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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?



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

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2 **1. Introduction, Process History, Land Acknowledgement, and** 3 **Governance Guidelines**

4 **1.1 Introduction to this document**

5 This document serves as the Comprehensive Management Plan for the Andrews Community Forest
6 (ACF). The ACF Management Plan was initially prepared by the Interim Community Forest Steering
7 Committee which comprised Berne Broudy, Cecilia Danks, Brad Elliott, Willie Lee, Hannah Phillips
8 (Chair), Wright Preston, Guy Roberts, and Elizabeth Wright. Assistance was provided from Ethan Tapper
9 (Chittenden County Forester), Bob Heiser, Cara Montgomery, Rebecca Roman (Vermont Land Trust),
10 Drew Pollak-Bruce, Liz Grades, Ellie Wachtel, Taylor Luneau (SE Group), Aaron Worthley, Dori Barton
11 (Arrowwood Environmental). The first iteration of this document was accepted by the Selectboard in
12 November 2018 .

13 The Management Plan underwent a full revision in 2022-2026 by the Andrews Community Forest
14 Committee (ACFC). Revisions included adding an Indigenous land use acknowledgment, replacing the
15 original recreational trail design concept with a new trail based on ecological assessments, and textual
16 reorganization, updates, clarifications and corrections.

17 **1.2 Acquisition of the Andrews Community Forest**

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

23 **1.3 Conservation Easement**

24 The Andrews Community Forest is encumbered by a [Conservation Easement](#) (“Easement”) held by the
25 Vermont Land Trust and the Vermont Housing and Conservation. The purposes of the Easement are to
26 conserve the property’s natural resources and ecological processes, open space values, provide for non-
27 motorized, non-commercial recreation and education, and involve the public in the management of the
28 property.

29

30 Vermont Land Trust acts as the primary easement steward. As the primary easement steward, Vermont
31 Land Trust (VLT) must conduct annual monitoring to ensure activities on the property are consistent with
32 the terms of the easement. The easement steward is also the Committee’s primary contact at VLT for
33 reviews and approvals of proposed actions which are not contemplated in the Management Plan.

34

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

39

1.4 Indigenous Land Acknowledgment

2 Andrews Community Forest is located within NdaKinna (in-DAH-kee-NAH), the homeland of the
 3 Western Abenaki people, who have a unique connection to this land and have been its traditional stewards
 4 for millennia. For many generations before the European colonists arrived, the Abenaki people harvested
 5 animals, nuts, plants, berries, fiber, and timber in these forests, without degrading their ecological health.
 6 The Indigenous people who preceded the colonists created an extensive system of trails throughout the
 7 Green Mountains that attest to the extended relationships between the Abenaki people and other tribes,
 8 who also used these forests, and who took refuge here as the settlers drove them from their homes.
 9 The Town of Richmond acknowledges that we have access to this land because it was taken without
 10 consent and that our ability to make decisions about its management rests on this historic injustice. The
 11 Andrews Community Forest Committee therefore acknowledges the Abenaki people’s rights to use this
 12 land in perpetuity and welcomes the Abenaki people as partners in our forest management. We aim to
 13 honor and respect the Abenaki people through responsible forest management and sustainable land use.
 14 We will strive to incorporate Traditional Ecological Knowledge into our management practices to foster a
 15 healthy forest community and to restore a healthy balance between human needs and the needs of the
 16 nonhuman people of the forest ([Appendix B Indigenous recognition](#)). We say their name, and we name
 17 trails using the Western Abenaki language, to remind us that the Abenaki people are the Original People
 18 of the Dawnland, NdaKinna, out of respect for their culture and special relationship to the land, and to
 19 acknowledge their historic and ongoing contributions to our community.

1.5 Governance of the Andrews Community Forest

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

27 The ACFC is a [seven-to-nine](#) person committee ([meaning of 7-9?](#)). The Richmond Conservation
 28 Commission and the Richmond Trails Committee each appoint a current member of their respective
 29 committee to sit on the ACFC. Additionally, the Conservation Commission and Trails Committee shall
 30 each recommend one person who is not a member of their respective committee for election to the ACFC.
 31 In order to incorporate Indigenous perspectives and traditional ecological knowledge into ACF
 32 management, the ACFC will seek to fill at least one of its seats with an Abenaki tribal citizen (see
 33 [Appendix B: Indigenous recognition](#)). ACFC will engage with the local Abenaki community to identify
 34 potential ACFC members.

1.6.1 Purpose of the Committee

36 **VISION:** The Andrews Community Forest will serve Richmond as a thriving ecosystem where
 37 conservation, education, and recreation harmoniously coexist. Through sustainable management
 38 practices, we aim to preserve the forest's ecological integrity and contributions to its forest block, while
 39 providing opportunities for local community engagement, environmental education, innovative forestry
 40 practices, and outdoor recreation. Together, we strive to create a model of responsible land management

1 where generations connect with and enjoy nature, share in the Forest’s stewardship, and foster a deep
2 appreciation for the rich biodiversity and cultural heritage of our region.

4 **MISSION** (representing a concise form of the ‘Purposes’ spelled out in the Easement):

5 Our mission is to manage the Andrews Community Forest to uphold the Purposes and other
6 directives of the Conservation Easement as well as those found in applicable local, state and
7 federal policies and mandates. We will:

- 8 1. Keep the ACF available for public use and enjoyment, including non-motorized, non-commercial
9 recreational, educational, and other appropriate community uses.
- 10 2. Protect its productive forestland, wildlife habitats, biological diversity, natural communities, riparian
11 buffers, wetlands, soil and water quality, and native flora and fauna, along with the ecological processes
12 that sustain them.
- 13 3. Guide the Forest’s management through open, public discussions and decision-making.
- 14 4. Strive to conserve key features and functions of the ACF, including:
 - 15 • Its values as a relatively natural and unfragmented forest, providing important landscape
16 connectivity and wildlife habitat to one of Vermont’s largest forest blocks
 - 17 • Its uncommon natural communities and sensitive habitats, including Dry Oak Forest, Dry Oak-
18 Hickory-Hophornbeam Forest, Dry Red Oak-White Pine Forest, Red Pine Forest, and Vernal
19 Pools
 - 20 • Its streams and their wooded buffers which maintain water quality, riparian habitats and corridors
21 for species movement
 - 22 • Its ability to sustainably provide both dispersed and trail-based recreational opportunities
 - 23 • Its high potential for demonstrating how ecological forestry practices, by emulating natural
24 disturbances, can encourage the development of a complex, diverse and healthy forest
 - 25 • Its resources for engaging the public in learning about forest ecology, habitat protection, and
26 sustainable recreational and forestry practices and stewardship
 - 27 • Its long cultural history and traditions, including those described in the management plan’s
28 Indigenous Lands Acknowledgement text and concepts.

29
30 The purpose of the Andrews Community Forest Committee is to:

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

41
42 Furthermore, the ACFC agrees to strive towards the following guiding tenets:

- 43 ● ~~Demonstrate an ongoing commitment to providing meaningful public access and outdoor~~
44 ~~recreation opportunities while simultaneously providing meaningful natural resource protection.~~

1

- 1 ● ~~Demonstrate an ongoing commitment to learning more about the property and its natural history.~~
- 2 ● ~~Demonstrate an ongoing commitment by the committee to work together across differences as~~
- 3 ~~representatives of the Town and all of its residents.~~

5 **2. History, Background and Existing Conditions**

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

15 **2.1 General Property Description and Background**

16 The Andrews Community Forest is a 428-acre largely forested parcel just outside Richmond Village in
 17 Chittenden County. The property is a diverse forestland with two small meadows. It has an abundance of
 18 hard-mast stands, predominantly oak and beech, that serve as important habitat for many species of
 19 wildlife. The forest includes several patches of Dry Oak Forest, Dry Red Oak-White Pine Forest, and Dry
 20 Oak-Hickory-Hophornbeam Forest, which are uncommon natural communities in Vermont. The property
 21 also has low elevation, southerly facing hemlock stands, which are used as winter deer yard. Recent
 22 timber harvesting and blowdown events have created patches of young forest and early successional
 23 habitat in the west and south of the property.

24
 25 Overall, this forest, especially as part of a larger, connected forest block, is a well-conserved wildlife
 26 habitat. The forest is one of eight large parcels that originally inspired the Chittenden County Uplands
 27 Conservation Project (CCUCP). The CCUCP (Community Strategies for Vermont’s Forests and Wildlife
 28 A Guide for Local Action Page 35. [Case Study: Chittenden County Uplands Conservation Project](#)) is a
 29 landscape-scale conservation effort with over a dozen partners working to conserve ecologically and
 30 culturally important forest blocks and habitat connectors between and alongside Camel’s Hump State
 31 Park and Mount Mansfield State Forest. The Andrews Community Forest abuts 6,000 acres of forestland
 32 that itself is adjacent to the 72,000-acre Mt. Mansfield Forest Block. This largely conserved forest block
 33 is a critical wildlife corridor and has been ranked in the top 3% of the state’s wildlife habitat blocks by the
 34 Vermont Department of Fish and Wildlife. The forest has several headwater streams ([Figure 1](#)) that flow
 35 into the Winooski River and then on to Lake Champlain. The property also includes a small beaver pond
 36 and wetlands and at least two vernal pools.

37
 38 Vermont is losing over 14,000 acres of forestland a year to development, so the conservation of the the
 39 Andrews Community Forest and associated forest block is of key importance. Further, the global loss of
 40 biodiversity to habitat fragmentation, environmental degradation, and climate change also emphasize the
 41 need to sustain the ACF's many ecological resources.

1

1 2.2 Geology, Topography, and Climate

2 2.2.1 Topography and Aspect

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

6 2.2.2 Biophysical Region

7 The Andrews Community Forest is located within the Green Mountains Biophysical Region, near its
8 boundary with the Champlain Hills Region LR-1. This region is part of the Appalachian Mountain chain
9 that extends from Alabama north to Québec. It includes Vermont's highest mountain (Mount Mansfield at
10 4,393 feet) and includes its coldest climate, and the greatest annual precipitation (72 inches). The bedrock
11 is primarily acidic, composed of non-calcareous schists, phyllites, gneisses, and granofels. Northern
12 hardwood forests blanket the region on the mountain slopes up to about 2,500 feet, above which yellow
13 birch and red spruce are dominant. Spruce-fir forests occupy the higher slopes and summits, with alpine
14 meadows above 3,500 feet. The extensive, unfragmented forests of this region provide habitat for many
15 species of wildlife that thrive in remote, interior forest conditions. The high elevation forests of this
16 region and the Southern Green Mountains provide habitat for several species of birds, **important? Why**
17 **these? including Bicknell's thrush, Swainson's thrush, and blackpoll warbler.** The heavy precipitation and
18 deep snows in the mountains feed some of the state's largest rivers, including the Missisquoi, Lamoille,
19 Winooski, and White. Floodplain forests were once common along these rivers, but they are now mostly
20 converted to agriculture.

21 2.2.3 Bedrock Geology

22 The Andrews Community Forest contains both Underhill and Pinnacle bedrock Formations. The western
23 part of the forest, from its northernmost point over is Underhill, and the eastern area is Pinnacle. Both
24 formations are metamorphic sedimentary rocks, formed by sediments collecting at the bottom of an
25 ancient sea, stacking on top of each other, then metamorphosing and compacting into rock during the
26 Taconic Orogeny, the event that created the Green Mountains. As metamorphic rocks, they are typically
27 dense and non-porous and have cracks and visible fractures.

28
29 The Pinnacle Formation is made of schistose greywacke rock, metamorphosed from bits of rock, mud,
30 and debris that had already broken down somewhat from their original state. It is gray to buff in color and
31 the stripes of varying layers in the rock are generally visible. The minerals present are quartz, sericite,
32 biotite, and chlorite. The formation dates back at least to the Cambrian Period, 500 to 630 million years
33 ago.

34
35 The Underhill Formation is a silvery-green color and a combination of phyllite and schist rocks. The
36 minerals present are chlorite, muscovite, and quartz. Compared to the Pinnacle Formation, the Underhill
37 Formation bedrock also dates back to at least the Cambrian Period but has coarser grains.

1

1

2 **2.2.4 Surficial Geology**

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

11

12 In the Andrews Community Forest, where the bedrock is not exposed, till covers the land and is the
13 source of stones in the forest's rocky soils. The glacial till is thicker in the valleys and thinner in the
14 uplands. Many of the exposed uplands in the forest have experienced significant post-glacial erosion,
15 leaving only rubble and scattered boulders on top of the bedrock.

16 **2.3 Climate**

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

23 **2.4. Cultural History**

24 **2.4.1 Indigenous History**

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

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

2

1 Specifically for the Richmond area, archaeological studies in the 1990s near the bridges in Jonesville over
 2 the Huntington and Winooski rivers have yielded valuable physical evidence of occupation and forest use
 3 by Indigenous peoples before colonization (Thomas et al. 1995; Doherty et al. 1996). These sites were
 4 radiocarbon dated to approximately 1040 AD (near Winooski bridge) and 1500 AD (near Huntington
 5 bridge), and thus considered to represent the Middle to Late Woodland period. The sites show that
 6 animals “including black bear, deer, beaver, porcupine, muskrat, fisher, mink, skunk, cottontail, red
 7 squirrel, and chipmunks were taken for both meat and pelts. Various nuts, including butternut, hickory
 8 nuts, beech nuts, and acorns from red oak” were also collected and processed for consumption and storage
 9 (Thomas et al. 1995). Diverse tree species were used for firewood at the Huntington River site, including
 10 beech, maple, birch, red pine, eastern hemlock, elm, eastern hophornbeam, eastern cottonwood, red pine,
 11 and possibly alder. No evidence of maize was found at these sites, even as maize, beans, and other plants
 12 were being cultivated at that time along the Winooski River closer to Lake Champlain. Thomas (2008)
 13 surmises that these Jonesville sites were seasonal encampments occupied between September and late
 14 December/early January to collect and process forest resources. Such findings suggest that the forests
 15 where ACF is now located were largely stewarded and used for hunting and gathering, rather than
 16 agriculture. This pattern concurs with broader geographical accounts of Abenaki practices, such as
 17 Wiseman (2001:27), who stated that the Abenaki “... had smaller seasonal camps along most rivers eight
 18 thousand winters ago” and described gathering and hunting activities in the uplands.

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

30 **2.4.2. Plants and Animals of Special Cultural Importance for Western** 31 **Abenaki**

32 A number of forest species were and continue to be of special cultural importance to the Abenaki people,
 33 and as such deserve special management consideration. Among tree species, these include black ash
 34 (*Fraxinus nigra*, also called brown ash and *maalakws* in Abenaki) used for basketry, and white birch
 35 (*Betula papyrifera*, also called canoe birch, its bark called *wigwa* in Abenaki) for canoes, homes, and
 36 containers. Unfortunately, black ash populations are currently highly threatened by the emerald ash borer,
 37 which is already present in Richmond. Butternut (*Juglans cinerea*, in Abenaki *pagon* or *bagon*) were
 38 among the trees highly valued for food, medicines, materials, and dyes (Haviland and Power 1994;
 39 Wiseman 1995b, 2001). This culturally important species is also threatened. The butternut canker fungus,
 40 first found in Vermont in 1983, now infects early all butternut trees causing dieback and often death.

1 Maple sugaring (*Pkwamhadin* – “gathering of maple sap” (Chenevert 2021)) was an important seasonal
2 activity among the Western Abenaki, one which was taught to colonists (Cotnoir n.d.).

3 Thomas (et al. 1995:61-64) lists the uses by the Abenaki of some thirty species of trees and shrubs
4 abundant in the mixed deciduous forests of Vermont, many of which are found in ACF. Wiseman (1995a,
5 1995b, 2001) describes a wide range of forest plant species that were and are collected for construction
6 materials, food, medicines, and dyes by Abenaki people. In Appendix 2, Wiseman (2001) lists many
7 forest plants used in Abenaki herbal medicines by the maladies that they treat. A complete list of
8 culturally important species found now or in the past at ACF would be valuable to develop for use by the
9 ACFC in management decisions and educational materials. Ideally, such a list would be compiled, and
10 important species prioritized, in partnership with the Abenaki people.

11 Before colonization, the Abenaki likely hunted and trapped a wide range of animal species for food and
12 pelts in the forested landscape where ACF is now located. Thomas et al. (1995:65-75) describes the
13 traditional uses of the 11 species of animals found at the Huntington River site. Wiseman (2001)
14 describes the relationship and importance of many species to the Abenaki, as well as how they were
15 traditionally hunted and used. The acts of hunting and fishing, as well as the resulting food, skins and
16 other usable body parts (e.g., bones and sinew), remain culturally important for many Indigenous peoples.
17 As mentioned for forest flora above, it would be valuable to develop a prioritized list of ACF’s animal
18 species of cultural importance in consultation with Abenaki partners, including uses, stewardship, and
19 both Abenaki and scientific names.

20 **2.4.3. Abenaki language and the ACF**

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

31 Conservation efforts, such as the ACF, can inadvertently contribute to the erasure of Indigenous presence
32 when introducing and perpetuating nonnative place names and management practices. Conversely, the
33 ACF can support the revival of the Western Abenaki language and culture by supporting the use of
34 Abenaki language for places, practices, flora, and fauna in the naming of trails, educational materials, and
35 signage. **Appendix B** includes suggestions developed by the Richmond Racial Equity committee in
36 collaboration with Abenaki tribal citizens and culture keepers. If ACFC decides to go beyond that list,
37 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.

The Andrews family also kept a small deer camp, known as "Odds and Ends," on the northern portion of the property. They built a rustic cabin there in the 1950s but stopped using it in the 1990s and eventually had it burned in 2013. Only the metal roof and two 1950s automobiles remain on the property.

Everett and Mary Jo Andrews, and their daughters, generously facilitated the transfer and conservation of the property as a Town Forest. Angus Cummings (2019), a UVM student, interviewed several of the Andrews sisters and other townspeople familiar with the recent history of the parcel in 2018 for his [thesis](#) that includes historical photos of the site contributed by the Andrews family.

1

1 2.4.5 Remaining Historical Sites and Features

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

11

12 2.5 Ecological Resources

13 The ACF Conservation Easement and Richmond Town Plan require us to maintain the forest’s ecological
14 health and its ability to support biodiversity amid climate and land-use changes. To guide this effort, this
15 part of the Plan uses the [Vermont Conservation Design](#) (VCD) framework to look at the ACF’s natural
16 resources from three perspectives: landscape, community, and species.

17

18 The VCD framework, combined with a number of research studies, informs this and other sections of the
19 ACF Management Plan. For example, many studies show that human activities can disturb wildlife and
20 degrade the value of habitat at distances of 1000 feet or more for some species. As a workable average,
21 wildlife biologists recommend buffering sensitive areas from concentrated human activity by at least 330
22 feet (Naughton M, 2021, Dertien et al. 2021, Baas J. et al. 2020, Vermont Agency of Natural Resources,
23 2005, Oehler, J, 2019). Identifying the location of ACF’s sensitive natural areas allows us to use buffers
24 to protect the Forest’s ecological integrity while also expanding recreational and other human activities.

25

26 Numerous remote and “boots-on-the-ground” assessments specific to the ACF also provide information
27 for understanding and managing the ACF. (See Arrowwood’s [Science to Action](#), UVM [Field Naturalist](#)
28 [Report](#)) VLT ‘[Rapid Ecological Report](#)’, [Audubon Vermont](#)’s 2017 forest bird habitat assessment on the
29 property, the UVM Field Naturalist Program ([Landscape Analysis and Wildlife in the Andrews](#)
30 [Community Forest, Richmond, Vermont, 2018](#) Bob Low’e assembled report [Andrews Community Forest](#)
31 [An Ecological Assessment](#)).

32

33 2.5.1 Landscape-Level Attributes

34 The ACF lies at the southwest corner of the 70,000-acre Mount Mansfield Forest Block, a state-
35 significant ecological landscape ranked "High Priority" by Vermont Conservation Design. As part of this
36 larger forest, the ACF’s intact interior forest supports wide-ranging species like black bears, bobcats and
37 fishers, and steep ridgelines and canopied ravines facilitate seasonal movement and genetic dispersal. As
38 climate shifts, the ACF’s connectivity will enable species to adapt by moving northward, reinforcing its
39 role as a cornerstone of regional biodiversity.

2

1

1

2 **Interior Forest and Connectivity**

3 The [Vermont Conservation Design](#) (2024), a landscape-level conservation prioritization from Vermont
4 Land Trust and the Vermont Agency of Natural Resources, stated that the entire Property was part of a
5 ‘Highest Priority Interior Forest Block’ that provides critical ecological function on a statewide level. The
6 forest is the latest addition to the long-standing 10,000-acre Chittenden County Uplands Conservation
7 Project.

8

9 In addition, the entire property is notable in its contribution to Vermont’s physical landscape diversity.
10 Adjacent to other large blocks of conserved land and with connections to the Winooski River valley and
11 its floodplain, this property also plays an important role in landscape connectivity, offering a corridor for
12 wildlife and other species to move, and parts of the contiguous forest provide “forest interior” habitats (or
13 ‘core forests’) are those forests that are distant from human development (typically defined as being at
14 least 100 meters from the nearest human disturbance such as a road, house, or agriculture).

15

16 **Ledges, Cliffs, Talus, and Ridges**

17 Ledge and cliff habitat is present within the ACF (specify where). Ledges develop where bedrock
18 outcrops occur in areas of steep slopes. Ledges and cliffs can occur as areas of sheer rock wall or as a
19 broken jumble of rocks and crevices. Talus consists of a field of large rocks that typically develop at the
20 base of cliffs and ledges, though can sometimes occur independently of these features. Ledges, cliffs, and
21 talus can provide important habitat and shelter for a wide range of species, including nesting peregrine
22 falcon, common ravens, and the small-footed bat, coyote, porcupine, bobcat, fisher and other weasels,
23 ruffed grouse,

24 **2.5.2 Community-Level Attributes**

25 Ten types of upland and wetland natural communities are identified within the ACF. (Natural
26 communities are defined as “interacting assemblage(s) of plants and animals, their physical environment,
27 and the natural processes that affect them.”). The ACF’s largest natural communities are Northern
28 Hardwood Forest, Hemlock-Northern Hardwood Forest, Dry Oak Forest and their variants. Within them
29 are several smaller but nonetheless important natural communities.

30

31 Undisturbed, natural communities provide needed food, shelter and breeding grounds for numerous
32 species. Surveys have identified that the ACF’s upland communities support whitetail deer, black bears,
33 bobcats and numerous forest birds and amphibians. The ACF’s wetland communities—Shallow Emergent
34 Marshes, Seeps, and Vernal Pools—comprise less than 1% of its area but are disproportionately
35 significant for biodiversity, supporting species of amphibians, reptiles and mammals. Riparian areas along
36 the ACF’s perennial and intermittent streams safeguard water quality, provide habitats for aquatic species,
37 and serve a variety of terrestrial wildlife as food sources and safe travel corridors.

38

39 **Mast Stands**

40 Several important areas of mast stands exist on the ACFC (Figure 3: in R. Low’s Figure 16) Mast refers
41 to the nuts and seeds of trees and shrubs, many of which are eaten by wildlife and include the nuts of
42 trees, especially those of beech and oak, as well as ‘soft mast’: the berries of a variety of species,

2

1

1 including woody plants such as serviceberry and cherry. A “stand” refers to an area where many of the
 2 trees or shrubs are growing together in one area. Species in the ACF that rely on mast stands include
 3 black bears, white-tailed deer, wild turkey, squirrels, and many other species. (DeGraaf et al., 1992).

4

5 **Table 1: ACF Natural Communities and Typical Species** (compiled from information in Thompson et al.,
 6 2019).

7

Natural Community												Natural Community											
Northern Hardwood Forest												Northern Hardwood Forest4											
Hemlock Forest												Hemlock Forest5											
Hemlock-N. Hardwood Forest												Hemlock-N. Hardwood Forest6											
Red Pine Forest												Red Pine Forest7											
Dry Oak Forest												Dry Oak Forest8											
Dry Red Oak White Pine Forest												Dry Red Oak White Pine Forest9											
Shallow Emergent Marsh												Shallow Emergent Marsh10											
N. Hardwd. Seepage Forest												N. Hardwd. Seepage Forest11											
Seep												Seep12											
Vernal Pool												Vernal Pool											
Associated Species												Associated Species											
American woodcocks	*											N. two-lined salamanders									*	*	
Barred owls			*			*						N. water thrushes									*	*	
Black bears	*				*	*	*			*		N. leopard frogs								*		*	
Blackburnian warblers		*	*									N. saw-whet owls		*									
Black-throated blue warblers	*											Pine warblers			*	*	*						
Blue-headed vireos			*									Porcupines	*	*	*					*	*		
Bobcats	*	*	*	*	*	*	*	*	*	*	*	Raccoons							*			*	
Broad-winged hawks	*											Red squirrels							*				
Bullfrogs					*							Red-breasted nuthatches			*								
Canada warblers						*	*					Red-eyed vireos	*										
Chipmunks				*								Red-shouldered hawks											
Eastern red-backed salamanders	*											Red-winged blackbirds								*			
Eastern wood peewees				*	*							Scarlet tanagers	*										
Fishers		*		*								Spotted salamanders	*	*		*							
Gray foxes	*											Spring peepers				*	*						
Gray squirrels			*	*								Spring salamanders								*	*		
Great blue herons				*								Swamp sparrows							*				
Green frogs				*								Turkeys		*					*	*	*		
Hermit thrushes	*											Veerys								*	*		
Jefferson salamanders				*								White-tailed deer	*		*		*	*	*	*	*		
Minks				*	*							Winter wrens								*	*		
Muskrats				*								Wood frogs			*								
N. dusky salamanders				*	*							Wood thrushes		*									

8 **Natural Communities in the Forest**

9 The [Conservation Easement](#) protecting the Andrews Community Forest describes several areas of the
 10 property that are uncommon or sensitive, and therefore require special treatment. Natural communities
 11 that are uncommon or rare in Vermont will be managed according to state and local regulations.

12

13 **Table 2: Upland Natural Community Types on the Andrews Community Forest**

2

Natural Community	State Rank	Number of Occurrences	Total Acreage
Dry Oak Forest/ Dry Red Oak-White Pine Forest	S3	6	16
Red Pine Forest or Woodland	S2	1	2
Hemlock-Northern Hardwood Forest	S5	1	313
Hemlock Forest	S4	3	18
White Pine-Northern Hardwood Forest	S4	5	314
Mesic Red Oak-Northern Hardwood Forest	S4	5	385

1

2

2.5.3 Species-Level Attributes

3 The ACF provides specialized habitats that are critical for certain species. Its hemlock groves serve as
 4 essential winter shelters for deer and many other wildlife. The ACF's mast stands of oak, beech,
 5 blueberry and other mast foods sustain over 100 species, from black bears to wild turkeys. Early
 6 successional habitats foster biodiversity by supporting young tree growth and associated fauna. Ledges
 7 and other rocky areas are especially important to bobcats when raising their young, along with coyotes,
 8 porcupines, fishers, ravens and ruffed grouse.

9

10 **Wildlife Habitat**

11 The Andrews Community Forest provides habitat for a range of wildlife species. Observations include
 12 that white-tailed deer are active throughout the property, with heavy browse in the seedling, sapling, and
 13 shrub layers, and beds in or near hemlock cover. Moose have stripped bark off of striped maples. Bobcat
 14 tracks have traversed the ledgy dry oak area in the northern corner as well as the edge of the small beaver
 15 wetland. Coyote, fox, turkey, fisher, and weasel tracks have been noted. Recent claw marks on American
 16 beech trees in at least two areas, as well as tracks and scat on the VAST trail, indicate the presence of
 17 black bears.

18

19 Significant information regarding wildlife habitat exists through work completed in the Chittenden
 20 County Uplands Conservation Project (page 35 of

21 <https://vnrc.org/wp-content/uploads/2019/08/VNRC-Forestland-Conservation-10-1-links.pdf> and

22 [https://landscapeconservation.org/our-work/initiatives-list/chittenden-county-uplands-conservation-](https://landscapeconservation.org/our-work/initiatives-list/chittenden-county-uplands-conservation-project/)
 23 [project/](https://landscapeconservation.org/our-work/initiatives-list/chittenden-county-uplands-conservation-project/)). Information on some of the property's natural communities and sensitive features exist from

24 previous work for Vermont's Natural Heritage Program and a four-town, [science-to-action](#) resource

25 inventory completed by Arrowwood Environmental. Allaire Diamond, an ecologist from Vermont Land

1 Trust, collected and mapped information on uncommon natural communities and sensitive areas found in
2 two days of field research on the property in the VLT ‘[Rapid Ecological Report](#)’. [Audubon Vermont](#)
3 conducted a forest bird habitat assessment on the property in July of 2017 and reported its findings in
4 November, 2017. The UVM Field Naturalist Program conducted a project ([Landscape Analysis and](#)
5 [Wildlife in the Andrews Community Forest, Richmond, Vermont, 2018](#)) and Bob Low assembled a
6 report [Andrews Community Forest An Ecological Assessment](#)) to assess how wildlife utilize the ACF
7 "with the goal of minimizing negative impact on wildlife through trail placement that avoids sensitive
8 areas."

9

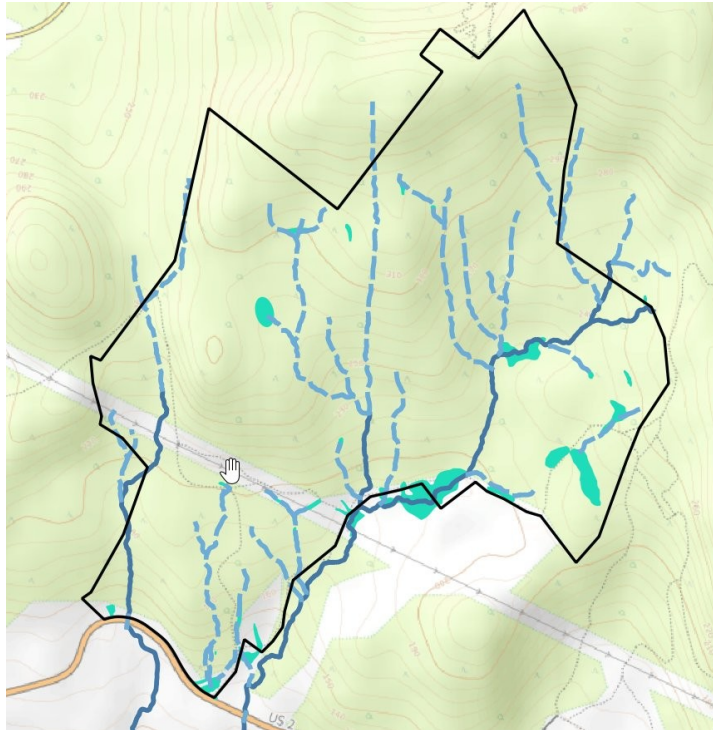
10 **Deer Wintering Areas**

11 Most of the ACF is southerly facing, and there are areas providing winter shelter for deer, especially in
12 the areas of hemlock forest. **List actual deer yards in the ACF and to provide some detail about the extent**
13 **and estimates of carrying capacity for these areas see Figure 49 by R. Low.** Forests where white-tailed
14 deer congregate during the winter months in Vermont are called deer wintering areas (also known as deer
15 yards). Typically the heaviest used wintering areas have a southern aspect, and sometimes with a westerly
16 or easterly aspect and deer congregate in these areas when snow depths exceed ~15 inches and often
17 remain until the snow melts in spring.. Deer use these dense stands of mature or maturing evergreen trees
18 in years with significant snow accumulation. Evergreen trees intercept snow as it falls to the ground,
19 generally resulting in shallower snow beneath the canopies of these forests. The overhead canopy of
20 needles also shield deer from the cold. By providing easier mobility and protection from the cold, deer
21 wintering areas can be critical in limiting the energy expenditures of deer and support the continued
22 survival and reproduction of this species along the northern extent of their range , including Vermont.
23 These winter habitats are also home to bobcat, coyote, and scavenging bear and fisher that come looking
24 for weakened and dead deer in spring. Other animals such as conifer-nesting birds, porcupines, and fox
25 also utilize these habitats during other seasons.

1 2.6 Water Resources

2 2.6.1 Streams and Riparian Buffers

3 The Andrews Community Forest is located within the Winooski watershed. Water from forests and fields
4 eventually flows into the Winooski River and into Lake Champlain. Surface waters on the property
5 include an inactive beaver pond and wetlands, three headwater streams, and two confirmed vernal pools.
6 Maintaining forested riparian cover adjacent to these resources is vital for the protection of water quality
7 and conservation of important aquatic habitat.



8 Several streams pass through the property on
9 their way to the Winooski River (Figure 1).
10 A stream may be perennial or intermittent -
11 its channel periodically or continuously
12 contains moving water. It has a defined bed,
13 and its banks serve to confine water at low or
14 moderate flows.
15 Riparian buffers are adjacent to the
16 watercourse, extending between the top of
17 the bank and the edge of other land uses and
18 are typically undisturbed areas consisting of
19 trees, shrubs, ground cover plants, duff layer,
20 and an uneven ground surface. Forested
21 streamside riparian habitats offer many
22 ecological benefits. They anchor the stream
23 shoreline and limit streambank erosion,
24 preventing wetland and water-quality
25 degradation. They offer important plant and
26 animal habitat by providing shade and coarse
27 woody debris which provide structural and
28 substrate diversity. They also provide
29 organic matter and nutrients that fuel
30 stream food chains.
31

32 **Figure 1:** Streams – Perennial and intermittent
33 (dashed). Data From Arrowwood Shapefiles

32 2.6.2 Wetlands

33 In the ACF, wetlands are confined to the few low areas, narrow benches and areas of groundwater
34 discharge. Overall, the total acreage of wetlands is relatively small, but their rarity makes them that much
35 more important.

36
37 Three wetland types have been identified within the Andrews Community Forest, as summarized in Table
38 3 below. Two of the Shallow Emergent Marshes are on the southern border of the community forest and
39 continue off-property. All three are beaver-influenced wetlands and contain a diverse mixture of open

1 water, herbaceous vegetation, and occasional shrubs. The northern marsh sits in a scenic low area
 2 surrounded by upland forests. These marshes are significant for a wide range of functions and values
 3 including water quality, erosion control, and floodwater attenuation. Being part of a public, conserved
 4 parcel, they also offer opportunities for education and research. Perhaps the most important function that
 5 they serve is that of wildlife habitat. The mosaic of open water and herbaceous vegetation in a forested
 6 matrix is ideal for a wide variety of song birds, raptors, mammals, reptiles, and amphibians.

7
 8 Seeps are small wet areas that are the sites of groundwater discharge which often form the headwaters of
 9 small streams. Because these wetlands are small, it is difficult to map them remotely. It is likely that more
 10 seeps are present on the Andrews Community Forest that remain unmapped.

11
 12 **Table 3: Wetland Types on the Andrews Community Forest**

Natural Community	State Rank	Number of Occurrences	Total Acreage
Seep	S4	3	0.62
Shallow Emergent Marsh	S4	3	5.73
Vernal Pool	S3	2*	0.08

13 * More vernal pools may exist
 14

15 2.6.3. Vernal Pools

16 Vernal pools are seasonally flooded forested wetlands that hold water in the spring and typically dry out
 17 by late summer. Vernal pools provide critical habitat for a wide variety of amphibians and invertebrates,
 18 including indicator species such as wood frogs, spotted salamanders, blue-spotted salamanders, Jefferson
 19 salamanders, fairy shrimp, and fingernail clams. They typically have five characteristics: 1) they occur in
 20 a forested matrix (though there are exceptions to this); 2) they are flooded seasonally; 3) they are isolated
 21 from streams and rivers; 4) they lack fish (hence predation by fish), and 5) they have vernal pool indicator
 22 species present.

23
 24 Like the seepage wetlands described above, vernal pools are also small wetlands that are difficult to
 25 remotely map. Two vernal pools have been field-confirmed and described in the Baseline Documentation
 26 Report (Diamond, 2017) while two others still await field confirmation.

27
 28 Both of the field-confirmed vernal pools were assessed by Diamond (2017). Each contained many
 29 hundreds of eggs of wood frogs and spotted salamanders and appeared to be an established breeding
 30 habitat for these (and many other) species. The surrounding forests appeared healthy though the northern
 31 pool had some recent timber harvesting nearby.

2.7. Forestry

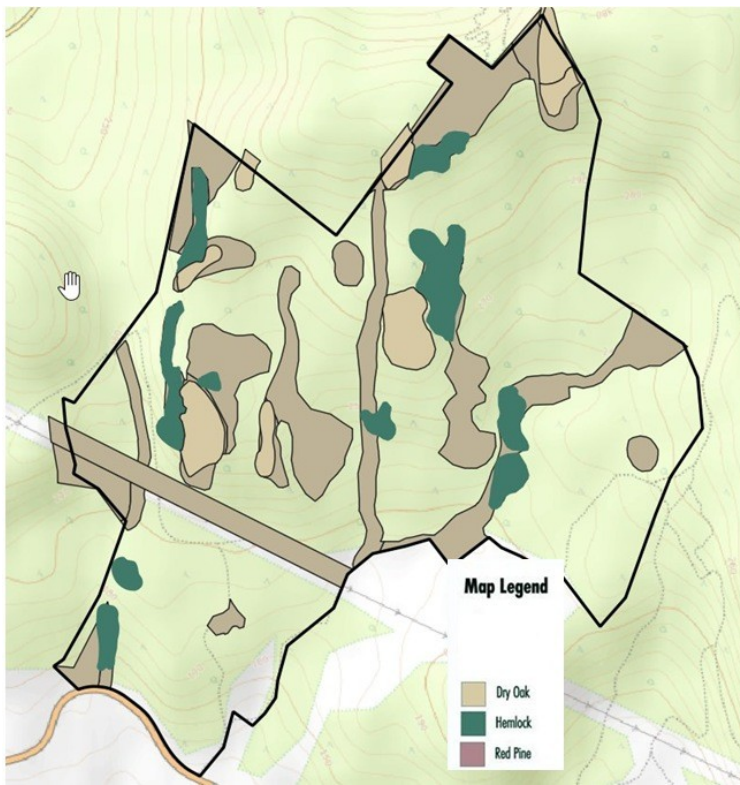


Figure 2: Communities by tree species. Data from Shapefiles recorded at Arrowwood website, (Documents and Downloads).
 elevating the health and resilience of forested ecosystems, and generating periodic income to fund important stewardship activities. It is also a source of local, renewable resources in the form of forest products. 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.

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.

Forest management in the form of periodic selective cutting of timber can be an important part of land restoration and conservation, maintaining the working landscape, and supporting the forest products economy in Vermont. 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,

In forestry 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. Forests may be capable of executing this selective process on its own through competition and natural mortality events, but this may be accelerated by active management.

1 The ability of a forest to respond to and maintain its health during disturbance is known as resiliency.
2 Diverse forests can respond to disturbance, stabilizing nutrients and soil and create conditions suitable to
3 the growth of subsequent generations of healthy trees (cite references). Forests today encounter regular
4 natural disturbance events, together with human-related events. In the face of an unstable climate,
5 invasive exotic plants, animals and pathogens, and many other unpredictable problems, it is prudent to
6 manage forests for resiliency in the course of any long-term forest management planning. Our goal is to
7 encourage diversity, both in terms of species composition and function, the age spectrum of significant
8 species and consistent with other activities within the management plan.

2.9. Recreation

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 recreational use due to their steep grades, poor drainage, and potential for erosion, so sustainable trail design should redirect visitors onto trails, reducing use of existing skid roads when appropriate. 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. Recent years have brought major changes to both the nature and the volume of traffic on forested trails. For example, new mountain bike technologies such as lighter frames, e-bikes and wintertime tires are taking more people further into forests in less time and in different times of the year. There are over 100 miles of trails for use with mountain bikes within Richmond and bordering Towns (Table 4). Regional networks are in discussion or under construction, making once-remote areas accessible to village, town and city population centers, potentially increasing traffic and requirements for volunteer management.

Name	Town	Miles	Sources:
Mobbs Valley	Jericho	5.2	https://www.trailfinder.info/trails/trail/mobbs-valley
Mobbs Hill	Jericho	2.6	https://www.trailfinder.info/trails/trail/mobbs-hill
Old Jericho Rd	Richmond	0.7	https://www.trailfinder.info/trails/trail/old-jericho-road-trail
Johnnie Brook Trail	Richmond	0.6	https://www.trailfinder.info/trails/trail/johnnie-brook-road-trail
Preston Preserve	Richmond	3.4	https://www.trailfinder.info/trails/trail/preston-forest-legacy
Beeken Rivershore	Richmond	3.1	https://www.trailfinder.info/trails/trail/warren-and-ruth-beeken-rivershore-trail
Safford Preserve	Richmond	2.8	https://www.trailfinder.info/trails/trail/safford-uplands-nature-preserve
Sleepy Hollow	Hinesburg	13	https://www.trailfinder.info/trails/trail/sleepy-hollow-mountain-biking
Mud Pond	Williston	3.4	https://www.trailfinder.info/trails/trail/mud-pond-country-park
Catamount Family Center	Williston	20	https://catamountoutdoor.org/summer/mountain-biking/
Hinesburg Town Forest	Hinesburg	18	https://www.trailfinder.info/trails/trail/hinesburg-town-forest
Bolton Valley	Bolton	11.5	https://www.trailforks.com/region/bolton-valley-resort-24626/trails/
Cochrans	Richmond	12.3	https://www.trailforks.com/route/getting-pitted-at-cochrans/
Chamberlain Hill	Richmond	6	https://www.trailforks.com/region/chamberlain-hill/
Hillside	Richmond	4	https://www.trailforks.com/region/hillside/
Sunshine	Richmond	3	https://www.trailforks.com/region/sip-of-sunshine-trails-53767/
Driving Range	Bolton	3	https://www.trailforks.com/region/the-driving-range-51149/
Snipe Ireland Trail	Richmond/ Jericho	4	https://www.trailforks.com/trails/snipe-ireland-road/
	Total Miles	116.6	

Table 4: Multi-Use Trails in Richmond and Surrounding Towns

1 The VYCC campus, which adjoins the property to the east, has a network of trails. There is currently a
 2 former VAST trail connecting the two properties and trail networks. [Rules of use at VYCC?](#)

3

4 Adjoining the ACF to the north is a 173-acre property currently owned by David Sunshine and Carol
 5 Jordan, which contains a multi-use trail network connecting to trails on adjoining properties and beyond.
 6 A meeting of David Sunshine and Ian Stokes on August 21st 2023, identified that the land is conserved
 7 and VLT did a survey and holds the Easement. Motorized travel is not permitted and there is no parking
 8 at the trailhead. Hunting is only with permission, and there are no limitations about time of day/night or
 9 seasonal access. Dogs are permitted subject to removal of dog waste from trails. Trail closures are
 10 monitored by RMT but the trails are not listed at the Richmond Trails map, nor mentioned at the Town
 11 webpage. There is informal(?) connectivity from these trails to the north, eventually to the Mobbs trails
 12 in Jericho.

13

14 **2.10. Agriculture**

15 Maple Wind Farm, the current farm leasee, is a diversified pasture-based livestock, poultry, and organic
 16 vegetable farm. In 2013, the farm acquired 187 acres of former Andrews/Gray Rocks Farm. Maple Wind
 17 also currently farms eight acres of the community forest. [Update?](#) They have used the “lower meadow”
 18 and a meadow along the powerline right-of-way for grazing cattle, typically 30 adult bovines and 30
 19 calves for 10-16 days per year. The Town and Maple Wind are interested in continuing this arrangement
 20 and will negotiate a long-term lease.

21

22 Maple Wind Farm has a right-of-way for agricultural purposes over the main farm road on the Andrews
 23 Community Forest extending from the Dyer-Chadwick property on Route 2 to Maple Wind Farm’s upper
 24 meadow. The Town has a right of way over the northern edge of Maple Wind Farm’s upper meadow.
 25 Previously the VAST trail operated on a year-to-year basis over sections of both these roads/rights of
 26 way.

27

28 Maple Wind Farm has placed a high tensile electric fence around their grazing area in the community
 29 forest’s lower meadow. A gate through the fence allows for public access to the meadow when the pasture
 30 is not in use for grazing. When the pasture is in use, the “cutover trail” is closed.

31

32 **2.11. Legal Agreements on the Property**

33 There are several agreements, right-of-ways, and easements that are key to the management of the forest.
 34 Approval by Vermont Land Trust and the Selectboard is required for any changes in lease arrangements.

35 **2.11.1 Agricultural Lease**

36 Maple Wind Farm is an adjoining land owner of several acres of the original Andrew farm. Maple Wind
 37 Farm has historically used eight acres of what is now the Community Forest for grazing cattle. Both
 38 parties are interested in continuing this arrangement and will explore the possibility of a long-term lease.
 39 .

1

1 **2.11.2 Powerline Rights-of-Way: VELCO (Wright to update)**

2 A VELCO powerline runs through the community forest and VELCO owns the right-of-way. VELCO
3 needs road access to the right-of-way on occasion for maintenance and repairs to the powerline. In 2018,
4 VELCO improved a road from the forest entrance on Route 2 to the powerline; they used the upper
5 landing area to stage their work. Following this work, they re-seeded the landing and the road above the
6 landing, and installed waterbars on the road below the landing. At certain periods, VELCO may need to
7 close some or all of the forest to perform larger projects on the powerline. The ACF Committee should
8 coordinate with VELCO to prepare for such events and fully inform the public of the closure.

9 **2.11.3 Powerline Rights-of-Way: Green Mountain Power (Wright to**
10 **update)**

11 Green Mountain Power has a 75-foot right-of-way adjacent to the VELCO line in the same powerline
12 corridor. Within this corridor, Green Mountain Power manages vegetation. The Committee will work to
13 better understand the vegetation management goals and practices, the landowner's (Town's) rights, to
14 advise the Selectboard to make an informed decision about vegetation management within the Powerline
15 corridor, and to communicate this decision broadly to Community Forest visitors.

1 | **3. Management Plan Development and General Principles**

2 | **3.1 Management Plan Development**

3 Upon purchasing the property, the Selectboard established an Interim Community Forest Steering
 4 Committee to develop a Comprehensive Management Plan and governance structure for the Community
 5 Forest, subject to final approval by the Selectboard. This Committee prepared an Interim Management
 6 Plan to provide short-term guidelines for the management of the property and allow “breathing room” for
 7 the development of the Comprehensive Management Plan. The [2018 Management Plan](#) was signed by the
 8 Town and approved by the Vermont Land Trust in March 2018.

9
 10 Meanwhile, the Town, through a grant from the Vermont Urban and Community Forestry Program,
 11 worked to develop the full Management Plan with the consulting groups SE Group and Arrowwood
 12 Environmental. Beginning in 2018, these groups assisted in management planning by leading the public
 13 input process, conducting environmental analyses, and drafting the plan. The first Management Plan was
 14 adopted by the Selectboard in November 2018 in compliance with conditions attached to a grant from the
 15 US Forest Service.

17 | **Credits:**

18 | **Interim Community Forest Steering Committee:**

19 Berne Broudy, Cecilia Danks, Brad Elliott, Willie Lee, Hannah Phillips (Chair), Wright Preston, Guy
 20 Roberts, and Elizabeth Wright.

21 Assistance provided by Ethan Tapper (Chittenden County Forester), Bob Heiser, Cara Montgomery,
 22 Rebecca Roman (Vermont Land Trust), Drew Pollak-Bruce, Liz Grades, Ellie Wachtel, Taylor Luneau
 23 (SE Group), Dori Barton and Aaron Worthley (Arrowwood Environmental).

24 The first iteration of this document was accepted by the Selectboard in November 2018 including Bard
 25 Hill, David Sanders, Steve Ackerman, Roger Brown, Christy Witters, and Josh Arneson.

26 | **Land Acknowledgement:**

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

30 | **ACFC Committee:**

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

34 | **Consultation with experts:**

35 May 2021: Ecologists and trail designer (Aaron Worthley, Dori Barton of Arrowwood; Mariah Keagy of
 36 Sinuosity)

37 July 2021: Arrowwood and Sinuosity consultants (Aaron Worthley, Dori Barton, Mariah Keagy, Brooke
 38 Scatchard)

39 June 2022: Arrowwood and Sinuosity (Dori Barton and Mariah Keagy)

40 July 2022: Discussion with Arrowwood (Aaron Worthley) about the fine-scale review.

41 August 2022: Consultation with Melissa Levy (Community Roots, LLC) about facilitation of a
 42 community engagement public meeting.

- 1 August 2022: [Advice from Nick Fortin](#) (Deer & Moose Project Leader, Department of Fish & Wildlife,
2 Vermont Agency of Natural Resources) email to ACFC about deer wintering areas and recreational use.
3 January 2022: Rebecca Roman (Vermont Land Trust) about acknowledgment wording and use rights as
4 related to the Conservation Easement)
5 January 2022: Chief Richard Menard of Missisquoi Abenaki Nation about perspectives on the Land
6 Acknowledgment and related components
7 July 2022: Rebecca Rouiller (Radiate Art Space, which sponsored the murals of Abenaki culture and
8 language on the Town Center building) agreed to allow use of mural images in ACF signage. The murals,
9 which were dedicated in a traditional ceremony led by Abenaki culture bearer Charles Delaney Megeso.
10 March 2023: Richmond Conservation Commission panel discussion on balancing conservation and trail-
11 based recreation. [Video by MMCTV](#)
12 June 2023: Talk “Enjoying Our Trails with Wildlife in Mind”: Sue Morse of “Keeping Track” Video by
13 MMCTV <https://archive.org/details/sue-morse-enjoying-trails-wildlife-06072023>
14 November 2024: Tyler Machia (Richmond Zoning Administrator) presented information to ACFC
15 meeting [about Zoning Regulations and trail construction](#).

17 3.2 General Rules

- 18 ● Except where otherwise noted in the plan (seasonal trail closures in certain areas to
19 protect foraging, reproduction and winter shelter etc. of at-risk species, hunting), the ACF
20 is open year-round to the public from dawn to dusk. Other exceptions with prior
21 approval of the ACFC. Any human presence is known to disrupt activity of nocturnal
22 wildlife. (e.g. See [https://www.nationalgeographic.com/science/article/news-humans-](https://www.nationalgeographic.com/science/article/news-humans-making-mammals-nocturnal-behavior-ecology)
23 [making-mammals-nocturnal-behavior-ecology](https://www.nationalgeographic.com/science/article/news-humans-making-mammals-nocturnal-behavior-ecology))
24 ● As the Original People who stewarded these lands, the Western Abenaki People and other
25 Indigenous Peoples are extended a special invitation to visit the ACF and pursue
26 traditional and contemporary practices as outlined in [Appendix B, Indigenous](#)
27 [Acknowledgement, Part 2](#).
28 ● **Allowed Uses:**
29 ○ Dispersed and trail-based pedestrian access is allowed on the property for uses such as
30 hiking, walking, wildlife observation, or cross-country skiing, unless otherwise noted.
31 ○ Mountain biking is only allowed on trails designated for that use and at designated times.
32 ○ Snowmobiling may only be used on designated trails subject to agreements with VAST.
33 ○ Hunting is allowed on the Andrews Community Forest and is subject to the State of
34 Vermont hunting seasons, rules, and regulations.
35 ■ Temporary tree stands and ground blinds are allowed: from the third Sunday in
36 August through the third Saturday in December, May 1 through May 31, and
37 during any Youth Hunting Day. Tree stands and ground blinds must be erected
38 such that no damage is done to a living tree (except that branches <1” diameter
39 on the main stem may be trimmed). Stands and blinds must have the owner's
40 name and contact information in an easily identifiable location. Stands and blinds
41 that do not conform to these regulations may be confiscated.

- 1 ○ The Abenaki People may use ACF for gatherings and ceremonies, including the erection
- 2 of small, temporary structures relevant to ceremonies. Prior notification of the ACFC is
- 3 requested for large gatherings.
- 4 ○ The Abenaki People have the right to collect fungi, plants, and plant parts in a sustainable
- 5 manner, which is described in Appendix B, Indigenous acknowledgement.
- 6 ○ Additional uses not listed here may be considered by the ACF Committee if they comply
- 7 with town and state law and the Conservation Easement.

8 **3.3 Restricted and Prohibited Uses, as specified in the Conservation**
 9 **Easement**

10 ● **Restricted Uses:**

- 11 ○ Motorized vehicles are not allowed on the property, except for use by those with physical
- 12 disabilities (as defined in ADA?), snowmobiles on any approved VAST trail, vehicles
- 13 required for property management, or in case of emergency. Use for winter maintenance
- 14 such as 'grooming' of trails shall be limited twice per year to minimize disturbances
- 15 during the winter when wildlife is at risk.
- 16 ○ Road Use: Motorized vehicles will be permitted subject to the easements with VELCO
- 17 and the right-of-way agreement with Maple Wind Farm.
- 18 ○ Commercial wildcrafting, the collection of mushrooms, berries, herbs, and other forest
- 19 materials for sale, is restricted to Abenaki People who follow the sustainable practices
- 20 described in Appendix B. ? Other non-commercial wildcrafting - (mushrooms, chaga,
- 21 ramps, birch bark, etc.)?

22 ● **Prohibited Uses:**

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

35 **3.4 Posting of Town Forest Rules**

36
 37 Posted rules shall be posted at the kiosk and trails providing access from neighboring lands (Note to
 38 ACFC: need to update the posted rules and install):

- 39 1. The Forest is open from dawn until dusk for walking, running, skiing, and other non-mechanized
- 40 recreation. Hunting is permitted after dusk and before dawn in accordance with VT State regulations.
- 41 2. ATVs, motorcycles and other types of motorized transport are not permitted. Be aware that the
- 42 neighboring farm operation may use farm vehicles to access its pastures.

- 1 3. Bikes only on authorized trails (see the map) and yield to others.
- 2 4. During hunting seasons (generally October through May) - please use safety colors.
- 3 5. Please park only in the assigned lot and not on the adjacent private property or across Rt. 2. Respect
- 4 the privacy of the neighboring homes and businesses.
- 5 6. Keep pets on a leash; **dogs are not permitted above the power lines**. Avoid disturbing wildlife or
- 6 livestock. Remove all pet waste.
- 7 7. Be careful of the pasture fencing - it may be electrified.
- 8 8. Camping and fires are not allowed.
- 9 9. Do not cut, remove or damage any trees or other vegetation.
- 10 10. Watch out for ticks!

11 **3.5 Parking**

12 Parking is available off of Route 2 across from Maple Wind Farm, at 1129 East Main Street, Richmond
 13 and is permitted to accommodate one parked school bus and five parked cars. The Town of Richmond is
 14 responsible for maintenance and plowing. **The upper landing area can be used for parking during special**
 15 **events**, subject to acceptance of an application to the ACFC.
 16 No new car parking shall be designated without ACFC approval. Maintaining low parking capacity is a
 17 passive way of controlling density of use.
 18 Bike parking shall be installed in the parking area.
 19

20 **3.6. History of the Management Plan Public Input Process**

21 Public input opportunities into the initial management planning process in 2017 and 2018 were advertised
 22 by email, social media, Front Porch Forum, via signage in Town, and in the local print newspaper, the
 23 TimesInk! This process was critical to ensure the Management Plan reflects the interests of Richmond
 24 residents, and to give the Committee an opportunity to consider and reach consensus on important
 25 management issues such as hunting, trail development, and more.
 26

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

- 29 ● In response to an online survey about whether the Town of Richmond should purchase the
 30 Andrews Forestland as a community forest, wildlife habitat protection was the most **(?confirm)**
 31 listed interest of respondents related to the opportunity.
- 32 ● *Visioning Workshop* – A public workshop was held on January 18, 2018 with about 80
 33 community members in attendance, providing input on management balance, appropriate
 34 activities and facilities
- 35 ● *Visioning Survey* – A survey, open from January to March 2018, asked similar questions to those
 36 posed at the workshop. The survey received 317 responses from residents of Richmond and
 37 surrounding towns.
- 38 ● *Stakeholder Interviews* – Small group interviews were held on June 14 and June 18, 2018 to
 39 discuss the future of the property with stakeholder groups: hunters/trappers, neighbors, education,
 40 trail-based recreation, natural resources, and others were invited to join.

- 1 ● *Draft Strategies Workshop* – A public workshop was held on July 12, 2018 to present the
2 progress of the plan and hear feedback from the community on draft strategies for the future
3 development and management of the property.
- 4 ● *Community Forest Committee* – The Community Forest Committee met twice a month through
5 this process. The committee also met as smaller working groups to inventory and plan for each
6 resource in the property.
- 7 ● *Public Input on Draft Management Plans* -- 44 people attended a presentation of the 1st draft of
8 the Management Plan on 9/20/18; an additional 14 people submitted comments in writing. The
9 comment period was open for two weeks. A second draft plan was released on 10/21/18, followed
10 by a two-week comment period and including another public meeting.

11
12 Formal Public input into the 2022 Management Plan revision, including public engagement regarding the
13 development of the approved trail design and the inclusion of an Indigenous land use acknowledgment,
14 occurred in 2020-2022. In addition to the monthly ACFC carried out the following specific public
15 engagements:

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

37 **3.7. Expert Guidance Provided to the ACF Committee**

38 **Alignment with town plan/zoning regulations**

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

41 **Development addressed in the town plan:**

42 The Town plan states: “Restrict development on steep slopes between 20% and 35%, cliffs, and ridgelines
43 over 900ft in elevation, and prohibit all structural development (including renewable energy generation

1 facilities and distribution/transmission infrastructure) on slopes greater than 35% , in order to maintain
2 habitat connectors and mitigate erosion”

3 **Zoning**

4 The ACF is zoned as a recreational facility, based on a June 10 2020 DRB decision about the parking at
5 the East Main frontage.

6 Zoning Administrator Tyler Machia has advised that any development in the ACF requires DRB
7 approval: Concerning trails, any new trails developed on slopes greater than 20% will require engineered
8 plans for “adequate” erosion controls per the RZR, SECTION 6.11. Trails that currently exist can be
9 maintained in-situ but any changes that would be considered an update to the approved site plan would
10 require DRB approval. See [Tyler Machia memo](#) for Nov 25th 2024 meeting and ACFC Minutes October
11 23rd, 2023: and the Town's [Zoning Regulations](#) especially Section 2.5.1 Areas with Special Guidelines
12 for Land Development.

13
14 **Other Expert advice:**

15 Trail designers Aaron Worthley, Dori Barton of Arrowwood and Mariah Keagy of Sinuosity about the
16 proposed trail routes and removing the Ridgetop Trail based on public feedback,and about the fine-scale
17 ecological review.

18 Consultation with Community Roots, LLC (Melissa Levy) about facilitation of a public meeting on
19 revisions to the Comprehensive Management Plan.

20 Nick Fortin (Deer & Moose Project Leader, Department of Fish & Wildlife, Vermont ANR) about how to
21 manage deer wintering areas in the context of recreational use. ([Correspondence with Nick Fortin](#))

22 Rebecca Roman (VLT) regarding development of trail design, revising the management plan, and general
23 compliance with the Conservation Easement.

24 Josh Arneson, (Richmond Town Manager) Judy Rosovsky, (Conservation Commission) Willie Lee and
25 Chase Rosenberg (Trails Committee)

26
27 **For the development of the Land Acknowledgment**, the accompanying use rights, and the signage and
28 naming suggestions:

29 Scott Silverstein and Alexis Latham (Richmond Racial Equity) and Jesse Bruchac and Kerry Wood,(tribal
30 citizens), Chief Don Stevens (Nulhegan Band of the Coosak Abenaki Nation), Chief Richard Menard
31 (Missisquoi Abenaki Nation), Abenaki culture bearer Charles Delaney Megeso and culture keeper
32 Annette Urbschat concerning Abenaki access to the forest for hunting, gathering and perhaps holding
33 gatherings, as well as the potential trail naming and interpretive signage (See Appendix B).

34 Rebecca Roman (VLT) reviewed the Land Acknowledgment wording and use rights as related to the
35 Conservation Easement and Rebecca Rouiller of Radiate Art Space, which sponsored the murals of
36 Abenaki culture and language on the Town Center building, agreed to allow use of mural images in ACF
37 signage.

38 **3.8. Comprehensive Management Plan: Process for Updates: Amendments**
39 **and Revisions**

40 This Comprehensive Management Plan is intended to be a living and evolving document. As the Andrews
41 Community Forest is new to public ownership, there is a need to better understand conditions on the
42 ground and respond to new conditions that may arise. Adaptive management is an iterative cycle of
43 evaluating and learning, adjusting, planning, and acting. The ACFC is required to make management

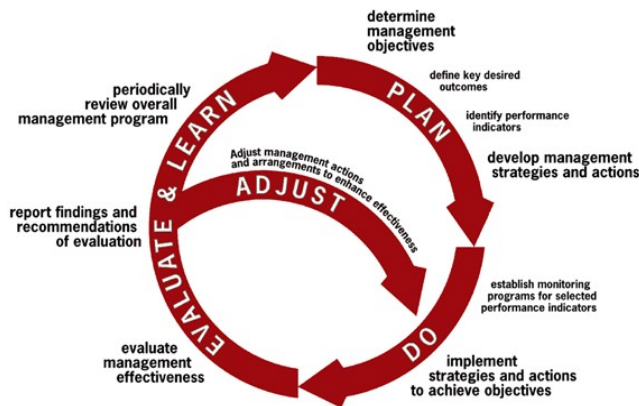
1 decisions based on resource management objectives and current best management practices. In addition,
2 the ACFC is required to gather information on relevant management practices that can guide future
3 management decisions and management plan revisions.

4
5 This plan must be reviewed and updated, at a minimum, every ten years, as required by the Conservation
6 Easement. However, more frequent revisions may be necessary in the early years of municipal ownership
7 as the community’s use of the property evolves. Updates to the Comprehensive Management Plan can be
8 of two kinds, revisions or amendments, which vary in degree of public outreach and data collection.

9
10 Any *amendments* to the plan, as suggested by **Figure 3: Adaptive Management Model**, may include
11 **minor adjustments** that improve the effectiveness of management actions or minor changes to wording.
12 Any **major changes** to the plan objectives or proposed actions require a plan revision, which entails a
13 planning and outreach process that includes scoping of concerns, collection of any needed data, and a
14 public engagement process that invites stakeholders and other residents to provide input on proposed
15 revisions. Such a process may entail a combination of surveys, ecological assessments, field trips, and
16 public meetings dedicated to the plan revision.

17
18 Proposed changes to the Comprehensive Management Plan, either amendments or revisions, must be
19 reviewed and approved by the Vermont Land Trust to ensure compliance with the Conservation Easement
20 and submitted for approval by the Richmond Selectboard.

21
22 **Figure 3. Adaptive Management Model**



24
25
26 **4. Timber Management and Forestry Activities**

27 In November of 2019 the ACFC, Vermont Land Trust, and the Selectboard adopted a [Forest Management](#)
28 [Plan](#) written by the County Forester Ethan Tapper specific to forestry activities. The document details
29 how the forest will be managed for its timber and other natural resources. It uses a ‘zone’ approach that
30 divides the forest into three different management styles for perpetuity and emphasizes a diverse and
31 resilient forest as well as addresses invasive species management. This Comprehensive Management Plan
32 provides more detail about the Forest Management Plan that was crafted by Ethan Tapper and adopted by

1 the Selectboard on November 18, 2019. Additional timber stand improvement (TSI) activities were
2 completed in the winter of 2022 and included crop tree release as well as selective cutting.

3

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

8

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

12 **4.1 Forestry Management Objectives and Tasks**

13 **Overall Objectives:** Accurately follow the [Forest Management Plan](#) Adopted on 11/18/2019 to manage
14 forestry activities that improve Forest health, wildlife habitat protection and wildlife diversity

15

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

27

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

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

38

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

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

6
7 **Objective 4.** Manage the ACF to sustain plant and wildlife species of special cultural importance to
8 Abenaki peoples. (When forest management incorporates traditional practices by engaging Abenaki
9 foresters and culture keepers, it offers the opportunity to educate the community about historical and
10 contemporary Indigenous forest stewardship practices.)

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

16 **5. Cultural History Management Objectives and Tasks**

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

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

21 Expand and enhance cultural information about the forest.

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

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

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

29
30 **Objective: Protect remaining cultural features and values.**

31 Route trails distant from cultural resources; provide spur trails if appropriate.

32
33 **Objective: Maintain viable populations of plants and wildlife of cultural importance.**

34 Coordinate with Chittenden County forester and Abenaki tribal forester(s) to manage black ash
35 trees given its cultural importance and the threat of the emerald ash borer. Identify and protect any
36 threatened butternut trees and any other culturally important species in the ACF.

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

39
40 **Objective: Include Indigenous perspectives, knowledge, and language in ACF educational materials,**
41 **management and naming practices.**

1

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

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

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

9 Choose AFC trail names from the list of Abenaki words for animals of the forest and landscape
10 features found in Appendix B, Part 4. These words were proposed and vetted by Abenaki tribal citizens
11 and culture keepers.). Take advantage of educational materials and programming for the UN International
12 Decade of Indigenous Languages 2022 – 2032. See:

13 <https://www.un.org/development/desa/indigenouspeoples/indigenous-languages.html>

14 Also, for exploring the potential for ACF to be an educational site for the Abenaki Trails Project, see:

15 <https://abenakitribe.org/abenaki-trails-project>

16 **5.1 Potential partners regarding ACFC cultural history**

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

24

1 **6. Wildlife and Natural Resources Stewardship**

2 **6.1 General**

3 Follow the Richmond Town Plan to:

- 4 • “Protect priority natural areas in order to maintain the health and function of those areas and their
- 5 services”
- 6 • “Utilize best management practices for Richmond-owned, publicly accessible natural and recreational
- 7 areas”
- 8 • “...ensure best stewardship of [the Town Forest] and ensure that the requirements of the
- 9 [Conservation] Easement are being met.”

10

11 Follow the Purpose of the ACF Conservation Easement to:

- 12 • “[c]onserve productive forestland, wildlife habitats, biological diversity, natural communities,
- 13 riparian buffers, wetlands, soil productivity, water quality and native flora and fauna...and the ecological
- 14 processes that sustain these natural resource values.”
- 15 • Provide, protect and enhance a diversity of upland, wetland and riparian natural communities and
- 16 features for mammals, amphibians, songbirds and other wildlife characteristic and supportive of those
- 17 elements
- 18 • Base management decisions on the full scope of community input, and the scientific habitat
- 19 assessments, research and recommendations provided to the Town by expert sources, such as Vermont
- 20 Land Trust, Audubon, UVM Field Naturalist Program, Arrowwood Environmental, VT Fish & Wildlife
- 21 Department, the Chittenden County Forester and other ecological professionals.
- 22 • Provide visitors with maps and signs, and offer interpretive information, seasonal walks, talks and
- 23 workshops and other information describing the ACF’s significance, natural resources, wildlife
- 24 populations and conservation needs.
- 25 • Structure the ACF’s adaptive management program to respond to the impacts of climate change,
- 26 human activities, and other influences on the ACF’s natural communities.

27 **6.2 Landscape-Level Management**

28 **6.2.1 Interior Forest Contiguity**

- 29 • Maintain the ACF’s status in Vermont Conservation Design as a “Highest Priority” and “Priority”
- 30 interior forest component of the Mt. Mansfield Forest Block, along with the similar high and/or highest
- 31 priority rankings on a statewide scale of its natural communities, uncommon natural communities and
- 32 wildlife habitats.
- 33 • Protect and enhance the biodiversity and functional integrity of the ACF and its state-designated
- 34 forest block for a variety of deep-forest species, including its black bear, bobcat, fisher, moose, hermit
- 35 thrush, oven birds, and salamanders.
- 36 • Maintain public recreational access to the entire ACF while avoiding the introduction of new trails
- 37 and infrastructure above the VAST trail.

1 • Continue utilizing multi-aged silvicultural treatments over most of the property. Avoid creating new
 2 permanent openings or wide (> 20 feet wide), linear roads and trails. Identify where 5-10 acres of young
 3 forest/early-successional habitat could be created to compensate for areas maturing around 2025.

4 • Continue retaining and establishing older growth forest areas; a multi-layered forest canopy; downed
 5 and standing dead and live woody debris and snags; small natural forest openings and food sources; and
 6 canopy closures over trails.

7 • Develop a program with the County Forester to identify and invasive species in the ACF, and to
 8 replace them with native species.

9 • Consult with the County Forester at least annually for updates on challenges facing ACF wildlife and
 10 opportunities to further enhance its interior forest values.

11 • Avoid degrading the ecological integrity of neighboring properties, and support opportunities to
 12 conserve and connect wildlife resources on properties elsewhere in the ACF's forest block.

13

14 6.2.2 Connecting Habitat

15 • Maintain the ACF's ranking by Vermont Conservation Design as a "Priority" wildlife connectivity
 16 component of its forest block.

17 • Avoid activities that would deny wide-ranging, deep forest species such as bear, bobcat, fisher, moose
 18 and other wide-ranging species of the ability to move freely and undisturbed between the ACF and its
 19 forest block along ridgelines, ravines and other movement corridors.

20 • Develop a plan to reduce wildlife mortality rates at crossing points along the ACF's boundary on
 21 Rt. 2.

22

23 6.3 Community-Level Management

24 6.3.1 Upland Natural Communities Objectives

25 **Basis:**

26 *The Conservation Easement, Section VI "Ecological Protection Zone" (EPZ) identifies four areas of rare
 27 and uncommon natural communities: Dry Oak Forest, Dry Red Oak-White Pine forest, Dry Oak-Hickory-
 28 Hophornbeam Forest, and Red Pine Forest. The EPZs consists of approximately sixteen (16) acres.*

29 *generally depicted as Dry Oak EPZ. It identifies protection of the EPZs including their natural
 30 communities and the ecological processes that sustain them as highest priority in planning and
 31 conducting all activities within the EPZ. Management will incorporate steps to retain soil integrity,
 32 water quality, natural species composition, natural disturbance regimes and natural hydrology.*

33 *Forest management activities, limited agricultural activities, and new roads or trails are prohibited
 34 except for limited vegetation management to protect public health and safety or to promote or restore
 35 ecological integrity or eligibility of the EPZ for enrollment in the State of Vermont's Use Value Appraisal
 36 program, subject to prior written approval by VLT and subject to the best available ecological science.*

The ACF Mission statement (Section 4) identifies human stewardship responsibilities for conserving key features including uncommon natural communities and sensitive habitats, while also providing both dispersed and trail-based recreational opportunities, and demonstrating how ecological forestry practices can encourage the development of a complex, diverse and healthy forest. It recognizes resources for learning about forest ecology, habitat protection, and sustainable recreational and forestry practices and stewardship, cultural history and traditions, including those of Indigenous peoples.

Importance of Upland Natural Communities:

Humans have responsibilities to ensure that their actions within and adjacent to the ACF sustain the health of the forest and the life forms on which humans depend. Individual species only thrive in combination with others: fungi, microbes in the soil, plants that are anchored to the soil, and animals exist in zones or regions that provide for food, reproduction and shelter for each. This apparent hierarchy should be seen instead as a cycle in interdependence where no species can exist in isolation.

Communities can be recognized most commonly by the presence of habitat areas of predominant tree species or other visible features. In the ACF these tree species include Northern Hardwoods, Hemlock, Red Pine, or combinations such as Dry Oak-Hickory-Hophornbeam, Dry Oak-White Pine. Visible habitats include Vernal Pools, wetlands (marshes), and streams.

Objective 1: Possess current information about identified Communities

- Identify existing categories of Natural Communities (such as Vernal Pools, Dry Oak Forests, etc.) and maintain a documentation registry of those Communities within the ACF. (by Designated ACFC members and recruited local naturalists)

- Identify and monitor the key species essential to or representative of the health of those Communities.

- Update maps and other documentation of identified community locations and extent using onsite surveys and local and employing State Agencies and resources such as Biofinder, and safeguard that information at the town offices and at the VLT.

Objective 2: Ensure that periodic updates of the ACF Management Plan include current information about Natural Communities.

- Communicate with the Vermont State Agencies to identify and utilize resources such as Biofinder).

- Provide updated information about ACF Natural Communities to the ACFC.

Objective 3: Maintain or improve the health of identified Communities

- Ensure that future negative impacts of human activities in the ACF are minimized through planning of trails etc., recommending season restrictions, education and signage.

- Identify and control exotic species.

- Include anticipated increases in rainfall and temperatures into stewardship planning.

Objective 4: Ensure that implementation of the Forestry Management Plan focuses on restoring natural communities that have been disrupted by prior human activity, as well as protecting integrity of existing healthy communities.

- Check in annually with the County Forester about recommended, planned, ongoing and completed forestry activities.

1

- Obtain VLT approval of forest management activities.

2

Objective 5: Ensure that members of the ACFC Community and concerned citizens have access to educational and recreational resources consistent with current information, knowledge, and understanding.

6

- Establish a person or work group that will maintain a key list of respected published resources using online searches and advice from the Conservation Commission, Trails Committee and others.

8

- Post to FPF and other ‘social media’ about complied historical, current and new information about our impacts on the ACF and our responsibilities for minimizing harmful impacts.

10

6.3.2 Wetland Natural Communities Objectives

Objective 1: Protect and conserve significant wetland resources. Identify and map wetland resources within the community forest.

14

Avoid construction of recreational trails through wetlands.

15

Utilize boardwalks and bridges for any necessary wetland crossings.

16

Objective 2: Prevent wetland and water quality degradation.

18

Identify areas where invasive species are having a significant negative impact on wetlands and develop/implement an invasive species management strategy.

20

Objective 3: Protect important plant and animal habitat.

22

Objective 4: Protect significant wetland functions and values.

24

Provide wetlands with naturally vegetated buffers.

25

6.3.3 Vernal Pools Objectives

Basis:

28

Vernal pools are protected under the Conservation Easement by Vernal Pool Ecological Protection Zones (EPZ), which include a 100’ undisturbed buffer, and a 500-foot secondary zone where foot trails are permitted. Timber harvesting in this zone is allowed but must be addressed in the Forest Management Plan.

32

The Vernal Pool Ecological Protection Zones identified in the Conservation Easement Section VII consists of two (2) vernal pools and the area around them as "EPZ Primary Zone" and "EPZ Secondary Zone". The purpose and goal of the EPZ is to provide and maintain high quality amphibian habitat, including critical breeding habitat by promoting and maintaining high levels of shade and coarse woody debris; exceptions must be approved in advance by VLT.

37

The EPZ Primary Zone shall be subject to limitations and restrictions which shall supersede the provisions of Sections I(C), II, and III of the Easement in any case of inconsistency.

39

1 *The EPZ Primary Zone shall include its vernal pool and the area within its surrounding 100-foot radius*
 2 *measured from its edges. There shall be no agricultural activity within this Zone other than the collection*
 3 *of maple sap subject to approval by the VLT. No new structures, land disturbance or improvements, with*
 4 *the exception of pedestrian trails shall be permitted within the EPZ Primary Zone. Removal or standing*
 5 *timber or downed wood or disturbance to the pool's hydrology are not permitted, except for control of*
 6 *exotic species and for actions that enhance amphibian habitat, subject o VLT approval. New roads for*
 7 *timber harvest may be approved by VLT within the EPZ Primary Zone if there is no other location fit for*
 8 *that purpose, and timber harvesting may be approved to if required for eligibility for enrollment in the*
 9 *State of Vermont's Use Value.*

10
 11 *EPZ Secondary Zone is the forested area lying within an additional 500 foot zone outward from each*
 12 *Primary Zone. Within the EPZ Secondary Zone timber harvesting is permitted but amphibian habitat*
 13 *needs, such as coarse woody debris and shade, shall be addressed and explained in the preparation of*
 14 *forest management plans.*

15
 16 **Objective 1: Provide and maintain high quality amphibian habitat.**

17 Avoid any disturbance or impact to the actual vernal pools.

18 Maintain an undeveloped and undisturbed 100' primary ecological protection zone and a 500'
 19 secondary ecological protection zone around the vernal pools, as described in the Conservation Easement.
 20 Pedestrian trails are compatible in the primary EPZ but must be approved by Vermont Land Trust.

21 Avoid creating ruts or pools of standing water as the result of recreational trails in the primary
 22 EPZ.

23
 24 **Objective 2: Promote and maintain high levels of shade and coarse woody debris.**

25 How? See Forestry Management?

26 **Objective 3: Consistent with the Conservation Easement, clearly identify management practices within**
 27 **the EPZ zones in the Forestry Plan.**

28 Follow harvest prescriptions in the EPZ zones as identified in the Forestry Plan.

29 Identify areas where invasive species are having a significant negative impact on vernal pools and
 30 develop/implement an invasive species management strategy for both the vernal pool and the surrounding
 31 buffer zone.

32
 33 **6.3.4 Streams and Riparian Buffers Objectives**

34 **Basis:**

35 *Section V of the Conservation Easement identifies special protections for Riparian Buffer Zones (RBZs)*
 36 *on either side of perennial streams to protect the water quality and the ecological health of the natural*
 37 *systems associated with them. Restrictions apply to zones lying within fifty feet (50') of the top of the*
 38 *banks of perennial streams, and any land located between the tops of banks and the low water marks of*
 39 *the waterways. The principal goal for management within the RBZ is the establishment and maintenance*
 40 *of high quality buffers that provide an array of ecological benefits including, but not limited to:*

41 *(i) buffering aquatic and wetland plants and animals from disturbance;*

42 *(ii) preventing wetland and water-quality degradation;*

1 (iii) providing important plant and animal habitat; and
 2 (iv) providing organic matter, nutrients, and structure to aquatic systems.
 3 Any management or use of the RBZ shall be designed to protect soil integrity and minimize erosion, and
 4 shall incorporate up-to-date ecological knowledge and management practices. Any forest management
 5 activities within the RBZ (including the installation of any new roads and trails and any agricultural
 6 activities (including the grazing or pasturing of animals) shall require VLT prior approval.

7
 8 **Objective 1: Maintain and preserve surface and groundwater quality.**

9 Forestry and agricultural uses of the property shall, at a minimum, comply with the terms of the
 10 Conservation Easement and with state and local water-quality regulations.

11 Provide food and cover for aquatic and terrestrial species as well as structural habitat diversity
 12 within the stream channel with leaf litter and woody debris.

13 Maintain 100 meter (328 feet) wide Riparian Buffer Zone on all perennial streams as
 14 recommended in “Conserving Vermont’s Natural Heritage, A Guide to Community Based Planning.”

15
 16 **Objective 2: Protect channel stability by preventing excessive scour and erosion of streambanks.**

17 Stream crossings (bridges etc.) should be kept to a minimum and, when needed, designed not to
 18 interfere with the course, the current, and the cross-section of the natural stream channel and maintain
 19 existing in-stream conditions. Allow stream channels to continue to adjust (migrate, erode, deposit
 20 sediments) in order to maintain equilibrium conditions over the long term.

21
 22 **Objective 3: Preserve wildlife travel corridors.**

23 Trail networks should be designed to avoid parallel alignment within a riparian buffer.

24
 25 **Objective 4: Buffer aquatic plants and animals from disturbance.**

26 Within these buffers, no cutting of trees or operation of logging equipment should occur, except
 27 what is necessary to cross streams (as described above) and where existing forest management roads are
 28 stable, located within this buffer, and no reasonable alternative trail exists.

29
 30 **Objective 5: Protect soil integrity and minimize erosion. Protect natural water levels and flows.**

31 Maintain 50 ft Riparian Buffer Zone (RBZ) on all perennial streams as required by the
 32 Conservation Easement. Management or use of the RBZ must protect soil integrity and minimize erosion,
 33 and must incorporate up-to-date ecological knowledge and management practices. Forest management
 34 activities or new stream crossings within the RBZ require approval of the easement steward (Vermont
 35 Land Trust). Agriculture is not permitted within the RBZ.

36
 37 **6.4 Species Level Management**

38 **6.4.1 Rare, Threatened and Endangered (RTE) Species**

39 **Objective: Maintain and protect habitats and natural communities that support rare, threatened, and**
 40 **endangered species.**

1

- 1 • Incorporate the latest information about known RTE species and their locations into ACF
2 Management and Forestry Plans. Create a plan for managing and conserving them, including actions to
3 shield them and their habitats from development impacts, and to increase their populations.
- 4 • Engage a professional ecologist to survey the area within 50 feet of all trail and other infrastructure
5 projects for any RTE species. Photograph and map the species' locations, and use the information as
6 described above.

7 **6.4.2 Wildlife Wintering Areas**

8 **Objective:** Maintain and protect typical wintering areas for whitetail deer, bobcat, coyote, black bear,
9 conifer-nesting birds and other wildlife.

- 10 • Meet the conservation requirements of white-tailed deer, bobcat, fisher, coyote, crossbills and other
11 by maintaining mature or maturing softwood cover and nearby food sources. Maintain at least 70% closed
12 canopy over cover areas.
- 13 • Promote hard and soft mast trees and shrubs to serve as food sources near wintering areas.
- 14 • Shield wintering areas above the VAST trail from concentrated disturbances by closing trails within
15 330 feet of them to all but hunters from November to April.
- 16 • Monitor likely wintering areas to gauge their ongoing viability and usage by deer and other species.
17

18 **6.4.3 Mast Stands**

- 19 • Maintain the conservation requirements of black bears, wild turkeys, white-tailed deer and other
20 species by promoting the establishment, wildlife usage, maintenance, and long-term viability of
21 hard and soft mast stands.
- 22 • Mitigate the continuing statewide loss to disease and invasive insects by maintaining and
23 protecting the functional integrity of Dry Oak communities and other mast stands inside the ACF
24 and within 330 feet (100 meters) of its borders.
- 25 • Gather information and advice on conserving mast stands from the County Forester and the
26 Vermont Fish and Wildlife Department
27

28 **6.4.4 Early Successional Forest and Shrub Habitats**

- 29 • Employ the ACF Forestry Management Plan to continue diversifying the species mix and age
30 classifications of the ACF's trees and shrubs.
- 31 • Improve deer population management. Encourage hunting of both antlered and antlerless deer.
32 Employ small, fenced-in areas (deer exclusion zones) to demonstrate how understory areas
33 respond in areas free of extensive deer browsing.
34
35
36

1 **7. Recreation Management Objectives and Actions**

2 **7.1 Recreation as addressed in the Conservation Easement**

3 The Conservation Easement notes that the ACF is “one of Vermont’s largest blocks of unfragmented
4 interior forest.” The continued loss of Vermont forest lands makes the ACF even more ecologically
5 valuable. The “Purposes” of the governing Conservation Easement allow conserving the ACF’s natural
6 resources while continuing to provide public access to the Forest in appropriate ways.”

7

8 The Conservation Easement (Page 6, III Permitted Uses of the protected Property, Paragraph A) allows
9 for non-motorized, non-mechanized recreational use of the forest (i.e., walking, snowshoeing, skiing, and
10 hunting). Additionally, Section IIIA of the Easement allows for “snowmobiling, and for non motorized
11 mechanized recreation such as mountain biking, and by animals capable of transporting humans as
12 regulated in the Management Plan and are consistent with the Conservation Easement Section(s) V, VI
13 and VII. that identify constraints within the Riparian Buffer Zone, [rare and uncommon natural
14 communities], the Ecological Protection Zone and Vernal Pool Ecological Protection Zone. The
15 Management Plan must provide the rules for these three uses and guide the management of recreational
16 infrastructure.

17 **7.2 Trail-based Recreation**

18

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

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

27

28 However, people’s physical and mental health benefit from being outdoors. An article entitled “Health
29 and wellness benefits of being outdoors” (Avitt, 2021) published by the Forest Service of the US Dept of
30 Agriculture reports benefits under the headings of physical wellness, mental wellness, and wellness in
31 the community. A review of published literature (Eigenschenk et al., 2019) examined evidence about
32 benefits to physical health, mental health and wellbeing, education and lifelong learning, active
33 citizenship, crime reduction, and anti-social behavior, and concluded that a combination of physical
34 activity and being in nature provided a range of significant benefits. Weinstein et al. (2015) addressed the
35 links between contact with natural environments and community cohesion, and crime. They reported that
36 the amount of time spent in nature was linked to more community cohesion. In turn, perception of
37 cohesive communities enhanced measures of people’s individual well-being and contributions to society
38 through higher workplace productivity and environmentally responsible behaviors. They also found
39 indications of linkage to lower crime both directly and indirectly through its effects on community
40 cohesion.

41

1 Therefore, human presence and activity in the Forest can have negative effects on wildlife, and positive
 2 effects on human wellbeing The Town cannot serve the aspirations of all potential recreational users of
 3 the ACFC, nor the hopes of those who recommend eliminating all human disturbance and the Town has
 4 little control over ecological protections in adjoining properties.

5

6 **Town residents' preferences for allowed activities**

7 A 2018 survey (link?) asked town residents to indicate their preferences for activities they would like to
 8 see allowed in the ACF. The ten most favored, in order of preference, were hiking, running, hunting,
 9 snowshoeing, skiing, bird- and wildlife-watching, picnicking, biking and dog-walking. Some Town
 10 residents identified connectivity with abutting trail systems to be an important attribute of trail design,
 11 while others were concerned that increased traffic would impact sensitive wildlife habitats. Expanding
 12 trails into the Forest's most sensitive areas and linking them into larger, unregulated networks would tax
 13 the Town's ability to protect the ACF's ecological resources and to manage safety for people using more
 14 remote trails.

15

16 **Naming of Trails:**

17 **Note:** The suggested names in Appendix B use animal names, which do not necessarily correspond to the
 18 prevalence or habitat of the named species. Conversely, the English Language proposed names are
 19 indicative of landscape etc. features. ACF will support the revival of the Western Abenaki language and
 20 culture by using Abenaki language for places, practices, flora, and fauna in the naming of trails,
 21 educational materials, and signage. Trails will be named to help bring Indigenous presence and language
 22 back to this landscape (rather than contribute to their erasure). Appendix B: Indigenous Recognition, Part
 23 4, identifies suggested names that were proposed and vetted by Abenaki tribal citizens, culture keepers
 24 and language experts.

25

26 **General Regulations**

27 To address the often competing interests of human and Forest health, the following regulations about
 28 recreation are proposed:

- 29 1. No access for horses and similar animals; Horses are a major vector of invasive species spread.
- 30 2. Pedestrians are allowed on all trails; Mechanized recreation only on trails identified for such use on the
 31 Trails Map;
- 32 3. No mechanized recreation during hunting seasons, during (specified) winter months or when trails are
 33 announced as 'closed' via public notices;
- 34 4. Electric bikes (eBikes) are not generally allowed on the trail network, based on concerns regarding
 35 their faster speeds, safety, possible user conflict and the non-motorized provision in the Conservation
 36 Easement. Recognizing that eBikes may broaden access for individuals with physical limitations and
 37 consistent with a commitment to equity and inclusion and the ADA, any ACF visitors with mobility
 38 disabilities who wish to use motorized personal assistive mobility devices (as permitted in the
 39 Conservation Easement, Section G) should contact the ACF Committee.

40

41 **Dogs**

42 **Figures ?:** Dogs on Trail Rules

43 <https://infoacf.wordpress.com/wp-content/uploads/2023/06/dogs-on-trail-rules-corvallis-2019.jpg>

44 <https://infoacf.wordpress.com/wp-content/uploads/2024/09/whynodogs.jpg>

1 Dogs are permitted below the power lines, and not above them. Dogs are to be kept on leash at all times,
 2 following the model of the Audubon Society (Huntington), in order to protect the forest wildlife. This is
 3 more stringent than the town dog ordinance, and is intended to protect wildlife and vegetation as well as
 4 other forest users. Hence no hunting with dogs. Voice control may not always be effective, and may
 5 disturb wildlife anyway because of the (loud) vocalization required.

6 All pet waste must be carried out.

8 **Signage at property boundaries with trails and liaison with adjacent owners**

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

12

13 **Events/permitting**

14 People and organizations wishing to hold events in the ACF should apply to the ACF at least two ACF
 15 meetings in advance of the event date. (See Easement, Events p7, section J)

16 Fees may be determined in proportion to and in accordance with cost of the events.

17 Approval of events will be determined by the ACFC according to criteria including but not limited to:

18 Appropriateness of use per the objectives of the MP and the Easement, expected numbers of participants,
 19 location and extent of the event, parking requirements, the likely ecological impact on the trails (if
 20 applicable) and on flora and fauna (for e.g., deer wintering, spring vernal pools, etc.).

22 **Determining trail closure times**

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

33

34 **Enforcement of Trail use Policy**

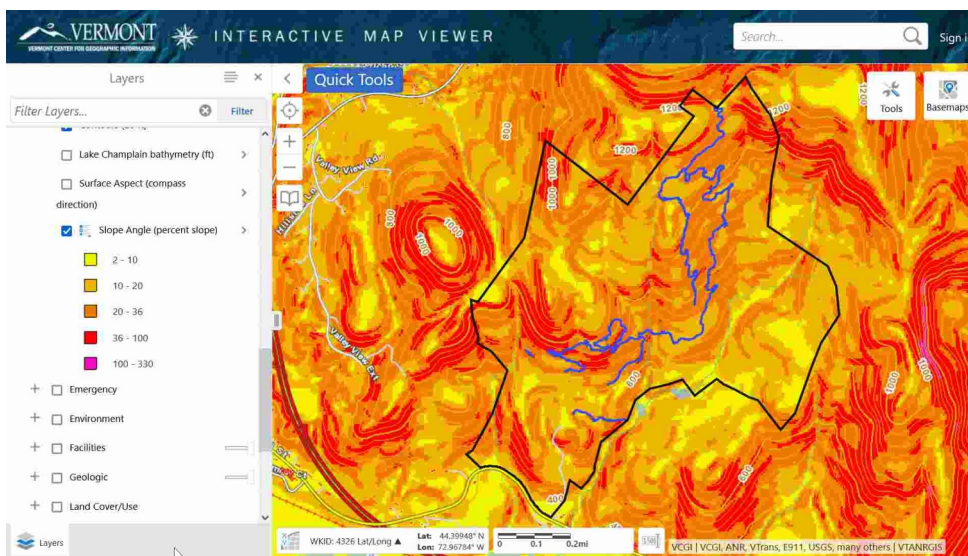
35 Clear signage and a map will be maintained at the kiosk and other formal access points to identify
 36 permitted uses and guidance for users and trail closure status. Public should be notified of trail closures at
 37 the Town Website and through notices at Richmond's Front Porch Forum. Ropes will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

1

1 7.2.1 Process for Considering Future Trails

2 Proposals for new trails shall not be approved for construction until a new Trail Design Map is adopted
3 through a full revision of the Management Plan, which is subject to public review and approval by the
4 Selectboard, and the Easement holders.

5 In considering the appropriateness of proposing any new future trails, the Committee will (1) seek
6 appropriate professional guidance to assist it in evaluating trail sustainability and the impact of trails on
7 the ACF’s wildlife and forested ecosystems; (2) comply with Richmond’s Zoning Regulations and Town
8 Plan (3); engage with the community via an open public process addressing the Town Plan and
9 Management Plan’s objectives to offer recreational opportunities while protecting the ACF’s natural
10 resources. Zoning permits for new trail construction may require a professionally prepared site plan and
11 an engineering design plan.
12



13

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.

14

15 Any new trail will avoid impacting ecologically sensitive areas (via buffers and Zones of Influence);
16 avoid duplication of trail routes and high density of trails; avoid trail routes liable to erosion.

17 Evaluation of suitability of new trail proposals should take into account the results of monitoring of
18 impacts of existing and prior trails. A new trail proposal should identify whether it is intended for
19 mechanized (bike) use, and explain why, taking into account the criteria and regulations for allowing
20 mechanized use in the Easement Page 6 (Page 6 Section IIIA “Permitted Uses of the protected Property”).
21

22 **Some Factors to Consider in Evaluating new Trail Proposals:**

23 **In favor:**

- 24 1. The Easement cites 'connectivity' as desirable;
- 25 2. Many people have expressed a desire to see a connection to the Sunshine trail network and beyond,
26 (though many have opposed it with valid reasons, see below);

2

1 3. The trails were designed with Arrowwood's ecological expertise and were considered consistent with
2 ecological design principles.

3 4. Trails, if designated as 'multi-use' would accommodate people using mechanized transport, thus
4 increasing the variety of possible recreational activities and participants.

5 5. Increasingly, people are recognizing the value of many forms of outdoor recreation to health and
6 wellbeing. Additional trails in more remote sections of the Forest would add to those opportunities.

7

8 **Not favoring the proposed trails:**

9 1. The Wildlife Stewardship Plan provides a thoroughly researched and updated documentation of the
10 ecological reasons why human presence, especially as facilitated by trails, should be minimized,
11 especially above the power lines;

12 2. The terrain on which those trails are proposed is mostly steep, and some areas apparently exceed the
13 30% slope above which the Town Zoning regulations preclude trail development. Slope of the terrain in
14 many other areas exceeds 20%, thus requiring a lot of financial expense and a long permitting process
15 with no guarantee of approval.

16 3. Some of the proposed trails appear to be inconsistent with ecological principles documented in the
17 Management Plan (proximity to streams, wetlands, etc., infringement on ecologically sensitive areas)
18 where recent research has identified greater negative impacts of human presence.

19 4. Some Townspeople wish to reserve areas of the Forest where solitude can be enjoyed, and wildlife can
20 be observed, or hunted. More trails would facilitate larger volumes of human traffic.

21 5. Unknown factors include anticipated volume and cumulative effects of trail traffic, and the possible
22 future changes in access to the trails on adjacent properties.

23 6. An extensive trail network accommodating 'mechanized travel' would require infrastructure to
24 accommodate steep and rugged terrain, stream crossing requiring bridges, boardwalks etc. This would
25 require additional expenditure of efforts and resources by the Town to construct, monitor and maintain
26 trails in a location where access and parking may limited their value relative to other already existing
27 nearby trails.

28 **7.2.2 Trail Connectivity to Surrounding Properties**

29 The conserved lands around the ACF provides opportunities for a larger, connected trail network. The
30 former VAST trail already connects the VYCC and trail networks. Consistent with the Easement's
31 recreational objectives, the ACF Trail Design addresses connections to existing, mapped, public trails on
32 properties adjoining the ACF. Any trail connections with adjacent properties will be subject to mutual
33 agreement, including signage to be installed at boundaries to indicate land ownership and allowed uses.

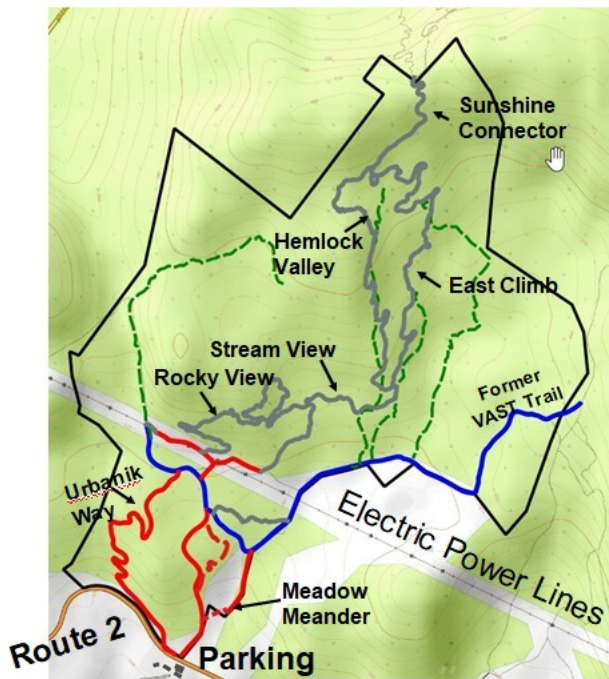
34 **7.2.3 Process for Constructing Approved Trails**

- 35 ● A hired professional trail designer will flag a route that, to the best of their ability, follows the
36 route appearing in the approved Trail Design Map.
- 37 ● A professional ecologist, will walk the flagged route and a 50 foot buffer on either side to
38 determine whether there are any fine-scale features (rare, threatened, or endangered species) that
39 would be adversely impacted by the proposed trail development. If there are, the trail designer
40 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. 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

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.



(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.

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. 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

Figure 4: Trail Design Map (Tentative)

1 accommodate school trips, families with young children or older people, providing easy to moderate
2 walking for 45 to 60 minutes.

3

4 Trails avoid sensitive areas (EPZs, etc) and give an appropriate buffer to sensitive areas, as determined by
5 professional ecologists and with reference to the Conservation Easement. To reduce impacts by avoiding
6 sensitive areas, 'buffer' widths; are specified as "300-foot" to reflect current ecological science.

7

8 **Existing roads and trails**

9 1. Except where they coincide with the proposed trail network, existing logging roads and skid trails will
10 not be maintained as trails and will not be shown on ACF trail maps (although during future forest
11 management activities, they may be maintained by the forester and logger).

12 2. Dana's Climb to be renamed as Camel's Hump View and is to be pedestrian only.

13 3. Urbanik Way should be re-routed to start higher in the parking lot to bypass persistently wet ground,
14 scramble up rock, and a section passing very close to Rt 2.

16 **Modifications to Arrowwood Proposal:**

- 18 • The proposed East Climb and Hemlock Valley trails will be rerouted to avoid wet areas and
19 rare/sensitive plants, per Arrowwood fine-scale review late summer 2022.
- 20 • The proposed Ridgetop trail was removed from the proposal, as it tracks closely to the ravine that
21 serves as a key wildlife corridor.
- 22 • The proposed central path between Cascade Trail and Rocky View was removed from the plan;
23 instead, the two should be connected where they are closest to one another towards the southern
24 end. Rocky View and Cascade are pedestrian only (Stream View, which is one access point for
25 those two trails, will have both pedestrian and non-pedestrian traffic). Note – potential slope
26 problem in that area.
- 27 • The Roadside Trail was removed from the proposed network as it is redundant, paralleling the
28 road, and would pass through persistently wet areas making trail construction “tricky” per
29 Arrowwood and Sinuosity report, requiring bridges, ramps, puncheon, etc.

30

31 **Pedestrian-only Trails:**

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

33

34 **Trail-free zones**

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

37 **7.2.5 Trail Monitoring, Maintenance, etc.**

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

1

1

2 Monitoring of trail traffic and status should include counting or estimating the number of visits, making
3 periodic surveys of plants (including invasives) and animal populations, and inspecting for trail erosion.
4 The plan should establish baselines and then monitor changes over time. Results of monitoring shall be
5 reported annually at a meeting of the ACFC. Management actions shall be adjusted according to the
6 results of the monitoring plan per the adaptive management model in **Figure 3**.
7 Monitoring should start with sensitive areas identified by the Arrowwood report recommendations **[link]**,
8 and the 2019 Field Naturalist Report **[link]**, and employ game cameras, observations by citizens science
9 and forest monitoring coordination.

10

11 **Invasive species management**

12 Seasonal visual inspection for invasive species will be conducted by ACFC and removal / mitigation will
13 be planned accordingly. Guidance shall be sought from the Conservation Commission, local experts such
14 as Jon Kart (Vermont Agency of Natural Resources, Fish & Wildlife Department) and others on
15 monitoring methods and control measures for identified invasive species.

16

17 **Monitoring impact of human presence in forest**

18 Quantitative and qualitative data collected will be reviewed regularly and guide the Committee in
19 prioritizing trail maintenance and upgrades. Trail user counters will be installed at base of each trail, and
20 counts retrieved periodically. A non-arbitrary decision-tree will be established to guide actions when
21 certain numbers of users are on trails. Methodology:

- 22 1. National Bicycle and Pedestrian Documentation Project (2016): A simple method for extrapolating
23 from sample monitoring to estimate longer term traffic volume. <https://bikepeddocumentation.org>
- 24 2. SE Group (2017) Monitoring Traffic on Hinesburg Town Forest (2017)
25 https://drive.google.com/file/d/1uUC0Vwym_BjyvSnyVy58z4Qp40p6EIBT/view
- 26 3. Monitoring traffic on Johnnie Brook Trail <https://infoacf.files.wordpress.com/2023/04/jbt-kh.pdf>

27 Seasonal visual inspection of trails for erosion and maintenance requirements will be conducted by the
28 ACFC. Trail maintenance will be planned seasonally and as needed and will be coordinated with the
29 Trails Committee to supervise work and to recruit volunteers. The ACFC member who is the Richmond
30 Trails Committee (RTC) member will liaise between ACFC and the RTC and other groups.

31 **7.3 Snowmobiling**

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

35 **7.4 Hunting**

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

2

1 7.5 Potential Recreation Partnerships

- 2 ● Richmond Trails Committee
- 3 ● Western Abenaki Tribes and Richmond Racial Equity
- 4 ● Maple Wind Farm
- 5 ● VYCC
- 6 ● Richmond Land Trust
- 7 ● Richmond Mountain Trails/Vermont Mountain Bike Association (VMBA)
- 8 ● Scouts
- 9 ● Community Senior Center

10 7.6 Recreation Management Objectives and Actions

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

14 **Actions:**

- 15 ● Maintain existing trails and design build new trails in conformity with the **ACF Trail Design Map**
 16 and provisions in this Management Plan
- 17 ● Choose trail names that bring Indigenous presence and language back to this landscape and create
 18 signage accordingly. Consult Appendix B, Part 4 for suggested names that were proposed and
 19 vetted by Abenaki tribal citizens, culture keepers and language experts.
- 20 ● Maintain a trailhead kiosk at the parking lot with information about wildlife and natural
 21 resources, hunting seasons, hunting safety, trail etiquette, agricultural uses of the property,
 22 allowed user groups, property ownership, cultural and ecological information, etc.
- 23 ● Include the short version of the Land Acknowledgment at all signed entrances, on kiosks and on
 24 maps stating: “The Andrews Community Forest is located within Ndakinna, the unceded
 25 homeland of the Western Abenaki People, who have a unique connection to this land and have
 26 been its traditional stewards.” (See **Appendix B**, Part 1.)
- 27 ● Install a bike rack at the East Main Street entrance to the Community Forest
- 28 ● Work with neighboring landowners to address any changes in landownership and allowed uses.

29
 30 **Objective:** Manage the recreation infrastructure in a way that best honors the needs of the forest and its
 31 users.

32 **Actions:**

- 33 ● Work with the Trails Committee to organize, advertise, and facilitate routine maintenance, acute
 34 maintenance, and trail work days and recruit volunteers.
- 35 ● Establish the ACFC email address as the means for trail users to communicate any need for trail
 36 maintenance (downed trees, erosion, etc.) or user conflicts.
- 37 ● Maintain a process to monitor and communicate trail conditions to the public.
- 38 ● Monitor impacts of recreational use on natural resources and adapt management strategies
 39 accordingly:
- 40 ● Explore possibilities for creating a walking/biking connection from the ACF to Richmond Village.
- 41 ● Evaluate applications for hosting trail-based events and races on forest trails if ecological monitoring
 42 indicates an ability to do so without negative impacts to forest ecosystems and trail infrastructure.

1

- 1 • Employ current best practices on balancing the needs of both habitat and recreational users.
- 2

1 8. Agriculture

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

11
 12 There may be opportunities in the forest for a community garden/orchard, and agricultural education and
 13 demonstration projects. Under the Conservation Easement, agriculture is permitted where the forest has
 14 already been cleared. The ACF Committee will remain open to proposals for alternative uses of the
 15 agricultural lands, but appreciates maintaining a long-term, mutually-beneficial agricultural partnership.

16 8.1 Potential Agriculture Partnerships

- 17 ● Maple Wind Farm
- 18 ● Richmond Farmers Market
- 19 ● Richmond Community Kitchen
- 20 ● The Farm at VYCC
- 21 ● NOFA Vermont
- 22 ● Vermont Farm Bureau

23 8.2 Agriculture Management Objectives and Actions

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

26 **Action:**

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

30
 31 **Objective:** Develop agreements with Maple Wind Farm or other farm entity to allow coexistence of
 32 agriculture and public access.

33 ● **Actions:**

- 34 Work with neighboring Maple Wind Farm or other farm entity who desires to use the two fenced-
 35 in agricultural meadow pastures and maintain or create the necessary license agreement for their
 36 use.
- 37 ● Work to convert the southern part Old Farm Road to a human use only trail and work with Maple
 38 Wind Farm to give up its existing perpetual 25’ wide farm road right of way on the south eastern

1

1 edge of the ACF land in exchange for a new perpetual farm road right of way easement using the
2 25' utility road right of way from Route 2.

- 3 • Maintain the two meadows as open land whether grazed or not; Brush hog each of the meadows
4 at least every three years.

5 **9. Education**

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

10 Possible educational opportunities include:

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

23

24 **9.1 Educational Objectives and Actions**

25

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

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

32

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

- 34 • Monitoring of trail use
- 35 • Monitoring of invasive species

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

- 40 • **Action 1**

1 | ● Action 2

2 |

3 **Objective 4:** Education about land and original people recognition

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

13 **9.2 Potential Education Partnerships**

- 14 ● Richmond Elementary School
- 15 ● Camels Hump Middle School
- 16 ● Mount Mansfield Union High School
- 17 ● University of Vermont Field Naturalist Program
- 18 ● University of Vermont Rubenstein School and Environmental Studies Program
- 19 ● Essex Technical School
- 20 ● Vermont Youth Conservation Corps
- 21 ● Abenaki Nation of Missisquoi, The Nulhegan Band of the Coosuk Abenaki Nation, Richmond
- 22 Racial Equity
- 23 ● Green Mountain Audubon Center, Birds of Vermont Museum
- 24 ● Boy and Girl Scout Troops
- 25 ● Maple Wind Farm
- 26 ● Nature Conservancy
- 27 ● Vermont Land Trust, Richmond Land Trust
- 28 ● Richmond Recreation Committee
- 29 ● Radiate Art
- 30 ● Vermont Forests, Parks, and Recreation
- 31 ● Summer Camps: Mount Mansfield Modified Union School District (MMMUSD) and
- 32 MMMUSD, Part 2 After School and Summer Camps, Our Community Cares Summer camp
- 33 ● Green Mountain Orienteering Club

34 **10. Legal Agreements on the Property**

35 There are many agreements, right-of-ways, and easements that are key to the management of the forest.

36 **10.1 Agricultural Lease**

37 Maple Wind Farm is the adjoining land owner and that land includes the remaining acres of the original
38 Andrew farm. Maple Wind Farm has historically used eight acres of what is now the community forest

1 for grazing cattle. Both parties are interested in continuing this arrangement and will explore the
2 possibility of a long-term lease. Vermont Land Trust will need to approve any changes in the lease.

3

4 In negotiating this lease, the Committee wishes to to retain a crossover trail across the lower portion of
5 the pasture linking the VELCO road with the Maple Wind Farm road. This trail would be open anytime
6 cows are not grazing in the pasture; when cows are grazing, the Committee proposes closing this trail and
7 installing appropriate signage to redirect visitors to other routes on the property.

8 **10.2 Powerline Rights-of-Way: VELCO Wright to update**

9 A VELCO powerline runs through the community forest and VELCO owns the right-of-way. VELCO
10 needs road access to the right-of-way on occasion for maintenance and repairs to the powerline. In 2018,
11 VELCO improved a road from the forest entrance on Route 2 to the powerline; they used the upper
12 landing area to stage their work. Following this work, they re-seeded the landing and the road above the
13 landing, and installed waterbars on the road below the landing. At certain periods, VELCO may need to
14 close some or all of the forest to perform larger projects on the powerline. The ACF Committee should
15 coordinate with VELCO to prepare for such events and fully inform the public of the closure.

16 **10.3 Powerline Rights-of-Way: Green Mountain Power Wright to update**

17 Green Mountain Power has a 75-foot right-of-way adjacent to the VELCO line in the same powerline
18 corridor. Within this corridor, Green Mountain Power manages vegetation. The Committee will work to
19 better understand the vegetation management goals and practices, the landowner's (Town's) rights, to
20 advise the Selectboard to make an informed decision about vegetation management within the Powerline
21 corridor, and to communicate this decision broadly to Community Forest visitors.

22 **10.4 Legal Agreements Management Objectives**

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

25 **10.5 Legal Agreements Management Actions**

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

11. Appendices

2 [Appendix A: Conservations Easement](#)

3 Appendix B. [Indigenous Land and People Acknowledgment and Land Use](#)

4 Appendix C: Draft [Wildlife Stewardship Plan](#)

5

6 **List of Maps**

7 A. Trail Concept Map 2018 - zones

8 B. Trail Concept Map 2018 - possible trails

9 C. Trail Design Map

10 D. Arrowwood and Sinuosity proposed map 2021

11 E. Slopes: <https://maps.vermont.gov/vcgi/html5viewer/?viewer=vtmapviewer>

12 F. Maps from Shapefiles:

13

14 **Appendices from 2018 Management Plan ([links](#))**

15 **1. Forestry Maps, etc.**

16 [ACF Soil Map \(2019\)](#)

17 [Forest Stands \(2019\)](#)

18 [Forest Stands -Topo \(2019\)](#)

19 [Management Intensity Zones \(2019\)](#)

20 [Forestry Activities Map \(2019\)](#)

21 [ACF Invasives Map 090119](#)

22 [Example Forester Agreement 072419\)](#)

23

24 **2. Ecological Assessments**

25 [Andrews Farm Ecological Assessment](#) – Allaire Diamond

26 [Four Town Ecological Assessment](#) - Arrowwood Environmental

27 [Audubon Society](#): Forest Bird Habitat Assessment and Management Recommendations (Hagenbuch,
28 2017)

29

30 **3. [Maps & Appendices](#) from 2018 Management Plan**

31 A. Maps

32 a. Trail Concept Map - zones

33 b. Trail Concept Map - possible trails

34 c. Conservation Easement Map

35 d. Interim Management Plan Map (applicable through 12/31/18)

36 B. Chart: Evolution of Allowed/Prohibited Uses Through Planning Phases

37 G. Results and Comments from Public Meetings

38

39 **4. [Visioning Process](#) (2017) from 2018 Management Plan**

40 (Starts at Page 279 of 345):

41 Visioning Process Results (pp 279 -)

42 See charts of priorities: [Page 294: Management Focus](#); [Page 342 – 347: Recreational Activities 1-6](#)

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