Note: This version, dated 11-Feb-2025 in the file name, reflects ACFC review through Section 2.9. Also included are Julian's comments of Feb. 10 – not shown in the version included in the Feb. 10 meeting packet. Though Word may identify comments as Brad's, if they're preceded by "JP:" they're Julian's, transferred from his file into this one.

Andrews Community Forest
Draft Comprehensive Management Plan 2025

Including history, background, and important information about the forest that will both guide and inform management decisions

Richmond, Vermont

2025?

Revision to be presented to the Richmond Selectboard and Vermont Land Trust

Table of Contents

[BE: Much of the text at the document's start deals with processes far-removed from the ACF and its management needs and actions, sometimes repetitively. As one reader of an earlier draft noted, "The overture to the main act is being prolonged." Many pages below could be moved to the Appendix, a separate account of the ACFC's history and personnel, and/or greatly shortened.]

1. Introduction, Process History, Land Acknowledgement, and Governance Guidelines

1.1 Introduction to this document

This document serves as the Comprehensive Management Plan for the Andrews Community Forest (ACF). The first iteration of this document was accepted by the Selectboard in November 2018. *It was revised and updated in 2025. Major changes include an Indigenous land use acknowledgment, a more comprehensive and updated description of the ACF's ecological importance replacing the original recreational trail design concept with a new trail design based on ecological assessments, along with textual reorganization, updates, clarifications and corrections.*

Commented [BE1]: Suggest deferring final text here until the rest of the draft is complete and we know what the major changes have been.

1.2 Acquisition and Conservation of the Andrews Community Forest

In 2018, the Town of Richmond, with the assistance of Vermont Land Trust, purchased a 428-acre, largely wooded parcel from the Andrews family to create a new community forest. Simultaneous with the sale, a Conservation Easement (Appendix A) was conveyed to both the Vermont Land Trust and the Vermont Housing and Conservation Board to protect the property's natural resources and ensure public access in perpetuity.

Vermont Land Trust acts as the primary conservation steward. As such, VLT must conduct annual monitoring to ensure activities on the property are consistent with the terms of the easement. VLT's stewardship representative serves as the Committee's primary contact at VLT for reviews and approvals of proposed actions which are not contemplated in the Management Plan.

Commented [BE2]: Review

Commented [BE3R2]: Review

The Easement (Appendix A) requires a Management Plan and any future changes to the Management Plan must be reviewed and approved by Richmond's Selectboard and by VLT. Section 1.B. of the Conservation Easement dictates what information the Management Plan must include. Public input is required for any updates to the Plan.

1.4 Indigenous Land Acknowledgment

Commented [BE4]: Cecilia: Please review comments.

Andrews Community Forest is located within Ndakinna (in-DAH-kee-NAH), the homeland of the Western Abenaki people, who have a unique connection to this land and have been its traditional stewards for millennia. For many generations before the European colonists arrived, the Abenaki people harvested animals, nuts, plants, berries, fiber, and timber in these forests, without degrading their ecological health. The Indigenous people who preceded the colonists created an extensive system of trails throughout the Green Mountains that attest to the extended relationships between the Abenaki people and other tribes, who also used these forests, and who took refuge here as the settlers drove them from their homes.
The Town of Richmond acknowledges that we have access to this land because it was taken without consent and that our ability to make decisions about its management rests on this historic injustice. The Andrews Community Forest Committee therefore acknowledges the Abenaki people's rights to use this land in perpetuity and welcomes the Abenaki people as partners in our forest management. We aim to

honor and respect the Abenaki people through responsible forest management and sustainable land use. We will strive to incorporate Traditional Ecological Knowledge into our management practices to foster a healthy forest community and to restore a healthy balance between human needs and the needs of the nonhuman people [SP comment: What does this mean and how does it pertain to ACF? IS suggestion: change to 'other species'] of the forest (Appendix B Indigenous recognition). We say their name, and we name trails using the Western Abenaki language, to remind us that the Abenaki people are the Original People of the Dawnland, Ndakinna, out of respect for their culture and special relationship to the land, and to acknowledge their historic and ongoing contributions to our community.

1.5 Governance of the Andrews Community Forest

As a municipally-owned property, the Town of Richmond Selectboard is ultimately responsible for the management and stewardship of the Andrews Community Forest, with responsibility delegated to the "Andrews Community Forest Committee," (ACFC). The ACFC is charged with meeting the priorities and goals outlined in the Town Forest Management Plan, or as directed by the Selectboard or Town Manager and subject to the ACFC Bylaws.

The ACFC is a nine-person committee. The Richmond Conservation Commission and the Richmond Trails Committee each appoint a current member of their respective committee to sit on the ACFC. Additionally, the Conservation Commission and Trails Committee shall each recommend one person who is not a member of their respective committee for appointment to the ACFC. In order to incorporate Indigenous perspectives and traditional ecological knowledge into ACF management, the ACFC will seek to fill at least one of its seats with an Abenaki tribal citizen (see Appendix B: Indigenous recognition). ACFC will engage with the local Abenaki community to identify potential ACFC members. [SP comment: When does this happen? Every time a seat opens? Have we been doing this?]

1.6.1 Purpose of the Committee

The purpose of the Andrews Community Forest Committee is to:

- Serve as representatives of the Town in decisions related to the management of the Andrews Community Forest, with ultimate approval of the Selectboard.
- Oversee management of the Community Forest responsibly and in accordance with the Comprehensive Management Plan, the Conservation Easement, and the Forest Management Plan.
- Act as a liaison with the Vermont Land Trust when input or approval is needed.
- Lead the management planning process whenever updates are needed to the Comprehensive Management Plan.
- Provide regular opportunities for public engagement with the Community Forest and in the planning/management of this community-owned property.
- Educate the public about the Community Forest.

Furthermore, the ACFC agrees to strive towards the following guiding tenets:

Commented [SP5]: What does this mean and how does it pertain to ACF?

Commented [BE6R5]: Cecilia: This seems to be a common term these days, correct?

Commented [SP7]: When does this happen? Every time a seat opens? Have we been doing this?

Commented [BE8R7]: Cecilia: Should we/can we include more detail here?

- Demonstrate an ongoing commitment to providing meaningful public access and outdoor recreation opportunities while simultaneously providing meaningful natural resource protection.
- Demonstrate an ongoing commitment to learning more about the property and its natural history.
- Demonstrate an ongoing commitment by the committee to work together across differences as representatives of the Town and all of its residents.

VISION: The Andrews Community Forest will serve Richmond as a thriving ecosystem where conservation, education, and recreation harmoniously coexist. Through sustainable management practices, we aim to preserve the forest's ecological integrity and contributions to its forest block, while providing opportunities for local community engagement, environmental education, innovative forestry practices, and outdoor recreation. Together, we strive to create a model of responsible land management where generations connect with and enjoy nature, share in the Forest's stewardship, and foster a deep appreciation for the rich biodiversity and cultural heritage of our region.

MISSION (representing a concise form of the 'Purposes' spelled out in the Easement):
Our mission is to manage the Andrews Community Forest to uphold the Purposes and other directives of the Conservation Easement as well as those found in applicable local, state and federal policies and mandates. We will:
1. Protect its productive forestland, wildlife habitats, biological diversity, natural communities, riparian buffers, wetlands, soil and water quality, and native flora and fauna, along with the ecological processes that sustain them.
2. Keep the ACF available for public use and enjoyment, including non-motorized, non-commercial recreational, educational, and other appropriate community uses.
3. Conserve the ACF's open space values and scenic resources for current and future generations
4. Guide the Forest's management through open, public discussions and decision-making.

2. History, Background and Existing Conditions

Documentation about the ACF and its surrounding lands is available via State resources updated with new information provided by the Vermont Agency of Natural Resources (ANR) through its 2024 Vermont Conservation Design initiative and updated BioFinder web site (together with continuing updates by VGIS (Link?). Specific ACF and local sources include Arrowwood's Science to Action, UVM Field Naturalist Report (Glynn, G., Hagen, E., & Naughton, M. (2019, January). Landscape Analysis and Wildlife in the Andrews Community Forest, Richmond, Vermont. University of Vermont). These provide appreciation of key landscape features and the wildlife and ecology. These resources also inform decisions regarding Forest uses in general and as stipulated by the Forest Easement (the Richmond Town Plan and other governing Documents (Richmond Zoning and State and Federal laws and regulations).

2.1 General Property Description and Background

The Andrews Community Forest is a 428-acre, largely forested parcel just outside Richmond Village in Chittenden County. It is part of the state-designated, 72,000-acre Mt. Mansfield Forest Block, and abuts 6,000 acres of forestland within that block. The state's Vermont Conservation Design project, which

prioritizes Vermont's lands and waters for their contributions to landscape-level ecological integrity, gives the ACF its highest priority rankings for interior forest integrity and wildlife connectivity. The ACF is one of eight large parcels that inspired the Chittenden County Uplands Conservation Project[1], a landscape-scale conservation effort focused on safeguarding important forest blocks and habitat connectors between and alongside Camel's Hump State Park and Mount Mansfield State Forest.

The property is a diverse forestland with three headwater streams, two small meadows and several small wetland areas. Among the __ natural communities[2] identified in the ACF are several areas of Dry Oak Forest, Dry Red Oak-White Pine Forest, and Dry Oak-Hickory-Hophornbeam Forest, which are uncommon natural communities in Vermont. The ACF's oak and beech hard-mast stands serve as important food sources in the landscape for bears, deer, turkeys and other wide-ranging animals, along with fishers, porcupines and many birds and small mammals. Vermont Conservation Design ranks the quality of the ACF's natural communities, generally clustered above the powerlines, "Highest Priority" and "High Priority" for their ecological integrity and functionality.

Certain features of the ACF have special importance to particular species. For example, its low elevation, southerly facing hemlock stands are vital wintering areas for deer. Recent timber harvesting and blowdowns have created patches of the Vermont's increasingly scarce, early successional habitat, required by ruffed grouse, American woodcock, golden winged warblers and other species. The ACF's vernal pools provide essential breeding areas for salamanders and frogs.

[Good points below, but this early in the document it feels like we're delaying getting to the meat by including text that would be better placed later in the document. That would enable us to include other challenges ACF faces, like invasive plants, insects and diseases, and the effects of our changing climate. Suggest deleting..]

[BE: Much of the 2.2 section is consolidated into a general "Ecological Resources" section later in this draft (but would come earlier in the final version once earlier material is moved, edited or deleted.]

2.2 Geology, Topography, and Climate

2.2.1 Topography and Aspect

The Andrews Community Forest is mostly south-facing, with elevations ranging from 400' to 1240' above mean sea level. Much of the terrain is steep but there are some flatter areas north of the parking lot and along the forest's southeastern boundary.

[1] More information on CCUP is available here on page 35.
[2] Defined as "an interacting assemblage of organisms, their physical environment, and the natural processes that affect them."

2.2.2 Biophysical Region

The Andrews Community Forest is located within the Green Mountains Biophysical Region, near its boundary with the Champlain Hills Region LR-1. This region is part of the Appalachian Mountain chain that extends from Alabama north to Québec. It includes Vermont's highest mountain (Mount Mansfield at 4,393 feet) and includes its coldest climate, and the greatest annual precipitation (72 inches). The bedrock is primarily acidic, composed of non-calcareous schists, phyllites, gneisses, and granofels. Northern hardwood forests blanket the region on the mountain slopes up to about 2,500 feet, above which yellow birch and red spruce are dominant. Spruce-fir forests occupy the higher slopes and summits, with alpine meadows above 3,500 feet. The extensive, unfragmented forests of this region provide habitat for many species of wildlife that thrive in remote, interior forest conditions as well as high-elevation forests. The heavy precipitation and deep snows in the mountains feed some of the state's largest rivers.2.2.3 Bedrock Geology
The Andrews Community Forest contains both Underhill and Pinnacle bedrock Formations. The western part of the forest, from its northernmost point over is Underhill, and the eastern area is Pinnacle. Both formations are metamorphic sedimentary rocks, formed by sediments collecting at the bottom of an ancient sea, stacking on top of each other, then metamorphosing and compacting into rock during the Taconic Orogeny, the event that created the Green Mountains. As metamorphic rocks, they are typically dense and non-porous and have cracks and visible fractures.

The Pinnacle Formation is made of schistose greywacke rock, metamorphosed from bits of rock, mud, and debris that had already broken down somewhat from their original state. It is gray to buff in color and the stripes of varying layers in the rock are generally visible. The minerals present are quartz, sericite, biotite, and chlorite. The formation dates back at least to the Cambrian Period, 500 to 630 million years ago.

The Underhill Formation is a silvery-green color and a combination of phyllite and schist rocks. The minerals present are chlorite, muscovite, and quartz. Compared to the Pinnacle Formation, the Underhill Formation bedrock also dates back to at least the Cambrian Period but has coarser grains.

2.2.4 Surficial Geology

Surficial geology refers to loose materials deposited above the bedrock layer by wind, water, or glaciers. Like much of the Green Mountain Region, the Andrews Community Forest is covered in rocks deposited when the glaciers receded at the end of the last ice age (roughly 14,000 years ago). Fine silt, pebbles, stones, and boulders of all sizes deposited by glaciers are known as glacial till. The glacial till covers the underlying bedrock surface to form the surface shape of the visible landscape. In addition to glacial till, soil particles deposited by the post-glacial Lake Vermont, which filled much of the Champlain and western Winooski River Valley following the retreat of the Laurentide Ice Sheet up to an elevation of about 600 feet above sea level, cover much of the southern portions of the Andrews Community Forest.

In the Andrews Community Forest, where the bedrock is not exposed, till covers the land and is the source of stones in the forest's rocky soils. The glacial till is thicker in the valleys and thinner in the

uplands. Many of the exposed uplands in the forest have experienced significant post-glacial erosion, leaving only rubble and scattered boulders on top of the bedrock.

2.3 Climate

While the Andrews Community Forest is part of the Northern Green Mountains biophysical region, which has a cooler climate and more precipitation than other portions of the State, it is significantly influenced by the Champlain Valley biophysical region, which is warmer and features a longer growing season than most other parts of Vermont. Coupled with its southerly aspect, this produces a forest dominated by tree species adapted to warm, dry sites with poorer soils on upper elevations, and those adapted to slightly richer forest soils on lower elevations (due to the influence of Lacustrine deposits).

2.4. Cultural History (Cecilia)

2.4.1 Indigenous History

Richmond is located within Ndakinna (in-DAH-kee-NAH), the homeland of the Western Abenaki people, also known as the Original People, who have a unique connection to this land and have been its traditional caretakers since at least the last Ice Age. For hundreds of generations before the European colonists arrived and applied their own borders and labels, the Western Abenaki people lived and worked on this land, stewarding resources in an ecologically sustainable way. Given that ACF lies along important east-west and north-south transportation and trade routes, other tribes are likely to have visited the forest as well.

Abenaki oral tradition and written accounts, historical resources, and archaeological studies of prehistoric sites in Richmond inform our understanding of how the ACF landscape has been stewarded and its continued importance to Indigenous people of our town and region. General resources include books such as those by Wiseman (1995, 2001), an Abenaki elder and scholar, and Haviland and Power (1994), as well as numerous online resources. Appendix 3 in Wiseman (2001) lists many written, video, and museum resources regarding Abenaki cultural history.

Specifically for the Richmond area, archaeological studies in the 1990s near the bridges in Jonesville over the Huntington and Winooski rivers have yielded valuable physical evidence of occupation and forest use by Indigenous peoples before colonization (Thomas et al. 1995; Doherty et al. 1996). These sites were radiocarbon dated to approximately 1040 AD (near Winooski bridge) and 1500 AD (near Huntington bridge), and thus considered to represent the Middle to Late Woodland period. The sites show that animals “including black bear, deer, beaver, porcupine, muskrat, fisher, mink, skunk, cottontail, red squirrel, and chipmunks were taken for both meat and pelts. Various nuts, including butternut, hickory nuts, beech nuts, and acorns from red oak” were also collected and processed for consumption and storage (Thomas et al. 1995). Diverse tree species were used for firewood at the Huntington River site, including beech, maple, birch, red pine, eastern hemlock, elm, eastern hophornbeam, eastern cottonwood, red pine, and possibly alder. No evidence of maize was found at these sites, even as maize, beans, and other plants were being cultivated at that time along the Winooski River closer to Lake Champlain. Thomas (2008) surmises that these Jonesville sites were seasonal encampments occupied between September and late December/early January to collect and process forest resources. Such findings suggest that the forests

where ACF is now located were largely stewarded and used for hunting and gathering, rather than agriculture. This pattern concurs with broader geographical accounts of Abenaki practices, such as Wiseman (2001:27), who stated that the Abenaki "… had smaller seasonal camps along most rivers eight thousand winters ago" and described gathering and hunting activities in the uplands.

The Jonesville archeological digs also uncovered the dramatic environmental changes that occurred as a result of forest clearing by European settlers (Thomas et al. 1995). The alluvial terrace on the Huntington River, which the Abenaki families occupied over 500 years ago, had developed slowly over thousands of years with minimal flooding evident in the analysis of sediments. In contrast, during the 19th and early 20th centuries, catastrophic flash flooding became more common as upland and riparian forests were cleared for farming. Thomas (2007:9) noted that "between roughly 1810 and 1880, four to seven feet of sand, gravel, and even small cobbles were deposited on the terrace surface." These extraordinary floods covered or destroyed most evidence of precontact use and settlements. More recently, as abandoned farmland grew back to forest, flooding has declined. "Since the early decades of the twentieth century, less than eight inches of alluvium have been deposited on the terrace surface next to the Huntington bridge, and most of this was probably due to the great flood of 1927" (Thomas 2007:10).

2.4.2. Plants and Animals of Special Cultural Importance for Western Abenaki

A number of forest species were and continue to be of special cultural importance to the Abenaki people, and as such deserve special management consideration. Among tree species, these include black ash (*Fraxinus nigra*, also called brown ash and *maalakws* in Abenaki) used for basketry, and white birch (*Betula papyrifera*, also called canoe birch, its bark called *wigwa* in Abenaki) for canoes, homes, and containers. Unfortunately, black ash populations are currently highly threatened by the emerald ash borer, which is already present in Richmond. Butternut (*Juglans cinerea*, in Abenaki *pagon* or *bagon)* were among the trees highly valued for food, medicines, materials, and dyes (Haviland and Power 1994; Wiseman 1995b, 2001). This culturally important species is also threatened. The butternut canker fungus, first found in Vermont in 1983, now infects nearly all butternut trees causing dieback and often death. Maple sugaring (*Pkwamhadin* – "gathering of maple sap" (Chenevert 2021)) was an important seasonal activity among the Western Abenaki, one which was taught to colonists (Cotnoir n.d.).

Thomas (et al. 1995:61-64) lists the uses by the Abenaki of some thirty species of trees and shrubs abundant in the mixed deciduous forests of Vermont, many of which are found in ACF. Wiseman (1995a, 1995b, 2001) describes a wide range of forest plant species that were and are collected for construction materials, food, medicines, and dyes by Abenaki people. In Appendix 2, Wiseman (2001) lists many forest plants used in Abenaki herbal medicines by the maladies that they treat. A complete list of culturally important species found now or in the past at ACF would be valuable to develop for use by the ACFC in management decisions and educational materials. Ideally, such a list would be compiled, and important species prioritized, in partnership with the Abenaki people.

Before colonization, the Abenaki likely hunted and trapped a wide range of animal species for food and pelts in the forested landscape where ACF is now located. Thomas et al. (1995:65-75) describes the traditional uses of the 11 species of animals found at the Huntington River site. Wiseman (2001)

describes the relationship and importance of many species to the Abenaki, as well as how they were traditionally hunted and used. The acts of hunting and fishing, as well as the resulting food, skins and other usable body parts (e.g., bones and sinew), remain culturally important for many Indigenous peoples. As mentioned for forest flora above, it would be valuable to develop a prioritized list of ACF's animal species of cultural importance in consultation with Abenaki partners, including uses, stewardship, and both Abenaki and scientific names.

2.4.3. Abenaki language and the ACF

The Western Abenaki language, which is in the Algonquian family of languages, is considered critically endangered by UNESCO (2010). It is a descriptive language based on root words specifying physical qualities. For example, the region's largest river is named Winoskisibo – built from *Winos* means onion, *ki* means land, and *sibo* means river. Thus the Winooski River is named for the ramps and other wild onions which were known to grow in abundance along its shores. Maintaining the Abenaki language and culture is deeply connected to the Abenaki homeland and its stewardship. For example, Cotnoir (n.d.), a citizen of the Nulhegan Band of the Coosuk Abenaki Nation, wrote that "…sugaring still functions as a time for our community members to gather and connect with the woods and one another. Through sugaring, we continue to cultivate a working relationship with the land, while practicing our language – Western Abenaki."

Conservation efforts, such as the ACF, can inadvertently contribute to the erasure of Indigenous presence when introducing and perpetuating nonnative place names and management practices. Conversely, the ACF can support the revival of the Western Abenaki language and culture by supporting the use of Abenaki language for places, practices, flora, and fauna in the naming of trails, educational materials, and signage. Appendix B includes suggestions developed by the Richmond Racial Equity committee in collaboration with Abenaki tribal citizens and culture keepers. If ACFC decides to go beyond that list, Abenaki culture keepers should be consulted.

2.4.4 History After European Settlement

European settlers arrived in the Richmond area in the 1770's. "Gray Rocks Farm," as it was formerly known, was placed on the National Register of Historic Places in 1996 "because of its dual architectural and agricultural significance" (Longstreth 2007). The farm exemplifies the growth and development of dairy farming in 19th and 20th century Vermont. The land that is now the Community Forest was largely the farm's pasture and woodlot, and most of the farmland and remains of the historic farm's agricultural buildings are on land now owned by Maple Wind Farm and protected by an agricultural conservation easement The farm house and immediate yard are privately owned.

The existing forest parcel, along with 212 additional acres, was first farmed by James Butler, beginning around 1800. He constructed a farmhouse, blacksmith shop, and an English barn before selling the property to Asa Rhodes in 1813. The property remained in the Rhodes family for over a hundred years, passing from father to son.

The 1850 agricultural census indicates that the Rhodes farm was primarily a dairy farm, with 45 cows producing 1,800 lbs. of butter and 15,000 lbs. of cheese annually. As was common in Richmond at the time, the farm also had other livestock – horses, chickens, sheep, and swine. The Rhodes also harvested 125 tons of hay and 200 lbs. of maple syrup annually and grew many different crops: corn, oats, rye, potatoes, peas, and beans.

Over the years, ownership passed first to Asa's son, Cornelius, and then to his son Edward, around the turn of the century. The farm continued to grow and ultimately thrived as the market for butter and cheese expanded. Given the farm's success, in 1917, Edward reconstructed the English barn into a large U-shaped barn that more than doubled the space available for the cows. The new barn also added space for horses, a granary, and a milk house and he added a silo for storing cereals elsewhere on the property.

In 1923, Edward Rhodes sold the farm to Clarence Andrews. Andrews continued dairying operations on the property until 1978. The Andrews also operated a successful inn, the Gray Rocks Inn, from 1928 to 1941. Ina Andrews, Clarence's wife, ran the inn, cooking three meals a day for guests from Massachusetts, New York, and Connecticut. During this period, the Richmond area was full of small inns for travelers looking to experience the idyllic countryside. The tourism business was vital to the Richmond economy and an important period in the town's history.

After Ken's death, Everett and his wife, Mary Jo, ran the dairy farm on their own, and also sold firewood and hay from the property. They built a rustic cabin on the northern portion as a deer camp which they used into the 1990s. Only two 1950s automobiles remain.

Everett and Mary Jo raised four daughters on the land – Abigail, Amy, Jennifer and Kate. After shutting down farming operations, the family generously facilitated the transfer and conservation of the property. What had largely been the farm's timberland, pastures and places of childhood exploration and adventures became Richmond's first community forest.

In 2018, Angus Cummings, a UVM student, interviewed several of the Andrews sisters and other townspeople familiar with the recent history of the parcel for his thesis. It includes historical photos of the site contributed by the Andrews family.

2.4.5 Remaining Historical Sites and Features

Today, all that is left of the many farmstead buildings on the community forest parcel are two former farmstead sites with stone foundations. One foundation is on the northwestern side of the property, near the VAST trail. The other remaining foundations are near the end of the eastern farm road. One remaining foundation, set slightly apart, was either a springhouse or a small barn. The adjacent parcel to the east, was also part of Gray Rocks Farm and the Andrews Farmstead. The 1813 farmhouse and barn remain there, just outside of the town-owned forest property. In 2013 Maple Wind Farm bought 189 acres from the Andrews family largely below Route 2, which is conserved by an agricultural use easement On January 13th, 2014 the barn located across the street from the ACF entrance, burned down from an electrical fire. Maple Wind Farm rebuilt the barn in the same location in 2014.

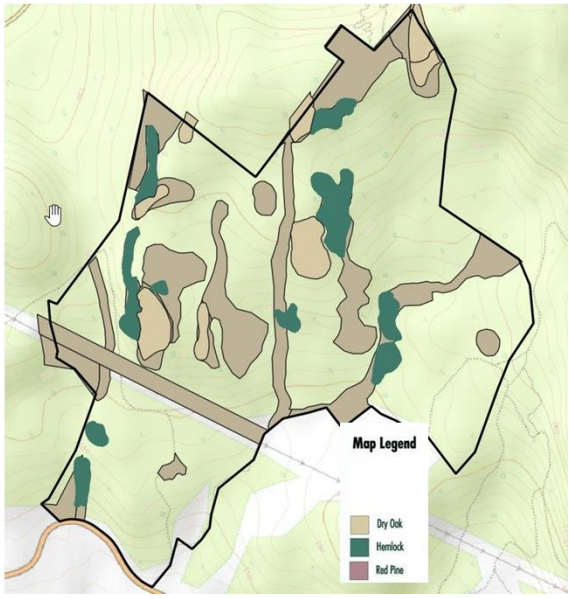
2.5 Ecological Resources (Brad + Sam – see new section in "MP2 Eco with Appendix 1-22.pdf")

[IS Comment: Note this section 2.5 and its subsections are recommended by Brad and Sam to be replaced by text in "MP2 Eco with Appendix 1-22.pdf"]

2.6. Water Resources (Melissa + Brad – see new section in "MP2 Eco with Appendix 1-22.pdf")

[IS Comment: Note this section 2.6 and its subsections are recommended by Brad, Sam and Melissa to be replaced by text in "MP2 Eco with Appendix 1-22.pdf"]

2.7. Forestry (Brandon)



Historical records indicate that former owners actively managed the forest. In 2011 - 2014, timber management occurred on a western portion of the property. Western areas were previously logged in 2001-2003 and eastern areas were logged in 1994-1997. The most recent timber harvest was completed in the spring of 2021 under the direction of then Chittenden County Forester, Ethan Tapper. In 2024 the Town began working with Chittenden County Forester Brandon Benedict.

There are a number of reasons to continue to employ active forest management on the Andrews Community Forest. Active forest management can be an important part of land restoration, conservation, maintaining the ecological integrity of native ecosystems, retaining the working landscape of Vermont, and supporting the local forest products economy in Vermont. Outside of infestations of non-native invasive plants, forests do not require human intervention to self-perpetuate and function ecologically. Active forest management, though, can accelerate the process by which forests acquire characteristics we may find desirable, such as:
orest management, though, can accelerate the process by which forests acquire characteristics we may find desirable, such as:
est management, though, can accelerate the process by which forests acquire characteristics we may find desirable, such as:

- Healthy wildlife habitat
- Old forest characteristics
- Resilience to disturbances (climate change, invasive pests, etc)
- Carbon storage and/or sequestration
- A steady supply of forest products

Active management in the form of timber harvesting can meet the goals of creating the forest products we use while promoting the other attributes as well. The forest products industry, in addition to being economically important in Vermont, can support the maintenance of healthy, intact ecosystems by providing the means for enhancing wildlife habitat, elevating the health and resilience of forested ecosystems, and generating periodic income to fund important stewardship activities. It is also a source of local, renewable resources in the form of forest products.
tivities. It is also a source of local, renewable resources in the form of forest products.

Commented [BE9]: It was noted at the 2-11 meeting that the source of the map should be included in a caption. Brad will check with Brandon. Otherwise, I suggest using the Forest Stand map from the Forestry Mgt. Plan, and noting it as such.

cal, renewable resources in the form of forest products.

Forests, such as ACF, can sustain plant and wildlife species of special cultural importance to Abenaki peoples. Forest management for timber on municipal lands can serve as a demonstration of responsible and sustainable forest management, educating people on how to harvest forest resources in a sustainable way. If forest management incorporates traditional practices by engaging Abenaki foresters and culture keepers, it offers the opportunity to demonstrate historical and contemporary Indigenous forest stewardship practices.

Uneven aged silvicultural systems (single and group tree selection) will generally mimic the scale, intensity, and frequency of disturbance that the forests of Vermont historically received prior to European settlement. With these systems either single, scattered trees or groups of trees (up to about 2 acres) are removed in a single treatment. These mimic historical disturbances such as windthrow, ice damage, or large downburst events. In forest management choices of which trees to retain and which to harvest are guided by a combination of ecological principles (which tree is "healthier," which trees are in use, or may be used, by wildlife), and human desires (the management objectives). Economic considerations (which tree is a more valuable species or may produce a more valuable product in the future) may contradict the 'non-commercial' stipulation in the Easement. Trees in forests, without any intervention by humans, will naturally die due to old age, disease, or disturbance. Active forest management seeks to guide which trees continue to occupy the forest and which will succumb to mortality; thus accelerating the accumulation of desirable forest characteristics (for example increased carbon storage or wildlife habitat).

The ability of a forest to respond to and maintain its health during disturbance is known as resiliency. Simple forests lack a diversity of tree species or structure, because of this they have fewer pathways to recovery if a disturbance occurs. Complex forests, those with greater species diversity or increased structural complexity, have more pathways to recovery following disturbance, and are therefore more resilient. Forests today encounter regular natural disturbance events, together with human-related events. In the face of an unstable climate, invasive exotic plants, animals and pathogens, and many other unpredictable problems, it is prudent to manage forests for resiliency in the course of any long-term forest management planning. Our goal is to encourage diversity, both in terms of species composition and function, the age spectrum of significant species and consistent with other activities within the management plan. Uneven aged silvicultural systems will accomplish the goal of encouraging complexity the forest, and therefore the forest's resiliency.

2.9. Recreation (Chase + Jim)

When the Forest was owned by the Andrews family, it was not posted and allowed hunting, walking, snowshoeing, and skiing. It was also managed for timber, leaving logging roads scattered throughout the property. Some of these roads are unsuitable for increased recreational use due to their steep grades, poor drainage, and potential for erosion. Others could be lightly maintained for continuing use as footpaths, supplementing multi- and single-use trails in appropriate areas. Other roads (the VELCO road, the Maple Wind Farm road on the eastern boundary, and parts of the former VAST trail) act as important recreational and management corridors throughout the property and remain in use.

Now, new trails and a parking area have opened up the forest to many more people and activities.

The VYCC campus, which adjoins the property to the east, has a network of trails. There is currently a former VAST trail connecting the two properties and trail networks.

Adjoining the ACF to the north is a 173-acre property currently owned by David Sunshine and Carol Jordan, which contains a multi-use trail network connecting to trails on adjoining properties and beyond, including into Jericho. Trail maps of the area are available online at various sites such as RichmondMountainTrails.com, TrailForks.com and AllTrails.com. The land is conserved, with VT Forests, Parks and Recreation holding the Conservation Easement. Motorized travel is not permitted and there is no parking at the trailhead

2.10. Agriculture (Wright)

Maple Wind Farm, the adjoining landowner to the south and east, is a diversified pasture-based livestock, poultry, and organic vegetable farm. This farm had an informal agreement with the Andrews family to use two fenced-in meadow areas for livestock grazing. Many years ago Maple Wind Farm had placed high tensile electric fencing around their grazing area in the community forest's lower meadow and upper meadow. A human gate through the fence allows for public access to the meadow when the pasture is not in use for grazing. When the pasture is in use, the "cutover trail" is closed.

The "lower meadow" and the "upper meadow" under the power lines, used to have about 30 adult bovines and 30 calves for 10-16 days per year. The fenced-in meadow lands have not been used for grazing or any agricultural purpose since perhaps 2010. The ACF Committee did have conversations with Maple Wind Farm perhaps in 2018 about entering into a license agreement at nominal charge for agricultural use of the two fenced meadows. Those conversations ended without final terms established. The Committee would like Maple Wind to continue these conversations and consider finalizing the agricultural license agreement.
Maple Wind Farm has a 25' right-of-way for agricultural purposes over the old farm road on the eastern side of the Andrews Community Forest extending from the then Dyer-Chadwick property on Route 2 to Maple Wind Farm's upper meadow. The Town has a 25' right of way over the northern edge of Maple Wind Farm's upper meadow over what was previously the VAST trail.

[BE: In the section below, "Legal Agreements," might we also include the earlier text about the Conservation Easement, which also puts legal requirements on us, and for the entire property?Also note that this appears at the end as well]

2.11. Legal Agreements on the Property (Wright updates)

There are four recorded easement agreements as follows:
the east / west 150' wide VELCO (Vermont Transco, LLC) utility easement,
the adjoining to the north and parallel 100' to 125' wide east / west Green Mountain Power, Co. utility easement,
the Maple Wind Farm, 25' farm road right of way on the eastern side of the Andrews Community Forest, and the Vermont Land Trust conservation easement.
A fifth easement, which has been fully agreed to and will likely be recorded in early 2025, is the VELCO, surveyed, 25', utility road right of way easement, leading from US Rte. 2 heading north up the existing utility road to the two utility right of way easements. Approval by Vermont Land Trust and the Selectboard is required for any changes in easement agreements.

2.11.1 Agricultural Lease (Wright updates)

Maple Wind Farm is an adjoining landowner of several hundred acres of the original Andrew farm. Maple Wind Farm has historically used eight to twelve acres of what is now the Community Forest for grazing cattle. The fenced in lower meadow and fenced upper meadows have not had cattle on them since perhaps 2015. The committee is interested in continuing to have Maple Wind Farm use these meadows and will explore the possibility of a long-term license agreement. These meadows should be brush hogged so trees and brush don't over take them.
.

2.11.2 Powerline Rights-of-Way: VELCO (Wright updates)

A VELCO powerline runs east/west through the community forest subject to a 150' wide utility easement. VELCO, the committee, the Town Manager, the Selectboard and the Vermont Land Trust have been working collaboratively to provide VELCO with its desired '25 wide perpetual utility road Right of Way easement, over the existing utility road. In 2018, VELCO improved a road from the forest entrance on Route 2 to the powerline; they used the upper landing area to stage their work. Following this work, they re-seeded the landing and the road above the landing and installed waterbars on the road below the landing. At certain periods, VELCO may need to close some of the forest to perform larger projects on the powerline. The ACF Committee should coordinate with VELCO to prepare for such events and fully inform the public of the closure.

2.11.3 Powerline Rights-of-Way: Green Mountain Power (Wright updates)

Green Mountain Power has a 75' to 100' utility right-of-way adjacent north of the VELCO utility line in the same east / west powerline corridor.

Within each of these two utility corridors, VELCO and Green Mountain Power manages vegetation growth. The Committee will work to better understand the vegetation management goals and practices, the landowner's (Town's) rights, to advise the Selectboard to make an informed decision about vegetation management within the Powerline corridor, and to communicate this decision broadly to Community Forest visitors.

2.11.4 (new)

A fifth easement, which has been fully agreed to and will likely be recorded in early 2025, is the VELCO, surveyed, 25', utility road right of way, leading from US Rte. 2 heading north up the existing utility road to the two utility right of way easements.
Approval by Vermont Land Trust and the Selectboard is required for any changes in easement agreements.

[BE: This is only of very limited interest to people and at most could be dealt with in the Appendix or even a separate, historical document for Town archives.. It also omits the expert panel discussion on how trails and wildlife can co-exist, the consultation with Fish & Wildlife's Andrea Shortsleeve, and the survey and consultation with botanists Liz Thompson (who first spotted the broad-beech ferns in a flagged route). Whether we list these people should depend on whether we follow their recommendations.]

3. Management Plan Development and General Principles

3.1 Management Plan Development

Upon purchasing the property, the Selectboard established an Interim Community Forest Steering Committee to develop a Comprehensive Management Plan and governance structure for the Community Forest, subject to final approval by the Selectboard. This Committee prepared an Interim Management Plan to provide short-term guidelines for the management of the property and allow "breathing room" for the development of the Comprehensive Management Plan. The 2018 Management Plan was signed by the Town and approved by the Vermont Land Trust in March 2018.

Meanwhile, the Town, through a grant from the Vermont Urban and Community Forestry Program, worked to develop the full Management Plan with the consulting groups SE Group and Arrowwood Environmental. Beginning in 2018, these groups assisted in management planning by leading the public input process, conducting environmental analyses, and drafting the plan. The first Management Plan was adopted by the Selectboard in November 2018 in compliance with conditions attached to a grant from the US Forest Service.

Credits:
Interim Community Forest Steering Committee:
Berne Broudy, Cecilia Danks, Brad Elliott, Willie Lee, Hannah Phillips (Chair), Wright Preston, Guy Roberts, and Elizabeth Wright.

Assistance provided by Ethan Tapper (Chittenden County Forester), Bob Heiser, Cara Montgomery, Rebecca Roman (Vermont Land Trust), Drew Pollak-Bruce, Liz Grades, Ellie Wachtel, Taylor Luneau (SE Group), Dori Barton and Aaron Worthley (Arrowwood Environmental).
The first iteration of this document was accepted by the Selectboard in November 2018 including Bard Hill, David Sanders, Steve Ackerman, Roger Brown, Christy Witters, and Josh Arneson.

Land Acknowledgement:

Scott Silverstein, Alexis Latham (Richmond Racial Equity), Jesse Bruchac and Kerry Wood, (tribal citizens), Annette Urbschat (culture keeper), Don Stevens (Chief of the Nulhegan Band of the Coosak Abenaki Nation).

ACFC Committee:

Jesse Crary, Cecilia Danks, Jim Monahan, Caitlin Littlefield, Nick Neverisky, Amy Powers, Daniel Schmidt, Melissa Wolaver, Chase Rosenberg, Ellen Kraft McCune, Tyler Merritt, Ian Stokes, Julian Portilla, Wright Preston, Brad Elliott, James Cochran, Sam Pratt.

Consultation with experts:

May 2021: Ecologists and trail designer (Aaron Worthley, Dori Barton of Arrowwood; Mariah Keagy of Sinuosity)
July 2021: Arrowwood and Sinuosity consultants (Aaron Worthley, Dori Barton, Mariah Keagy, Brooke Scatchard)
June 2022: Arrowwood and Sinuosity (Dori Barton and Mariah Keagy)
July 2022: Discussion with Arrowwood (Aaron Worthley) about the fine-scale review.
August 2022: Consultation with Melissa Levy (Community Roots, LLC) about facilitation of a community engagement public meeting.
August 2022: Advice from Nick Fortin (Deer & Moose Project Leader, Department of Fish & Wildlife, Vermont Agency of Natural Resources) email to ACFC about deer wintering areas and recreational use.
January 2022: Rebecca Roman (Vermont Land Trust) about acknowledgment wording and use rights as related to the Conservation Easement)
January 2022: Chief Richard Menard of Missisquoi Abenaki Nation about perspectives on the Land Acknowledgment and related components
July 2022: Rebecca Rouiller (Radiate Art Space, which sponsored the murals of Abenaki culture and language on the Town Center building) agreed to allow use of mural images in ACF signage. The murals, which were dedicated in a traditional ceremony led by Abenaki culture bearer Charles Delaney Megeso.
March 2023: Richmond Conservation Commission panel discussion on balancing conservation and trail-based recreation. Video by MMCTV
June 2023: Talk "Enjoying Our Trails with Wildlife in Mind": Sue Morse of "Keeping Track" Video by MMCTV https://archive.org/details/sue-morse-enjoying-trails-wildlife-06072023
November 2024: Tyler Machia (Richmond Zoning Administrator) presented information to ACFC meeting about Zoning Regulations and trail construction.

[BE: Rules would best be published where they'll be easier to change. The MP is too long-lived for any list to avoid becoming obsolete, especially with us relatively new to the job and learning which rules work, which don't and which we need to add. We can have a requirement somewhere to keep rules posted on the ACFC web page and on the kiosk and other entrances to the ACF.

3.2 General Rules

- Except where otherwise noted in the plan (seasonal trail closures in certain areas to protect foraging, reproduction and winter shelter etc. of at-risk species, hunting), the ACF is open year-round to the public from dawn to dusk. Other exceptions with prior approval of the ACFC. Any human presence is known to disrupt activity of nocturnal wildlife. (e.g. See https://www.nationalgeographic.com/science/article/news-humans-making-mammals-nocturnal-behavior-ecology)
- As the Original People who stewarded these lands, the Western Abenaki People and other Indigenous Peoples are extended a special invitation to visit the ACF and pursue traditional and contemporary practices as outlined in Appendix B, Indigenous Achnowledgement, Part 2.

- **Allowed Uses:**
  - Dispersed and trail-based pedestrian access is allowed on the property for uses such as hiking, walking, wildlife observation, or cross-country skiing, unless otherwise noted.
  - Mountain biking is only allowed on trails designated for that use and at designated times.
  - Snowmobiling may only be used on designated trails subject to agreements with VAST.
  - Hunting is allowed on the Andrews Community Forest and is subject to the State of Vermont hunting seasons, rules, and regulations.
    - Temporary tree stands and ground blinds are allowed: from the third Sunday in August through the third Saturday in December, May 1 through May 31, and during any Youth Hunting Day. Tree stands and ground blinds must be erected such that no damage is done to a living tree (except that branches <1" diameter on the main stem may be trimmed). Stands and blinds must have the owner's name and contact information in an easily identifiable location. Stands and blinds that do not conform to these regulations may be confiscated.
  - The Abenaki People may use ACF for gatherings and ceremonies, including the erection of small, temporary structures relevant to ceremonies. Prior notification of the ACFC is requested for large gatherings.
  - The Abenaki People have the right to collect fungi, plants, and plant parts in a sustainable manner, which is described in Appendix B, Indigenous acknowledgement.
  - Additional uses not listed here may be considered by the ACF Committee if they comply with town and state law and the Conservation Easement.

3.3 Restricted and Prohibited Uses, as specified in the Conservation Easement

- **Restricted Uses:**
  - Motorized vehicles are not allowed on the property, except for use by those with physical disabilities (as defined in ADA?), snowmobiles on any approved VAST trail, vehicles required for property management, or in case of emergency. Use for winter maintenance such as 'grooming' of trails [JP: Should include something like, per the trails plan. Trail plan should include which trails should be groomed. I'm assuming not all trails will be groomed.] shall be limited twice per year to minimize disturbances during the winter when wildlife is at risk.

- Road Use: Motorized vehicles will be permitted subject to the easements with VELCO and the right-of-way agreement with Maple Wind Farm.
- Commercial wildcrafting, the collection of mushrooms, berries, herbs, and other forest materials for sale, is restricted to Abenaki People who follow the sustainable practices described in Appendix B. ? Other non-commercial wildcrafting - (mushrooms, chaga, ramps, birch bark, etc.)?

- **Prohibited Uses:**
  - Campfires
  - Overnight parking
  - Horseback riding
  - Camping
  - New trail development without prior approval of the ACFC.
  - Timber harvest outside of the approved Forest Management Plan.
  - Trapping. Trapping poses a safety hazard to visitors and their pets and is considered incompatible with recreational and educational off-trail hiking by residents, school groups, researchers and hunters. Exceptions may be granted by the ACFC in conjunction with the Vermont Land Trust to address animals of concern/natural resource management concerns. Signage will notify visitors of the trap location and purpose.

3.4 Posting of Town Forest Rules

Posted rules shall be posted at the kiosk and trails providing access from neighboring lands (Note to ACFC: need to update the posted rules and install):

1. The Forest is open from dawn until dusk for walking, running, skiing, and other non-mechanized recreation. Hunting is permitted thirty minutes before sunrise [JP: Doesn't hunting happen as early as 3am during the season?] and thirty minutes after sunset in accordance with VT State regulations §4745. [Insertion by SP]
2. ATVs, motorcycles and other types of motorized transport are not permitted. Be aware that the neighboring farm operation may use farm vehicles to access its pastures.
3. Bikes only on authorized trails (see the map) and yield to others. [SP Comment: I think we should add signage per trail stating allowed uses as well.]
4. During hunting seasons (generally October through May) - please use safety colors.
5. Please park only in the assigned lot and not on the adjacent private property or across Rt. 2. Respect the privacy of the neighboring homes and businesses.
6. Keep pets on a leash; dogs are not permitted above the power lines. [SP Comment: I generally agree this is the responsible thing to do, but I would offer that we make a slight adjustment— changing it from power line to VAST trail. It only slightly changed the allowed trails for dogs, and also allows for better connectivity to surrounding properties for dog owners without having a major impact on wildlife.] Avoid disturbing wildlife or livestock. Remove all pet waste.
7. Be careful of the pasture fencing - it may be electrified.
8. Camping and fires are not allowed.
9. Do not cut, remove or damage any trees or other vegetation. [SP Comment: This seems to broad as it would not allow for foraging things like ramps, nettle, etc]

Commented [SP10]: I think we should add signage per trail stating allowed uses as well.

Commented [SP11]: I generally agree this is the responsible thing to do, but I would offer that we make a slight adjustment— changing it from power line to VAST trail. It only slightly changed the allowed trails for dogs, and also allows for better connectivity to surrounding properties for dog owners without having a major impact on wildlife.

Commented [SP12]: This seems to broad as it would not allow for foraging things like ramps, nettle, etc

10. Watch out for ticks!

3.5 Parking

Parking is available off of Route 2 across from Maple Wind Farm, at 1129 East Main Street, Richmond and is permitted to accommodate one parked school bus and five parked cars. The Town of Richmond is responsible for maintenance and plowing. The upper landing area can be used for parking during special events, subject to acceptance of an application to the ACFC.
No new car parking shall be designated without ACFC approval. Maintaining low parking capacity is a passive way of controlling density of use.
Bike parking shall be installed in the parking area.

[BE: Below (3.6 and 3.7) -- More history and feel-good text that can go elsewhere. It has a promotional, even self-aggrandizing ring to it. It makes it seem like the ACFC puts image-polishing ahead of presenting a solid MP].

3.6. History of the Management Plan Public Input Process

Public input opportunities into the initial management planning process in 2017 and 2018 were advertised by email, social media, Front Porch Forum, via signage in Town, and in the local print newspaper, the TimesInk! This process was critical to ensure the Management Plan reflects the interests of Richmond residents, and to give the Committee an opportunity to consider and reach consensus on important management issues such as hunting, trail development, and more.

Results from the public input process are available on the Town of Richmond website (where? In the MP?) and participation is summarized below:

- In response to an online survey about whether the Town of Richmond should purchase the Andrews Forestland as a community forest, wildlife habitat protection was the most (?confirm) listed interest of respondents related to the opportunity.
- *Visioning Workshop* – A public workshop was held on January 18, 2018 with about 80 community members in attendance, providing input on management balance, appropriate activities and facilities
- *Visioning Survey* – A survey, open from January to March 2018, asked similar questions to those posed at the workshop. The survey received 317 responses from residents of Richmond and surrounding towns.
- *Stakeholder Interviews* – Small group interviews were held on June 14 and June 18, 2018 to discuss the future of the property with stakeholder groups: hunters/trappers, neighbors, education, trail-based recreation, natural resources, and others were invited to join.
- *Draft Strategies Workshop* – A public workshop was held on July 12, 2018 to present the progress of the plan and hear feedback from the community on draft strategies for the future development and management of the property.
- *Community Forest Committee* – The Community Forest Committee met twice a month through this process. The committee also met as smaller working groups to inventory and plan for each resource in the property.
- *Public Input on Draft Management Plans* -- 44 people attended a presentation of the 1st draft of the Management Plan on 9/20/18; an additional 14 people submitted comments in writing. The

comment period was open for two weeks. A second draft plan was released on 10/21/18, followed by a two-week comment period and including another public meeting.

Formal Public input into the 2022 Management Plan revision, including public engagement regarding the development of the approved trail design and the inclusion of an Indigenous land use acknowledgment, occurred in 2020-2022. In addition to the monthly ACFC carried out the following specific public engagements:

- September 2020: After consultation the ACFC developed an RFP for ecological review and trail design services requiring the ecologist and trail designer to collaboratively establish a proposed trail design
- May 2021: Public walk held at ACF with Arrowwood and Sinuosity (professional ecologist/trail build team) to walk part of the proposed trail and discuss routing
- June 2021: Public presentation by Arrowwood and Sinuosity of proposed design, including representatives from VLT and SB. Some members of the public raised concerns over proposed encroachments on sensitive wildlife habitat and natural communities.
- March 2022: Online public comments form launched seeking feedback on ACFC's preliminary trail Plan. 128 public comments received on proposed trail design. ACFC thematically coded comments into 25 emergent themes/concerns. Some of the submitted suggested changes and submitted via other forums (e.g., Front Porch Forum, the Times Ink) were specific and accompanied by clear rationale. o Comments submitted via form o The comments here in 'readable' form and organized by category. o Public comments related to proposed trail route and committee responses
- March 2023: Professionally facilitated public meeting to solicit feedback related to proposed Management Plan revision o Questions presented for experts at the March 29th 2023 'Public Engagement' meeting o Video recording of Public Engagement meeting.
  Transcript (per YouTube) here with speakers identified, and edited for clarity; and partial timeline here o Facilitator report – Comments after "Public Engagement" meeting, o Summary of Facilitator Report

[The next section is redundant with much of 3.1]

3.7. Expert Guidance Provided to the ACF Committee

Alignment with town plan/zoning regulations

Keith Oborne (Town Planner) advised that when there is a plan for new trails, etc. ACFC should contact Richmond Planning and Zoning and DRB to ensure the regulations are followed.

Development addressed in the town plan:

The Town plan states: "Restrict development on steep slopes between 20% and 35%, cliffs, and ridgelines over 900ft in elevation, [SP Comment: Per the zoning administrator, the 900ft rule doesn't apply to trail development in ACF] and prohibit all structural development (including renewable energy generation facilities and distribution/transmission infrastructure) on slopes greater than 35% , in order to maintain habitat connectors and mitigate erosion"

Zoning

Commented [SP13]: Per the zoning administrator, the 900ft rule doesn't apply to trail development in ACF

The ACF is zoned as a recreational facility, based on a June 10 2020 DRB decision about the parking at the East Main frontage.
Zoning Administrator Tyler Machia has advised that any development in the ACF requires DRB approval: Concerning trails, any new trails developed on slopes greater than 20% will require engineered plans for "adequate" erosion controls per the RZR, SECTION 6.11. Trails that currently exist can be maintained in-situ but any changes that would be considered an update to the approved site plan would require DRB approval. See Tyler Machia memo for Nov 25th 2024 [IS Comment: Also his updated memo of Dec 13th 2024] meeting and ACFC Minutes October 23rd, 2023: and the Town's Zoning Regulations especially Section 2.5.1 Areas with Special Guidelines for Land Development.

Other Expert advice:
Trail designers Aaron Worthley, Dori Barton of Arrowwood and Mariah Keagy of Sinuosity about the proposed trail routes and removing the Ridgetop Trail based on public feedback,and about the fine-scale ecological review.
Consultation with Community Roots, LLC (Melissa Levy) about facilitation of a public meeting on revisions to the Comprehensive Management Plan.
Nick Fortin (Deer & Moose Project Leader, Department of Fish & Wildlife, Vermont ANR) about how to manage deer wintering areas in the context of recreational use. (Correspondence with Nick Fortin)
Rebecca Roman (VLT) regarding development of trail design, revising the management plan, and general compliance with the Conservation Easement.
Josh Arneson, (Richmond Town Manager) Judy Rosovsky, (Conservation Commission) Willie Lee and Chase Rosenberg (Trails Committee) [SP Comment: Other experts listed show how they contributed their advice— can we provide context for these resources as well?]

For the development of the Land Acknowledgment, the accompanying use rights, and the signage and naming suggestions:
Scott Silverstein and Alexis Latham (Richmond Racial Equity) and Jesse Bruchac and Kerry Wood,(tribal citizens), Chief Don Stevens (Nulhegan Band of the Coosak Abenaki Nation), Chief Richard Menard (Missisquoi Abenaki Nation), Abenaki culture bearer Charles Delaney Megeso and culture keeper Annette Urbschat concerning Abenaki access to the forest for hunting, gathering and perhaps holding gatherings, as well as the potential trail naming and interpretive signage (See Appendix B).
Rebecca Roman (VLT) reviewed the Land Acknowledgment wording and use rights as related to the Conservation Easement and Rebecca Rouiller of Radiate Art Space, which sponsored the murals of Abenaki culture and language on the Town Center building, agreed to allow use of mural images in ACF signage.

[We have yet to present management objectives or action items, and we're describing how they'll be changed? It sort of knocks the legs out from under them. This material belongs in the MP but would be most logical to include at the end.]

3.8. Comprehensive Management Plan: Process for Updates: Amendments and Revisions

This Comprehensive Management Plan is intended to be a living and evolving document. As the Andrews Community Forest is new to public ownership, there is a need to better understand conditions on the

Commented [SP14]: Other experts listed show how they contributed their advice— can we provide context for these resources as well?

ground and respond to new conditions that may arise. Adaptive management is an iterative cycle of evaluating and learning, adjusting, planning, and acting. The ACFC is required to make management decisions based on resource management objectives and current best management practices. *[BE: The preceding sentence should read, "…resource management requirements and objectives, …"* In addition, the ACFC is required to gather information on relevant management practices that can guide future management decisions and management plan revisions.

[BE: In the sentence below, our "early years" have passed. Our understanding of it will evolve as well, along with our uses] This plan must be reviewed and updated, at a minimum, every ten years, as required by the Conservation Easement. However, more frequent revisions may be necessary as the community's uses of the property and knowledge about it evolve. Updates to the Comprehensive Management Plan can be of two kinds, revisions or amendments, which vary in degree of public outreach and data collection.

[BE: Suggestion below] Any *amendments* to the plan, as suggested by Figure 3: Adaptive Management Model, may include **minor adjustments** made in the public eye that improve the effectiveness of management actions or minor changes to wording.
Any **major changes** to the plan objectives or proposed actions require a plan revision, which entails a planning and outreach process that includes scoping of concerns, collection of any needed data, and a public engagement process that invites stakeholders and other residents to provide input on proposed revisions. Such a process may entail a combination of surveys, ecological assessments, field trips, and public meetings dedicated to the plan revision.

Proposed changes to the Comprehensive Management Plan, either amendments or revisions, must be reviewed and approved by the Vermont Land Trust to ensure compliance with the Conservation Easement and submitted for approval by the Richmond Selectboard.

Figure 3. Adaptive Management Model

4. Timber Management and Forestry Activities (Brandon)

In November of 2019 the ACFC, Vermont Land Trust, and the Selectboard adopted a Forest Management Plan written by the County Forester Ethan Tapper specific to forestry activities. The document details how the forest will be managed for its timber and other natural resources. It uses a 'zone' approach that divides the forest into three different management styles for perpetuity and emphasizes a diverse and resilient forest as well as addresses invasive species management. This Comprehensive Management Plan provides more detail about the Forest Management Plan that was crafted by Ethan Tapper and adopted by the Selectboard on November 18, 2019. Additional timber stand improvement (TSI) activities were completed in the winter of 2022 and included crop tree release as well as selective cutting.

Many forest management roads (also called "logging roads," or "skid trails") from previous logging operations still exist in the forest. Some may still serve as a component of a multi-use recreational trail network, provided that drainage and erosion challenges can be mitigated. The use of these trails for recreation should not compromise or preclude their utility as forest management roads into the future.

This Forest Management Plan provides an initial schedule for maintenance and on-going forest management activities by stand and zone. All forestry activities should be in agreement with this document. (Located on the town website; click here for direct access).

[Did Brandon See this, or confine his update to the earlier Forestry section? Seems odd that he's changed nothing, like "Consider creating 5-10 acres of young forest/early-succesional habitat," as we're long past considering that.. Suggestions and highlights following "Overall Objectives:" just below are mine.

4.1 Forestry Management Objectives and Actions

Overall Objectives: Follow the Forest Management Plan adopted on _____to manage forestry activities that improve forest health, wildlife habitat protection and wildlife diversity.

- Utilize multi-aged silvicultural treatments over the majority of the property.
- Avoid creating new permanent openings or wide (> 20 feet wide), roads and trails. Consider creating 5-10 acres of young forest/early-successional habitat.
- Utilize management guidelines that enhance the value of the forest for a variety of deep forest species such as bear, fisher, and a variety of songbirds is recommended.
- In Ledge, Talus, and Ridges area, a forested canopy should be maintained over these rock habitats that occur in a forested matrix. The selective removal of trees near these habitats is compatible with continued use by wildlife. Maintain a 100' buffer from treatments to broken ledge and talus that provide concealment cover for wildlife.
- Mast Stands: Use forest management activities that promote the establishment, maintenance, and persistence of these species within the Forest.

Objective 2. Protect natural communities as well as the ecological processes that sustain them. Retain soil integrity, water quality, natural species composition, natural disturbance regimes and natural hydrology.

- Update natural community mapping as more on-the-ground data becomes available.
- All forestry activities shall incorporate steps to retain soil integrity, water quality, natural species composition, natural disturbance regimes, and natural hydrology; Identify and control exotic species with the Forest Management Plan.
- Deer Wintering Areas: The Hemlock and Hemlock-Northern Hardwood forest communities on the parcel could be managed specifically to enhance the conifer overstory and hemlock regeneration.

Objective 3. Recognize that forest management in the form of the periodic harvesting of timber is an important part of land conservation, maintaining the working landscape, and supporting the forest products economy in Vermont.

- Employ forest management for timber on municipal lands as a demonstration of responsible, and sustainable forest management, educating residents of Richmond and beyond in how to harvest forest resources in a sustainable way. See Forest Management Plan for harvest dates.
- Hold educational events around forest management activities to inform the public about the rationale and best practices of sustainable forest management.

Objective 4. Manage the ACF to sustain plant and wildlife species of special cultural importance to Abenaki peoples. (When forest management incorporates traditional practices by engaging Abenaki foresters and culture keepers, it offers the opportunity to educate the community about historical and contemporary Indigenous forest stewardship practices.)

- Maintain contact with Abenaki tribal foresters to contribute to future forest management planning and activities. In collaboration with Abenaki partners, identify culturally important species (e.g., black ash) and the stewardship practices needed to sustain them, to inform future forest management activities.

5. Cultural History Management Objectives and Actions (Cecilia)

In our commitment to Abenaki indigenous, first nation people we have pledged to foster a healthy forest community by incorporating Traditional Ecological Knowledge into our management practices.

Objective: Provide information for forest visitors about the Indigenous and colonial cultural history of the forest and its context within Richmond.

Expand and enhance cultural information about the forest.

Add interpretive signage about the cultural history of this forest land at historic sites and about other educational materials that explain and celebrate Abenaki language, forest uses and stewardship practices.

Work with the Abenaki tribes, the Andrews family, and others with cultural knowledge of the forest to host programs and tours about the history and contemporary resources of the ACF.

Work with Radiate Art to share high quality images of their murals for use by the ACF interpretive materials and signage.

Objective: Protect remaining cultural features and values.

Route trails distant from cultural resources [SP Comment: What cultural resources exist? Are we referring to ecological resources? Either way, perhaps we could be more specific.]; provide spur trails if appropriate.

Objective: Maintain viable populations of plants and wildlife of cultural importance.

Coordinate with Chittenden County forester and Abenaki tribal forester(s) to manage black ash trees [SP Comment: Is this actionable? Aside from tree injections, can we do anything to preserve these trees?] given its cultural importance and the threat of the emerald ash borer. Identify and protect any threatened butternut trees [SP Comment: Are there any butternut trees in ACF?] and any other culturally important species in the ACF.

Consult with an Abenaki Forester or tribal affiliate upon any management plan revisions and major management activities that may affect cultural resources. (See Appendix B, Part 3).

Objective: Include Indigenous perspectives, knowledge, and language in ACF educational materials, management and naming practices.

Maintain a working relationship with the Western Abenaki People and welcome them to this land.

Improve our community's understanding of the cultural importance of ACF to Indigenous people.

Partner with Abenaki tribal representatives and others to develop and prioritize lists of culturally important forest plant, animal and fungal species to help the ACFC manage them sustainably and to provide educational materials. Such lists should include Abenaki names, scientific names, traditional and current uses, traditional ecological knowledge and stewardship practices, potential threats, and other information, stories or sources that would help in their sustainable management.

Choose AFC trail names from the list of Abenaki words for animals of the forest and landscape features found in Appendix B, Part 4. These words were proposed and vetted by Abenaki tribal citizens and culture keepers.). Take advantage of educational materials and programming for the UN International Decade of Indigenous Languages 2022 – 2032. See:
https://www.un.org/development/desa/indigenouspeoples/indigenous-languages.html
Also, for exploring the potential for ACF to be an educational site for the Abenaki Trails Project, see:
https://abenakitribe.org/abenaki-trails-project

5.1 Potential partners regarding ACFC cultural history

- Abenaki Nation of Missisquoi, https://www.abenakination.com/
- The Nulhegan Band of the Coosuk Abenaki Nation, https://abenakitribe.org/
- Kerry Wood and Annette Urbschat for consultation regarding the Western Abenaki language
- Abenaki Arts and Education Center, https://abenaki-edu.org/
- Radiate Art, https://www.radiateartspace.org/, Contact: Rebecca Rouille
- Richmond Racial Equity, Contacts: Scott Silverstein and Alexis Latham
- Chittenden County Forester

Commented [SP15]: What cultural resources exist? Are we referring to ecological resources? Either way, perhaps we could be more specific.

Commented [SP16]: Is this actionable? Aside from tree injections, can we do anything to preserve these trees?

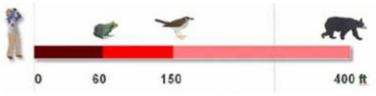
Commented [SP17]: Are there any butternut trees in ACF?

6. Wildlife and Natural Resources Stewardship (Brad + Sam)

6.1 Ecological Resources and Stewardship

The ACF Conservation Easement and Richmond Town Plan call for maintaining the Forest's ability to support biodiversity amid climate and land-use changes. To guide this effort, this Plan uses the Vermont Conservation Design (VCD)[3] framework to look at the ACF's ecological resources from three perspectives: landscape, community, and species.

Drawing from this comprehensive approach and numerous research studies, the Plan aims to minimize human impacts on sensitive habitats by recognizing the area around trails known as their "zone of influence" or ZOI, where wildlife can detect and respond to traffic, often adversely degrading the habitat's viability...



Wildlife can detect and show alarm at human presence on trails over large distances known as the zone of influence, or ZOI.

For some species in some terrain, ZOIs can extend beyond 1000 feet. As a general recommendation for New England forests, wildlife biologists advise keeping trail traffic 330-400 feet from sensitive areas[4]. This guidance, supported by professional ecological assessments, informs this Plan's strategies to ensure long-term human access to and enjoyment of the full ACF without degrading its ecological integrity or its forestry, recreational, agricultural, and educational values.

6.2 Landscape-Level Elements

Much of the ACF, especially above the former VAST trail, is ranked "Highest Priority" or "Priority" by Vermont's natural resource agencies as contiguous interior forest supporting high-quality wildlife habitat and robust natural communities.

ACF's intact interior forest, ranked "Highest Priority" for its conservation values (see illustration) supports wide-ranging species like black bears, bobcats, moose, fishers and wild turkeys. Its ridges and ravines provide vital migration corridors, foster genetic diversity and are ranked "Priority" for promoting forest connectivity on a landscape scale. As the climate shifts, the forest's connectivity will facilitate northward species migration, underscoring its role in sustaining regional biodiversity. Recognizing this, the ACF


UVM researchers in the ACF spotted this bear watching them work.

[3] https://vtfishandwildlife.com/conserve/vermont-conservation-design
[4] Naughton, 2021, Oehler, 2017 and others. See References in Appendix.

Conservation Easement highlights the need to conserve the ACF's landscape connectivity to sustain regional wildlife populations and mitigate habitat loss, fragmentation, and climate change effects.

6.2.1 Landscape-Level Objectives

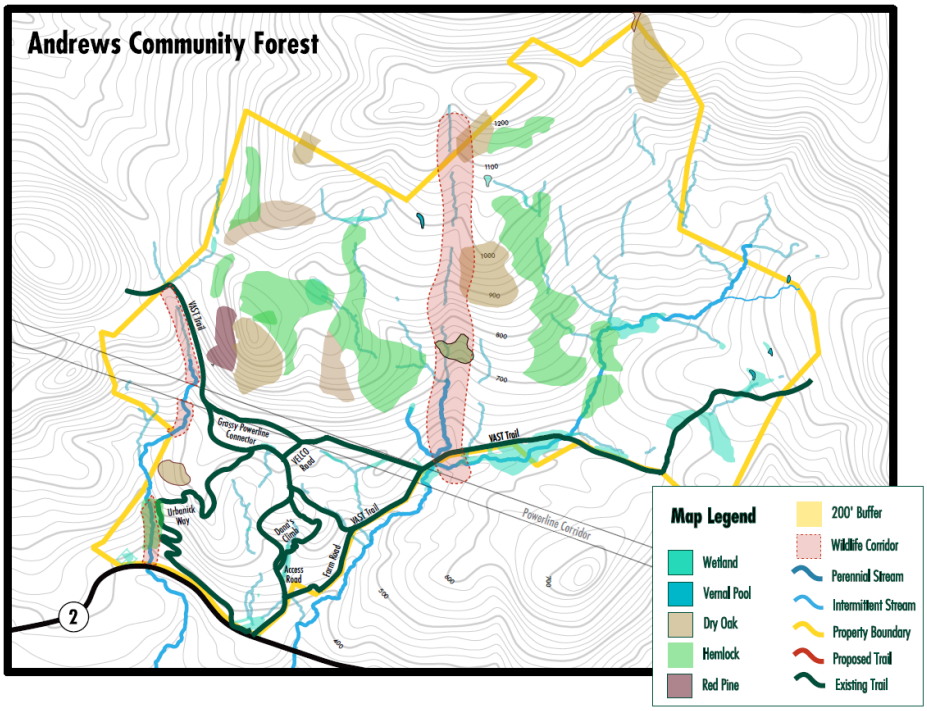
- Maintain the ACF's ecological integrity, biodiversity and functionality, including its status as "High Priority" and "Priority" interior forest and connectivity components of Vermont Conservation Design.
- Preserve interior forest health and connectivity to support black bears, bobcats, moose, fishers, ovenbirds, hermit thrushes and other deep-forest species.
- Protect neighboring properties' landscape-scale ecological integrity and pursue opportunities to conserve and connect wildlife habitats.
- Protect soils, natural vegetation, water quality and natural climate change resilience through measures shown to control erosion and prevent washouts from soil disturbances on slopes exceeding 20 percent. Avoid disturbing any soil or duff layers on slopes over 35 percent. Monitor existing trails on those slopes for damage and erosion, and take restorative measures that could include closures.

6.2.2 Landscape-Level Action Items

- Maintain recreational access north of the former VAST trail at current types and levels while creating new and diverse options south of the VAST trail (see Recreation).
- Work with the County Forester to implement the ACF Forestry Management Plan and enhance the ACF's interior forest and wildlife connectivity values.
- Replace invasive species with native vegetation.
- Develop a plan to reduce wildlife mortality along Route 2 crossings.
- Use public signage and events to educate visitors about ACF's ecological role.

For more information, see the Landscape-Level Elements Section in the Background to Ecological Resources and Stewardship Appendix

6.3 Community-Level Elements

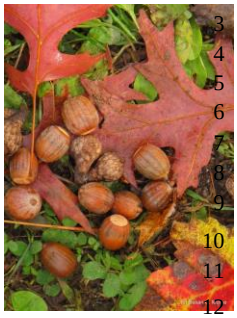


The ACF encompasses ten upland and wetland natural communities vital for wildlife diversity. Each is "an interacting assemblage of plants and animals, their physical environment, and the natural processes that affect them[5]." Undisturbed, natural communities provide needed food, shelter and breeding grounds for myriad species.

ACF's natural communities, particularly those north of the former VAST trail, hold "High Priority" and "Priority" rankings in Vermont Conservation Design. Tracks, scratch marks, sightings, camera captures and other evidence show ACF's upland communities supporting whitetail deer, black bears, bobcats and forest birds such as hermit thrushes. Wetland areas, while comprising less than 1% of ACF, support important populations of amphibians, reptiles, and mammals. Riparian zones filter stormwater runoff to protect water quality while also providing critical wildlife corridors.

[5] *Conserving Vermont's Natural Heritage.* 2nd Edition. Vermont Fish and Wildlife Department and Agency of Natural Resources. Waterbury, Vermont. 2013.

6.3.1 Community-level objectives



- Maintain the relative isolation and integrity of rare upland natural communities (e.g., Dry Oak Forest) to support the conservation needs of bears, bobcats, wild turkeys, hermit thrushes and other deep-forest, far-ranging species.
- Protect wetland and aquatic habitats, including vernal pools, for diverse species such as salamanders and wood frogs.
- Facilitate connectivity between upland and wetland habitats.
- Minimize disturbances to natural communities south of the VAST trail.

6.3.2 Community-level action items

- Develop a Wildlife Stewardship Plan to protect the functionality of the ACF's community-level elements.
- Promote food, cover and structural diversity for terrestrial and aquatic species in upland and wetland natural communities.

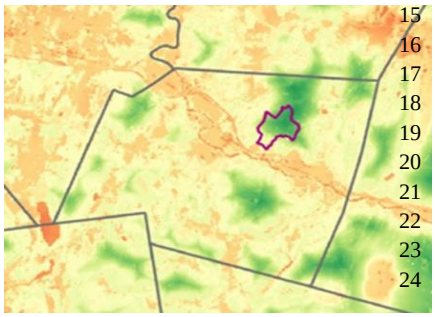
- Maintain hiking, hunting, skiing, snowshoeing, birding, wildlife observation and other types of low-impact recreation north of the former VAST trail on existing forest roads. Identify routes best suited for these types of recreation and maintain them accordingly. Expand recreational opportunities between the parking lot and the former VAST trail to include new and improved trails for mountain bikers, casual walkers, runners, elderly residents and school groups.
- Work with County Forester, UVM resources and professionals to ensure adequate amounts of shade and coarse, woody debris in streams and wetlands.
- Assess and develop plans addressing these major challenges to the ACF's natural communities:
  - Invasive species
  - Tree and plant diseases
  - Climate change
  - Human impacts
- Use signs and outreach tools to inform and involve the public in conserving the ACF's natural communities and the ecological processes and benefits they support.
- Monitor the health of the ACF's natural communities and habitats.
  - Involve ACFC and public volunteers in a program combining field visits, camera and audio traps, and consultations with experts.
  - Utilize black bear and bobcat [and ____songbirds/raptors?] as indicators of the overall biodiversity and health of the ACF.
- Maintain or enhance conditions for wildlife in and among the ACF's natural communities:

- Improve deer population management so the ACF's herd can contribute to its health and species diversity. Encourage hunting subject to VT regulations. Employ exclosures to both track and demonstrate impacts of deer browsing the forest understory.
- Protect mast-producing areas from disturbances during fruiting and wildlife foraging seasons.
- Monitor forest health and quantitative/qualitative changes to its habitats (see Appendix ___).
- Post to *Times Ink!*, *Front Porch Forum*, the ACFC webpage and social media information about the ACF's natural and cultural history, and efforts to protect and enhance its natural communities and other habitat features.

For more information, see the Community-Level Elements Section in the Background to Ecological Resources and Stewardship Appendix

6.4 Species-Level Elements

ACF offers specialized, critical habitats for certain species. Hemlock groves provide winter shelter for deer, enabling them to conserve energy during the leanest months. Oak, beech, blueberry and other sources of mast support over 100 species, including black bears and turkeys. Ledges and rocky areas serve as vital habitats for bobcats, ruffed grouse and other animals. Early successional habitats foster biodiversity by supporting young tree growth and associated fauna.



Much of Richmond's prime bobcat habitat (green) exists in the northern part of the ACF. *Source: 2020. Investigating Bobcat-Recreation Conflicts in Vermont. Middlebury College.*

6.4.1 Species-Level Objectives

- Conserve rare, threatened, and endangered species by integrating updated information into management plans.
- Maintain the functionality of mature softwood cover for wildlife wintering and ensure nearby food sources.
- Promote the health and viability of mast-producing trees and shrubs.
- Enhance early successional habitats to diversify species and age structures.

6.4.2 Species-Level Action Items

Hemlock stands not only shield deer and other wildlife from winter snows and winds, but they also provide nesting spaces for interior forest birds such as the hermit thrush.

- Engage ecologists to survey proposed trail routes and infrastructure areas for rare species within 50 feet of their sides and adapt conservation plans accordingly.
- Maintain at least a 70 percent canopy within hemlock stands. Close trails within 100 meters to all but hunters from November through March.
- Manage deer populations with regulated hunting. Install exclosures to demonstrate browsing impacts and nurture seedlings.
- Maintain the oak and other mast requirements of black bears, wild turkeys, white-tailed deer and other species. Avoid disturbing soft- and hard-mast stands areas during fruiting and foraging seasons.
- Provide education and updates about ACF's efforts to preserve its species and habitats.

For more information, see the Landscape-Level Elements Section in the Background to Ecological Resources and Stewardship Appendix

7. Recreation Management (Chase + Jim)

[BE: Note: This section appears not to have been reviewed by Chase and Jim. Comments were made with the understanding that many may be moot should such a review take place.]

7.1 Recreation as addressed in the Conservation Easement

The Conservation Easement notes that the ACF is "one of Vermont's largest blocks of unfragmented interior forest." The continued loss of Vermont forest lands makes the ACF even more ecologically valuable. The "Purposes" of the governing Conservation Easement allow conserving the ACF's natural resources while continuing to provide public access to the Forest in appropriate ways." [BE: The first "Purpose" of the Easement does more than "allow" conservation – it mandates it.]

The Conservation Easement (Page 6, III Permitted Uses of the protected Property, Paragraph A) allows for non-motorized, non-mechanized recreational use of the forest (i.e., walking, snowshoeing, skiing, and hunting). Additionally, Section IIIA of the Easement allows for "snowmobiling, and for non motorized mechanized recreation such as mountain biking, and by animals capable of transporting humans as regulated in the Management Plan and are consistent with the Conservation Easement Section(s) V, VI and VII. that identify constraints within the Riparian Buffer Zone, [rare and uncommon natural communities], the Ecological Protection Zone and Vernal Pool Ecological Protection Zone. The Management Plan must provide the rules for these three uses and guide the management of recreational infrastructure. [BE: This should note the condition the Easement puts on all "allowed" activities plus any others not listed. The Town is required to abide by "Purposes of the Grant." The first mandates us to "conserve productive forestland, wildlife habitat, biological diversity, natural communities, riparian buffers, wetlands, soil productivity, water quality and native flora and fauna…and the ecological processes that sustain these natural resource values…."]

7.2 Trail-based Recreation

Trail-based recreation impacts on wildlife and benefits of outdoor recreation and nature

The natural communities of the forest are not confined to human-drawn boundaries. Therefore, conservation and stewardship of wildlife habitat, water resources, and vegetation must recognize impacts beyond those boundaries. Research, including peer-reviewed studies and meta-studies (e.g. Baas 2020 Hennings 2017, Naughton 2021, Oehler 2017, Taylor, and Knight, 2003; Parker 2022, Larson 2016) has increased understanding of the negative impacts that human presence and trails can have on wildlife, including how trail traffic can frighten and harmfully stress wildlife within "zones of influence" that may extend hundreds of feet from trails. (See also https://infoacf.wordpress.com/literature-and-science/)

However, people's physical and mental health benefit from being outdoors. An article entitled "Health and wellness benefits of being outdoors" (Avitt, 2021) published by the Forest Service of the US Dept of Agricultures reports benefits under the headings of physical wellness, mental wellness, and wellness in the community. A review of published literature (Eigenschenk et al., 2019) examined evidence about benefits to physical health, mental health and wellbeing, education and lifelong learning, active

citizenship, crime reduction, and anti-social behavior, and concluded that a combination of physical activity and being in nature provided a range of significant benefits. Weinstein et al. (2015) addressed the links between contact with natural environments and community cohesion, and crime. They reported that the amount of time spent in nature was linked to more community cohesion. In turn, perception of cohesive communities enhanced measures of people's individual well-being and contributions to society through higher workplace productivity and environmentally responsible behaviors. They also found indications of linkage to lower crime both directly and indirectly through its effects on community cohesion.

Therefore, human presence and activity in the Forest can have negative effects on wildlife, and positive effects on human wellbeing The Town cannot serve the aspirations of all potential recreational users of the ACFC, nor the hopes of those who recommend eliminating all human disturbance. Additionally, the Town has little control over ecological protections in adjoining properties. [BE: No one is proposing either of those extremes. The statement is a red herring and potentially inflammatory. In addition, the preceding paragraph only states the obvious. Alongside conservation, the Easement requires us to "provide" "appropriate" recreational uses. The paragraph's last two sentences should be cut.]

Town residents' preferences for allowed activities

A 2018 survey (see 2018 Management Plan, Appendix G, page 279) asked town residents to indicate their preferences for activities they would like to see allowed in the ACF. The ten most favored, in order of preference, were hiking, running, hunting, snowshoeing, skiing, bird- and wildlife-watching, picnicking, biking and dog-walking. Some Town residents identified connectivity with abutting trail systems to be an important attribute of trail design, while others were concerned that increased traffic would impact sensitive wildlife habitats. Expanding trails into the Forest's most sensitive areas and linking them into larger, unregulated networks would tax the Town's ability to protect the ACF's ecological resources and to manage safety for people using more remote trails. [CR Comment: subjective.....try ¨could possible tax¨]

[BE: Suggest adding the following text here as another subsection:]

Trail Design Principles

Trail development and management in the ACF are guided by the principles listed on page 4 of the The Vermont Town Forest Trail Design Guide:

Avoid sensitive ecological areas and critical habitats.
Develop trails in areas already influenced by human activity.
Provide buffers to protect sensitive ecological and hydrologic systems.
Use natural infiltration and best practices for stormwater management.
Ensure ongoing stewardship of trails and surrounding natural systems.
Design, build, and maintain trails sustainably.
Decommission and restore unsustainable trail corridors.

Naming of Trails:

Note: The suggested names in Appendix B use animal names, which do not necessarily correspond to the prevalence or habitat of the named species. Conversely, the English Language proposed names are indicative of landscape etc. features. ACF will support the revival of the Western Abenaki language and

culture by using Abenaki language for places, practices, flora, and fauna in the naming of trails, educational materials, and signage. Trails will be named to help bring Indigenous presence and language back to this landscape (rather than contribute to their erasure). Appendix B: Indigenous Recognition, Part 4, identifies suggested names that were proposed and vetted by Abenaki tribal citizens, culture keepers and language experts.

General Regulations [BE: Usage regulations are likely to be updated more often than the MP. Putting them in the MP could shorten its shelf life. This and the next five sub-sections would best be published elsewhere – the ACFC web page, the kiosk, with printed maps, annotations to TrailsFork listing, etc.]
To address the often competing interests of human and Forest health, the following regulations about recreation are proposed:
1. No access for horses and similar animals; Horses are a major vector of invasive species spread.
2. Pedestrians are allowed on all trails; Mechanized recreation only on trails identified for such use on the Trails Map; [SP Comment: Consider adding to trail signage as well.]
3. No mechanized recreation during hunting seasons, during (specified) winter months or when trails are announced as 'closed' via public notices;
4. Electric bikes (eBikes) are not generally allowed on the trail network, based on concerns regarding their faster speeds, safety, possible user conflict and the non-motorized provision in the Conservation Easement. Recognizing that eBikes may broaden access for individuals with physical limitations and consistent with a commitment to equity and inclusion and the ADA, any ACF visitors with mobility disabilities who wish to use motorized personal assistive mobility devices (as permitted in the Conservation Easement, Section G) should contact the ACF Committee.

Dogs
Figures ?: Dogs on Trail Rules
https://infoacf.wordpress.com/wp-content/uploads/2023/06/dogs-on-trail-rules-corvallis-2019.jpg
https://infoacf.wordpress.com/wp-content/uploads/2024/09/whynodogs.jpg
Dogs are permitted below the power lines, and not above them. [SP Comment: I generally agree this is the responsible thing to do, but I would offer that we make a slight adjustment— changing it from power line to VAST trail. It only slightly changed the allowed trails for dogs, and also allows for better connectivity to surrounding properties for dog owners without having a major impact on wildlife.] Dogs are to be kept on leash at all times, following the model of the Audubon Society (Huntington), in order to protect the forest wildlife. This is more stringent than the town dog ordinance, and is intended to protect wildlife and vegetation as well as other forest users. Hence no hunting with dogs. Voice control may not always be effective, and may disturb wildlife anyway because of the (loud) vocalization required.
All pet waste must be carried out.

Signage at property boundaries with trails and liaison with adjacent owners
There are three existing possibilities for trail connectivity: VYCC, Sip of Sunshine and Valley View. At each access point from adjacent properties clear signage will indicate what is and is not permitted, using text as posted at the kiosk.

Events/permitting

Commented [SP18]: Consider adding to trail signage as well.

Commented [SP19]: I generally agree this is the responsible thing to do, but I would offer that we make a slight adjustment— changing it from power line to VAST trail. It only slightly changed the allowed trails for dogs, and also allows for better connectivity to surrounding properties for dog owners without having a major impact on wildlife.

People and organizations wishing to hold events in the ACF should apply to the ACF at least two ACF meetings in advance of the event date. (See Easement, Events p7, section J)
Fees may be determined in proportion to and in accordance with cost of the events.
Approval of events will be determined by the ACFC according to criteria including but not limited to: Appropriateness of use per the objectives of the MP and the Easement, expected numbers of participants, location and extent of the event, parking requirements, the likely ecological impact on the trails (if applicable) and on flora and fauna (for e.g., deer wintering, spring vernal pools, etc.).

Determining trail closure times

Decisions on seasonal trail closures address the following criteria: Quality of the activity relative to the season; Minimize incompatibilities among activities for maximizing safety (for example, minimizing non-hunting uses during hunting season, establishing directionality of trails for bikers where necessary); Minimize impacts on animal habitat. Following state guidance for deer wintering closures, the trails will be closed above the power lines from December 15 - April 1 to protect habitat and desirable game species. People may still recreate across ACF in a dispersed manner (eg x-c skiing) but trails will not officially be open. Trails will be closed to bikes from hunting season through April 1st to reduce the number of visitors, and the extent of their presence disturbing deer in wintering habitat. Question: why only bikes? Would skiers be similarly disturbing? Walking is allowed at all times with STRONG cautions to wear highly visible clothing during hunting seasons.

[IAFS: Yes, the whole issue of restricting human activities seasonally is difficult! Your comments seem appropriate to include somehow. But firm 'rules' seem elusive.] [BE: Usage regulations are likely to be updated more often than the MP. Putting them in the MP could shorten its shelf life. This and the next five sub-sections would best be published elsewhere – the ACFC web page, the kiosk, with printed maps, annotations to TrailsFork listing, etc.]

Enforcement of Trail use Policy

Clear signage and a map will be maintained at the kiosk and other formal access points to identify permitted uses and guidance for users and trail closure status. Public should be notified of trail closures at the Town Website and though notices at Richmond's Front Porch Forum. Ropes will be placed across trail entrances when trails are closed seasonally or temporarily for trail maintenance such as clearing downed trees.

7.2.1 Process for Considering Future Trails

Proposals for new trails shall not be approved for construction until a new Trail Design Map is adopted through a full revision of the Management Plan, which is subject to public review and approval by the Selectboard, and the Easement holders. [BE: The word "through" in the previous sentence is ambiguous as to whether the MP drives the trail design or the (problematic)opposite. Suggested rewording: "Proposals for new trails must comply with the latest approved update to the Management Plan. Otherwise, the Management Plan must first be fully revised, publicly reviewed and approved by the Selectboard and Easement holders."]
In considering the appropriateness of proposing any new future trails, the Committee will (1) seek appropriate professional guidance to assist it in evaluating trail sustainability and the impact of trails on the ACF's wildlife and forested ecosystems; [BE: ACFC members, the SB and public will need to know more. Suggest leading this list with (1) Document the need for and benefits of a new trail] (2) comply

with Richmond's Zoning Regulations and Town Plan [BE: Suggest: (3) Obtain estimates for building it and its infrastructure.] (3); engage with the community via an open public process addressing the Town Plan and Management Plan's objectives to offer recreational opportunities while protecting the ACF's natural resources. Zoning permits for new trail construction may require a professionally prepared site plan and an engineering design plan. [BE: I believe Tyler referred to an "Erosion and Sedimentation control plan."]

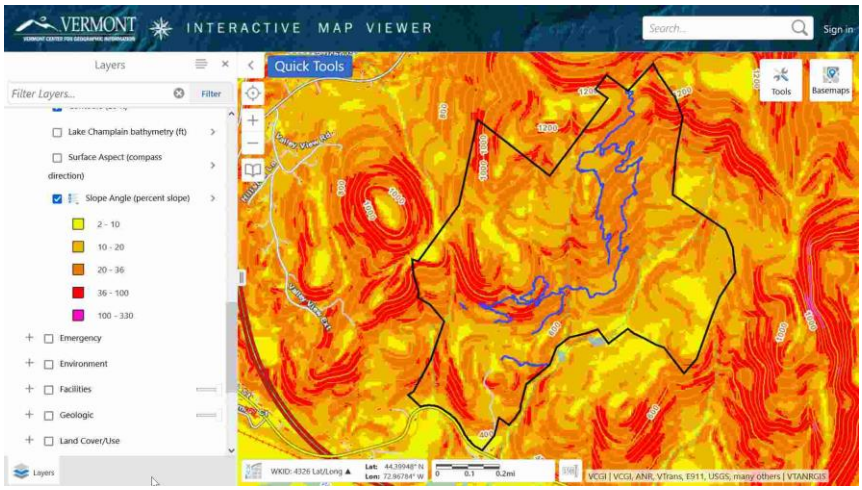


Figure 5: *Slopes of terrain in the ACF, with proposed trails overlaid. Richmond's Zoning Regulations identify special provisions for development on slopes greater than 20%, and greater than 35%. Map source: Vermont Interactive Map Viewer.*

[BE: A map showing only slopes from 20-35% and above 35% would be more helpful. It would probably also be better if placed in the Trail Stewardship Plan, along with other maps showing ACF's landscape-, community- and species-level attributes.] [IS: Not easy to make changes to this map – but it uses slope thresholds that happen to be the ones in Richmond's Zoning.]

Any new trail will avoid impacting ecologically sensitive areas (via buffers and Zones of Influence); avoid duplication of trail routes and high density of trails; avoid trail routes liable to erosion. Evaluation of suitability of new trail proposals should take into account the results of monitoring of impacts of existing and prior trails. A new trail proposal should identify whether it is intended for mechanized (bike) use, and explain why, taking into account the criteria and regulations for allowing mechanized use in the Easement Page 6 (Page 6 Section IIIA "Permitted Uses of the protected Property").

[BE: The following section, though important to ACFC's drafting of the MP and trail designs as well as to discussions of other Town boards, needn't belong in the MP.]

Some Factors to Consider in Evaluating new Trail Proposals:

In favor:

1. The Easement cites 'connectivity' as desirable;

2. Many people have expressed a desire to see a connection to the Sunshine trail network and beyond, (though many have opposed it with valid reasons, see below);
3. The trails were designed with Arrowwood's ecological expertise and were considered consistent with ecological design principles. (Arrowwood/Sinuosity Trails Proposal)
4. Trails, if designated as 'multi-use' would accommodate people using mechanized transport, thus increasing the variety of possible recreational activities and participants.
5. Increasingly, people are recognizing the value of many forms of outdoor recreation to health and wellbeing. Additional trails in more remote sections of the Forest would add to those opportunities.

Not favoring the proposed trails:
[BE: Another point: Arrowwood has expressed its professional misgivings about the SOS connection, explaining that the firm was required to map a such a route despite its ecological impacts.]
1. The Wildlife Stewardship Plan provides a thoroughly researched and updated documentation of the ecological reasons why human presence, especially as facilitated by trails, should be minimized, especially above the power lines;
2. The terrain on which those trails are proposed is mostly steep, and some areas apparently exceed the 30% slope above which the Town Zoning regulations preclude trail development. Slope of the terrain in many other areas exceeds 20%, thus requiring a lot of financial expense and a long permitting process with no guarantee of approval.
3. Some of the proposed trails appear to be inconsistent with ecological principles documented in the Management Plan (proximity to streams, wetlands, etc., infringement on ecologically sensitive areas) where recent research has identified greater negative impacts of human presence.
4. Some Townspeople wish to reserve areas of the Forest where solitude can be enjoyed, and wildlife can be observed, or hunted. More trails would facilitate larger volumes of human traffic.
5. Unknown factors include anticipated volume and cumulative effects of trail traffic, and the possible future changes in access to the trails on adjacent properties.
6. An extensive trail network accommodating 'mechanized travel' would require infrastructure to accommodate steep and rugged terrain, stream crossing requiring bridges, boardwalks etc. This would require additional expenditure of efforts and resources by the Town to construct, monitor and maintain trails in a location where access and parking may limited their value relative to other already existing nearby trails.
[BE: Another point: No one has yet identified a compelling need for building the SOS connection that justifies its costs, ecological trade-offs and management challenges.]

7.2.2 Trail Connectivity to Surrounding Properties

The conserved lands around the ACF provides opportunities for a larger, connected trail network. [BE: Connections to neighboring lands are "opportunities" only if they meet the Easement's Purposes. They also must be based on need, with gains that will exceed the costs (ecological and economic alike). Connections already exist to neighboring lands, including others not noted here.] The former VAST trail already connects the VYCC and trail networks. Consistent with the Easement's recreational objectives, the ACF Trail Design addresses connections to existing, mapped, public trails on properties adjoining the ACF. Any trail connections with adjacent properties will be subject to mutual agreement, including signage to be installed at boundaries to indicate land ownership and allowed uses.

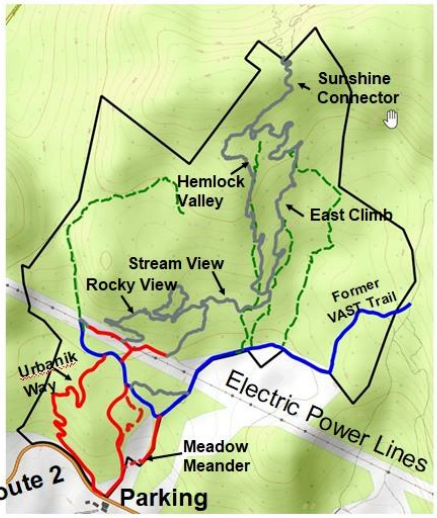
[BE: As with streams, trails should perpendicularly cross the boundary to minimize traffic impacts along that boundary.]

7.2.3 Process for Constructing Approved Trails

- A hired professional trail designer will flag a route that, to the best of their ability, follows the route appearing in the approved Trail Design Map.
- A professional ecologist, will walk the flagged route and a 50 foot buffer on either side to determine whether there are any fine-scale features (rare, threatened, or endangered species) that would be adversely impacted by the proposed trail development. If there are, the trail designer will consult with the ecologist to identify a suitable re-route.
- The Committee may make minor adjustments to the Trail Design Map to ensure a 200' buffer between the trail and known sensitive areas, as identified and mapped in existing ecological assessments. [BE: Words like "may" and "minor" in the preceding sentence provide little guidance for ACFC decision-making. Further, they subjugate the entire Forest's ecological needs to trail aspirations throughout, in conflict with the Easement and best practices. Also, the 200' buffer is a carry-over from MP1, and short of the latest, research-based recommendations for maintaining ecological integrity and long-term, sustainable human access.] Following Easement holder and Selectboard approval, the Committee will proceed to work with the Richmond Trails Committee, volunteer groups or individuals and/or a hired trail-builder to install trails which meet standards and designs agreed upon by the Committee and approved by the Selectboard and DRB.
- The ACFC will seek grant funding as necessary to support the design, construction, and maintenance of trails approved and included on the Trail Design Map.

7.2.4 Trail Design Map

[BE Comments: Trail designs need to follow criteria contained in an approved Management Plan, thus this section is premature. Also, when the MP is approved and a trail design published, the ACF shouldn't be shown as a blank slate. The design can't be evaluated without a map or maps showing proposed trail routes and their appropriate zones of influence in conjunction with the ACF's natural communities, connectivity routes, steep slopes and other sensitive features.]
The 2018 Trail Concept Map was intended as a "roadmap to trail construction" in which the proposed trails "reflect the approximate desired location of future trails, pending the results of the coarse- and fine-scale ecological assessment". The present Trail Design Map
is an extensive development from the Concept Map, based on the design proposed in a contract with Arrowwood Environmental and Sinuosity and subsequently modified in response to public input and Zoning considerations, and recognizing published and peer-reviewed expert findings and recommendations about trail impacts. [BE: The new design was produced ahead of the required revision of MP2 and thus without benefit of whatever trail placement guidelines the new document will contain. Some changes made to the design reflect expert knowledge and best practices. But significant concerns remain with some of the proposed routes.]



(Trail names from Arrowwood Proposal)
Red: Existing (Urbanik Way, Access Road, Dana's, etc.)
Red-Dashed: Pedestrian Only Trail
Gray: Currently proposed ('Rocky View, Hemlock, East Climb, Lower traverse)
Green (dashed): existing Forest Roads

The present Trail Design Map proposes an enduring, sustainable trail network that should not be expanded, to protect the natural resources within the ACF and also to honor the desires of the Andrews family and community intent documented in the Management Plan. It is intended to achieve a trail network that is consistent with minimizing ecological impacts of trail-based recreation. [SP Comment: This map may not be accurate— we still have to determine the trail design for ACF, both in terms of zoning/development feasibility, engineering site plans, and effects on wildlife.] [BE: "Enduring" and "sustainable" as used above are unsubstantiated, self-serving claims. They're also questionable in light of the impacts of higher volumes of trail traffic on nearby natural communities, steep slopes and other sensitive areas, and the safety and enjoyment of users of these trails.]

Commented [SP20]: This map may not be accurate— we still have to determine the trail design for ACF, both in terms of zoning/development feasibility, engineering site plans, and effects on wildlife.

General Principles and Objectives for the trails design

The plan creates a lower density of trails above the powerlines and higher density below the powerlines to place equal emphasis on conservation of the interior forest areas of the property, while still facilitating public access. [BE: Given the high conservation status of the ACF and its density of sensitive area, we should be designated its most sensitive and hard-to-access landscape as a conservation zone, open to all of the recreational activities that take place in it now but with no projects to channel new traffic into it. Given that area's steep, rugged terrain, new trails in a recreational zone between the parking lot and VAST trail would be much more inviting and used by "people of all ages and abilities…."] It provides shorter loops at a lower grade from the parking area to ensure the property is accessible and inviting to people of all ages and abilities, non-mechanized (pedestrian) trails are designated to accommodate school trips, families with young children or older people, providing easy to moderate walking for 45 to 60 minutes.

Trails avoid sensitive areas [SP Comment: Based on the current proposed trail design map, they do not avoid sensitive areas/EPZs.] [BE: Trial impacts would still degrade the ecological functions and integrity oft dry oak forests, riparian areas, wildlife wintering areas, mast stands, seeps and other sensitive areas.] (EPZs, etc) and give an appropriate buffer to sensitive areas, as determined by professional ecologists and with reference to the Conservation Easement. [BE: The Easement's EPZ's are not necessarily aimed at protecting habitat. The riparian area EPZ's for example, seem geared toward protecting water quality and

Commented [SP21]: Based on the current proposed trail design map, they do not avoid sensitive areas/EPZs.

not wildlife habitat and connectivity.] To reduce impacts by avoiding sensitive areas, 'buffer' widths; are specified as "300-foot" to reflect current ecological science.
[JP: 1. the arrowwood proposals do avoid EPZs. The zone of influence may incur but the trails themselves do not. 2. 300 foot ZOI is a good measure but should be conditional language, "wherever possible" or "trails should be routed to ensure minimum impact on habitat by taking a 300ft ZOI wherever possible." Meredith's document is not a policy handbook that lays out strict guidelines. Let's not forget that the document also says that motorized traffic is less impactful than non-motorized traffic (because it moves through more quickly). By that logic we should allow only e-bikes and motor bikes. Yet I don't think any of us would prefer that. So we need to make rational decisions about the area that reflect considered compromises.ß]

Existing roads and trails

1. Except where they coincide with the proposed trail network, existing logging roads and skid trails will not be maintained as trails and will not be shown on ACF trail maps (although during future forest management activities, they may be maintained by the forester and logger). [BE: The Zoning Administrator recommends against this prohibition due to the permitting requirements it would force onto the ACFC. This measure would strip away the value hikers, hunters, skiers, birders and others find in the ACF's network of forest roads, And it would require the Town to assume the yet-to-be-presented costs and risks of building trails in steep, remote areas]
2. Dana's Climb to be renamed as Camel's Hump View [SP Comment: This isn't consistent with the choice to use Abenaki names for the trails.] and is to be pedestrian only.
3. Urbanik Way should be re-routed to start higher in the parking lot to bypass persistently wet ground, scramble up rock, and a section passing very close to Rt 2.

Modifications to Arrowwood Proposal:

[BE: As welcome as any modifications will eventually be, we need a completed MP2 to base them on. Otherwise, and as the next three comments show, the concerns behind them are being arbitrarily applied, outside of any consistent management guidelines.]

- The proposed East Climb and Hemlock Valley trails will be rerouted to avoid wet areas and rare/sensitive plants, per Arrowwood fine-scale review late summer 2022.
- The proposed Ridgetop trail was removed from the proposal, as it tracks closely to the ravine that serves as a key wildlife corridor. [BE: For the same reason, Stream View needs to be re-routed away from its parallel route along that same corridor.]
- The proposed central path between Cascade Trail and Rocky View [SP Comment: Hemlock Valley and Rocky View are problematic due to being in hemlock natural communities, and too close to ledges.] was removed from the plan; instead, the two should be connected where they are closest to one another towards the southern end. Rocky View and Cascade are pedestrian only (Stream View [BE: Stream View still appears to run parallel and too close to the central corridor and its riparian area. (Again, a map including sensitive areas and trail proposals with their ZOIs would make this instantly clear.)], which is one access point for those two trails, will have both pedestrian and non-pedestrian traffic). Note – potential slope problem in that area.
- The Roadside Trail was removed from the proposed network as it is redundant, paralleling the road, and would pass through persistently wet areas making trail construction "tricky" per Arrowwood and Sinuosity report, requiring bridges, ramps, puncheon, etc.

Commented [SP22]: This isn't consistent with the choice to use Abenaki names for the trails.

Commented [SP23]: Hemlock Valley and Rocky View are problematic due to being in hemlock natural communities, and too close to ledges.

Pedestrian-only Trails:

1. All Existing Forest Roads and the (renamed) Dana'will be designated as pedestrian-only.

Trail-free zones

Other than proposed trails, current connection to VYCC trails, and where present-day VAST trail connects, all other areas of the forest are designated as trail-free. Refer to Wildlife Stewardship Plan?

7.2.5 Trail Monitoring, Maintenance, etc.

Trail users will be encouraged to notify the ACFC of any observed problems requiring attention (downed trees, erosion, invasive plants, etc.) via the email address listed at the Town website. The ACFC member who is the Richmond Trails Committee representative will be a designated as responsible for monitoring trail conditions, coordinating maintenance and repairs, and publicizing trails' status.

Monitoring of trail traffic [SP Comment: Should we consider adding a visitor sign in log?] [JP: Absolutely, doing so is consistent with all of our goals (conservation, recreation, education, etc)] and status should include counting or estimating the number of visits, making periodic surveys of plants (including invasives) and animal populations, and inspecting for trail erosion. The plan should establish baselines and then monitor changes over time. [BE: This is good but vague. It should describe how, when and where the baselines will be established, perhaps with a reference to more detail in the Eco section or Wildlife Stewardship Plan. The baseline data shouldn't be collected from a forest newly disturbed by trail traffic.] Results of monitoring shall be reported annually at a meeting of the ACFC. Management actions shall be adjusted according to the results of the monitoring plan per the adaptive management model in Figure 3.

Monitoring should start with sensitive areas identified by the Arrowwood report recommendations, and the 2019 Field Naturalist Report and employ game cameras, observations by citizens science and forest monitoring coordination.

Commented [SP24]: Should we consider adding a visitor sign in log?

Invasive species management

Seasonal visual inspection for invasive species will be conducted by ACFC and removal / mitigation will be planned accordingly. Guidance shall be sought from the Conservation Commission, local experts such as Jon Kart (Vermont Agency of Natural Resources, Fish & Wildlife Department) and others on monitoring methods and control measures for identified invasive species. [BE: The County Forester needs to take a lead role in this, especially given the critical importance given to this topic in the Forestry Management Plan. (Assuming the updated Forestry MP picks that up from the original one.)]

Monitoring impact of human presence in forest

[BE: Again, data will be meaningless unless there are benchmarks and standards relating to trail carrying capacity for ecological protections, user safety, user enjoyment, etc., all of which should be covered in the trail proposal.]

Quantitative and qualitative data collected will be reviewed regularly and guide the Committee in prioritizing trail maintenance and upgrades. Trail user counters will be installed at base of each trail, and

counts retrieved periodically. A non-arbitrary decision-tree will be established to guide actions when certain numbers of users are on trails. Methodology:
1. National Bicycle and Pedestrian Documentation Project (2016): A simple method for extrapolating from sample monitoring to estimate longer term traffic volume. https://bikepeddocumentation.org
2. SE Group (2017) Monitoring Traffic on Hinesburg Town Forest (2017)
https://drive.google.com/file/d/1uUC0Vwym_BjyvSnyVy58z4Qp40p6ElBT/view
3. Monitoring traffic on Johnnie Brook Trail https://infoacf.files.wordpress.com/2023/04/jbt-kh.pdf
Seasonal visual inspection of trails for erosion and maintenance requirements will be conducted by the ACFC. Trail maintenance will be planned seasonally and as needed and will be coordinated with the Trails Committee to supervise work and to recruit volunteers. The ACFC member who is the Richmond Trails Committee (RTC) member will liaise between ACFC and the RTC and other groups.

7.3 Snowmobiling

Previously the ACF contained a snowmobile trail that was part of the VAST trail network. Snowmobiling will be permitted in the ACF if and when VAST seeks to establish such trails and subject to a use contract ensuring compatibility with the Management Plan's goals and objectives.

7.4 Hunting

Many people want to hunt in the ACF. Hunting is allowed on the property in accordance with all State and federal laws and allowable uses. As of 2021, citizens of recognized Abenaki tribes may obtain free hunting licenses from the state of Vermont. The ACFC will emphasize education about hunting season safety for both hunters and non-hunters. Trapping will not be permitted on the Town Forest because of the safety hazard it presents to visitors and their pets who may be traveling both on and off trail.

7.5 Potential Recreation Partnerships

[BE: Add Richmond Conservation Commission, County Forester, Vermont Fish & Wildlife Department, UVM Community Forest Program]

- Richmond Trails Committee
- Western Abenaki Tribes and Richmond Racial Equity
- Maple Wind Farm
- VYCC
- Richmond Land Trust
- Richmond Mountain Trails/Vermont Mountain Bike Association (VMBA)
- Scouts
- Community Senior Center

7.6 Recreation Management Objectives and Actions

Objective 1: Develop and promote a community forest that accommodates a wide variety of recreation opportunities (hunting, hiking, skiing, mountain biking etc.) subject to the provisions of the Conservation Easement and this Management Plan as it may be revised from time to time.
Actions:

- Maintain existing trails and design build new trails in conformity with the ACF Trail Design Map and provisions in this Management Plan [BE: Another appearance of the cart in front of the horse.

Specifying a pre-existing "Trail Design Map" circumvents basing such a map on expert-derived, agreed-upon criteria clearly spelled out in the Management Plan. To do otherwise opens the way to arbitrarily applied rules, and inconsistent, ineffective management of the property over time.]

- Choose trail names that bring Indigenous presence and language back to this landscape and create signage accordingly. Consult Appendix B, Part 4 for suggested names that were proposed and vetted by Abenaki tribal citizens, culture keepers and language experts.
- Maintain a trailhead kiosk at the parking lot with information about wildlife and natural resources, hunting seasons, hunting safety, trail etiquette, agricultural uses of the property, allowed user groups, property ownership, cultural and ecological information, etc.
- Include the short version of the Land Acknowledgment at all signed entrances, on kiosks and on maps stating: "The Andrews Community Forest is located within Ndakinna, the unceded homeland of the Western Abenaki People, who have a unique connection to this land and have been its traditional stewards." (See Appendix B, Part 1.)
- Install a bike rack at the East Main Street entrance to the Community Forest
- Work with neighboring landowners to address any changes in landownership and allowed uses.

Objective: Manage the recreation infrastructure in a way that best honors the needs of the forest and its users.

Actions:

- Work with the Trails Committee to organize, advertise, and facilitate routine maintenance, acute maintenance, and trail work days and recruit volunteers.
- Establish the ACFC email address as the means for trail users to communicate any need for trail maintenance (downed trees, erosion, etc.) or user conflicts.
- Maintain a process to monitor and communicate trail conditions to the public.
- Monitor impacts of recreational use on natural resources and adapt management strategies accordingly: [BE: Suggest beginning this point with "Establish benchmarks and management action points, and monitor impacts…."]
- Explore possibilities for creating a walking/biking connection from the ACF to Richmond Village.
- Evaluate applications for hosting trail-based events and races on forest trails if ecological monitoring indicates an ability to do so without negative impacts to forest ecosystems and trail infrastructure. [BE: We needn't limit this to "trail-based events and races" as many forms of recreation take place off trails. Suggest just saying "activities in the ACF." (Of course, we should also be sure to build trails "without negative impacts to forest ecosystems.")]
- Employ current best practices on balancing the needs of both habitat and recreational users.

8. Agriculture Management (Wright updates)

8.1 Potential Agriculture Partnerships

- Maple Wind Farm
- Richmond Farmers Market
- Richmond Community Kitchen
- The Farm at VYCC
- NOFA Vermont
- Vermont Farm Bureau (Remove)

8.2 Agriculture Management Objectives and Actions

Objective: Recognize the importance of agriculture in Richmond and Vermont's heritage and continue to allow agricultural uses that are compatible with other management goals.

Action:

- Promote opportunities for agriculture education and demonstration on the parcel, perhaps in conjunction with Maple Wind Farm or other agricultural entity with a vested interest in the property.

Objective: Develop agreements with Maple Wind Farm or other farm entity to allow coexistence of agriculture and public access.

- **Actions:**
  Work with neighboring Maple Wind Farm or other farm entity who desires to use the two fenced-in agricultural meadow pastures and maintain or create the necessary license agreement for their use.
- Work with Maple Wind Farm to have the farm consider converting the southern part Old Farm Road to a human use only trail and in exchange for granting Maple Wind Farm a perpetual easement agricultural use of the 25' utility road right of way from Route 2.
- Maintain the two meadows as open land whether grazed or not; Brush hog each of the meadows at least every three years.

Maple Wind Farm, the current farm leasee may use the "lower meadow" and a meadow along the powerline right-of-way for grazing cattle. Maple Wind Farm has a right-of-way for agricultural purposes over the main farm road on the Andrews Community Forest extending from the Dyer-Chadwick property to Maple Wind Farm's upper meadow. The Town has a right of way over the northern edge of Maple Wind Farm's upper meadow. The Town will work with Maple Wind Farm to ensure compatible shared use of these two roads and rights of way, and to accommodate a high tensile electric fence around their grazing area in the community forest's lower meadow. A gate through the fence will allow for public access to the meadow when the pasture is not in use for grazing. When the pasture is in use, the "cutover trail" will be closed.

There may be opportunities in the forest for a community garden/orchard, and agricultural education and demonstration projects. Under the Conservation Easement, agriculture is permitted where the forest has already been cleared. The ACF Committee will remain open to proposals for alternative uses of the agricultural lands, but appreciates maintaining a long-term, mutually-beneficial agricultural partnership.

9. Education (Daniel + Jeanette Malone)

The ACF offers abundant educational opportunities and should exploit the natural features and cultural history of the Andrews Community Forest to provide enriching educational experiences for community members from elementary school students, college students, and curious adults.

Possible educational opportunities include:

- Climate and Biodiversity monitoring programs
- Trail building and maintenance (in partnership with VYCC)
- Host community events with an educational component.
- Tree/bird identification programs
- Sustainable forestry and forest products education
- Sustainable agriculture education
- School field trips on ecology and cultural history
- Outdoor skills training about responsible trail use (respecting wildlife, other trail users, natural resources, etc.)
- Kids summer camps and after school programs
- Seasonal guided hikes highlighting forest ecology
- Navigation and orienteering workshops

9.1 Educational Objectives and Actions

Objective 1: Provide educational materials, demonstrations and tours about natural communities, biodiversity, cultural history, the working forest, and good stewardship practices using the forest as a model and example of the value of healthy forests to the community.

- Place interpretive signage throughout the forest about natural communities, stewardship, and cultural history.
- Identify locations for birding and viewing wildlife.

Objective 2: Include local students and community members in data gathering/analysis.

- Monitoring of trail use
- Monitoring of invasive species

Objective 3: Partner with the schools and organizations listed above to hold programming in the forest. Use timber management activities as an opportunity to educate the community about proper forest management.

- Action 1
- Action 2

Objective 4: Education about land and original people recognition

- Reserve a portion of the kiosk to share history of Abenaki use of the land.
- Recruit people who can speak knowledgeably about Abenaki uses and care of the land (for example, hosting authors for a book club, perhaps in conjunction with the Richmond Free Library, Conservation Commission, UVM, VYCC, others?).
- Continue to seek advice from authorities including Indigenous peoples' Chiefs, organizations such as Richmond Racial Justice, and individuals with links to or knowledge of indigenous culture. About naming trails and places and rename to reflect Abenaki heritage, as already included in MP2

9.2 Potential Education Partnerships

- Richmond Elementary School
- Camels Hump Middle School
- Mount Mansfield Union High School
- University of Vermont Field Naturalist Program
- University of Vermont Rubenstein School and Environmental Studies Program
- Essex Technical School
- Vermont Youth Conservation Corps
- Abenaki Nation of Missisquoi, The Nulhegan Band of the Coosuk Abenaki Nation, Richmond Racial Equity
- Green Mountain Audubon Center, Birds of Vermont Museum
- Boy and Girl Scout Troops
- Maple Wind Farm
- Nature Conservancy
- Vermont Land Trust, Richmond Land Trust
- Richmond Recreation Committee
- Radiate Art
- Vermont Forests, Parks, and Recreation
- Summer Camps: Mount Mansfield Modified Union School District (MMMUSD) and MMMUSD,Part 2 After School and Summer Camps, Our Community Cares Summer camp
- Green Mountain Orienteering Club

[I agree with putting this close to the end. However, it should lead with the Conservation Easement, as noted earlier. The Town Plan deserves mention for the objectives it sets. The Zoning Regulations are binding, though, and a brief commentary and hyperlink to those would be helpful here. Comments in the first paragraph are mine.]

10. Legal Agreements on the Property (Wright)

There are many [several?] agreements, rights-of-way, and easements that are key to the management of the forest. *[BE suggests:* The Richmond Town Plan also establishes policies to use in guiding ACFC decisions. The Town's Zoning Regulations come into play as well, particularly in constructing new trails and infrastructure on ACF slopes above 20% in pitch.

10.1 Agricultural Lease

Maple Wind Farm is the adjoining landowner, and that land includes the remaining acres of the original Andrew farm. Maple Wind Farm has historically used eight acres of what is now the community forest for grazing cattle. Both parties are interested in continuing this arrangement and can explore the possibility of a long-term agriculture license agreement. Vermont Land Trust, as conservation easement holder would need to approve any such use license agreement.

Should Maple Wind Farm return to using one or both open meadows, the Committee wishes to retain a crossover trail across the lower portion of the pasture linking the VELCO access road with the old farm road to the east. This trail would be open anytime cows are not grazing in the pasture; when cows are grazing, the Committee proposes closing this trail and installing appropriate signage to redirect visitors to other routes on the property.

It is noted that the southern side of the lower agricultural meadow is on land that is apart of the former Andrews' homestead. The committee should work with this residential neighbor to continue accessing this lower meadow trail.

10.2 Powerline Rights-of-Way: VELCO Wright updates

A VELCO powerline, and its 150' east / west utility easement right of way runs through the middle of the community forest. VELCO needs frequent vehicular road access to the utility right-of-way for maintenance and repairs to the powerline. In 2018, VELCO upgraded improved the utility access road from the forest entrance on Route 2 to the powerline right of way ; VELCO used the upper landing area to stage the utility road their work. Following this 2018 work, VELCO re-seeded the landing and the road above the landing and installed waterbars on the road below the landing.

The Town (with the Committee) has worked for three years with VELCO on a 25' wide the utility road easement right of way agreement, requested by VELCO. This utility road right of way is located in the existing utility road heading north from Rte. 2 to the VELCO and GMP utility lines on the property. The Town will receive $11,549.45 from VELCO for granting this utility road right of way easement. Additionally, VELCO's insurance provider has listed the Town of Richmond as additionally insured, and VELCO installed two rows of split rail fencing and signs to help keep the public away from the now unused utility road bridge abutments under the power lines. This new utility road easement will likely be recorded in early 2025.

Approval by Vermont Land Trust and the Selectboard is required for any changes in easement agreements.

10.3 Powerline Rights-of-Way: Green Mountain Power Wright updates

Green Mountain Power has a 100'-125' utility right-of-way adjacent and north of the VELCO line in the same powerline corridor.

Within each of the two utility corridors, VELCO and Green Mountain Power (GMP) manage vegetation growth. The Committee will work to better understand the vegetation management goals and practices, the landowner's (Town's) rights, to advise the Selectboard to make an informed decision about vegetation management within the Powerline corridor, and to communicate this decision broadly to Community Forest visitors.

At certain periods, VELCO and or Green Mountain Power may need to close some or certain parts the community forest to perform utility line maintenance and upgrade projects. VELCO and GMP should coordinate with the Town and the committee to prepare for such events and fully inform the public of the closure.

10.4 Legal Agreements Management Objectives

- Develop agreements that allow partners to work within the forest while limiting the impact (both ecological and human impact) of such work.

10.5 Legal Agreements Management Actions

- Work with VELCO and GMP to understand and select vegetation management strategies in the powerline right-of-ways which are safe, effective, and environmentally responsible.
- Communicate with the public about grazing plans or powerline management activities that may influence the public's experience on the property.
- Manage public use during powerline work or grazing periods to mitigate public safety hazards.
- Maintain positive working relationships with Maple Wind Farm, VELCO, and Green Mountain Power to ensure that their use of the property is compatible with public visitation.

11. Appendices

Appendix A: Conservations Easement
Appendix B. Indigenous Land and People Acknowledgment and Land Use
Appendix C: Draft Wildlife Stewardship Plan

List of Maps

A. Trail Concept Map 2018 - zones
B. Trail Concept Map 2018 - possible trails
C. Trail Design Map
D. Arrowwood and Sinuosity proposed map 2021
E. Slopes: https://maps.vermont.gov/vcgi/html5viewer/?viewer=vtmapviewer
F. Maps from Shapefiles:

Appendices from 2018 Management Plan (links)

1. Forestry Maps, etc.

ACF Soil Map (2019)
Forest Stands (2019)
Forest Stands -Topo (2019)
Management Intensity Zones (2019)
Forestry Activities Map (2019)
ACF Invasives Map 090119
Example Forester Agreement 072419)

2. Ecological Assessments

Andrews Farm Ecological Assessment – Allaire Diamond
Four Town Ecological Assessment - Arrowwood Environmental
Audubon Society: Forest Bird Habitat Assessment and Management Recommendations (Hagenbuch, 2017)

3. Maps & Appendices from 2018 Management Plan

A. Maps
    a. Trail Concept Map - zones
    b. Trail Concept Map - possible trails
    c. Conservation Easement Map
    d. Interim Management Plan Map (applicable through 12/31/18)
B. Chart: Evolution of Allowed/Prohibited Uses Through Planning Phases
G. Results and Comments from Public Meetings (page 279)

4. Visioning Process (2017) from 2018 Management Plan

(Starts at Page 279 of 345):
Visioning Process Results (pp 279 -)
See charts of priorities: Page 294: Management Focus; Page 342 – 347: Recreational Activities 1-6

12. References

[BE: At some point this list need some review and clean-up.]

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