

B6. Recreation Management

B6.1 Recreation Objectives and Actions

Outdoor recreation has long been and remains a highly valued tradition throughout the Andrews Community Forest. With careful planning, we can offer meaningful access to nature while protecting the forest's most sensitive ecological features.

Objectives:

- Provide inclusive, accessible recreational opportunities for hikers, walkers, bikers, hunters, runners, nature observers, skiers, snowshoers, and others of all ages and abilities.
- Accommodate potentially conflicting recreational activities through strategies such as spatial zoning, seasonal scheduling, and tailoring approaches to the specific nature of each activity.
- Ensure that recreational development supports the long-term conservation goals outlined in the management plan and conservation easement.
- Promote trail connectivity to neighboring properties where ecologically appropriate.
- Seek input from relevant community groups, town committees and the general public about decisions related to recreation to promote a culture of shared stewardship and education.
- Design trails to highlight the forest's beauty while protecting wildlife corridors, riparian zones, steep slopes, vernal pools, and other ecologically sensitive features.

Actions:

- Promote recreational use on existing trails/skid roads and limit the creation of new trails except as needed to 1) bypass wet, steep, ecologically sensitive or otherwise unsuitable stretches of existing trails, 2) connect trail segments interrupted by acts of nature or forest management activities, 3) to connect to trails on adjacent land where ecologically appropriate.
- **Site,** build and maintain trails in keeping with this document's trail approval [process](#) and development parameters, and utilize the best practices from the Vermont Agency of Natural Resources. Trail work will only be performed at the direction of the ACF committee.
- Restrict motorized traffic to comply with the easement. **[BE: Do we need this if we're not being more restrictive than the easement's allowances? Electric bikes are an issue. VLT easements, ours included, explicitly prohibit "motorized" vehicles and yet VLT somehow doesn't consider all bikes with motors as motorized. I think for clarity we should prohibit "all classes of e-bikes," though that prohibition might best belong in the posted guidelines, where we can more easily change them if the situation warrants..]**
- Avoid constructing and maintaining trails in or near ecologically sensitive areas, buffering those locations from human disturbances as specified in the trail development parameters.
- Designate two distinct management zones within the forest: a southern zone and a northern zone. These zones are separated by a boundary that follows an east-west corridor composed of the VAST trail and the powerline corridor. Specifically, the dividing line should follow the northernmost edge of either the VAST trail or the powerline corridor, from east to west.

- Designate trails in the northern zone as pedestrian only. Limit dogs and mountain bikers to the southern zone.
- Minimize trail stream crossings and avoid encroachment on riparian buffers. Site, build, and maintain bridges, culverts and boardwalks in accordance with best practices to maintain water quality and prevent erosion.
- Monitor trail use and wildlife activity utilizing cameras, microphones, trail counters, sign-in sheets, etc.
- Adapt management of recreational trails as dictated by user volumes and their ecological impacts and using closures or reroutes where appropriate.
- Create and maintain a positive working relationship with adjoining property owners in efforts to coordinate ACF's management goals with theirs.
- Implement additional seasonal and weather related closures in designated areas to protect wildlife wintering areas, nesting/breeding sites, mast stands, wildlife connectivity routes, and fragile soils.
- Create and maintain up-to-date kiosks with trail maps, safety guidance, regulations, and seasonal advisories (e.g., trail closures, wearing blaze orange, etc). Install signs at all trailheads and property access points. Include Indigenous land acknowledgments and use Abenaki names where appropriate.
- Keep the public informed about trail conditions through the town website, Front Porch Forum, *Times Ink!* and other outlets.
- Inspect trails and infrastructure on a yearly schedule [and after major storm events](#). [Track](#) and respond to changes caused by human use and natural events.
- Inspect trails and infrastructure on a yearly schedule and respond to changes caused by human use and natural events.
- Collaborate with the Richmond Trails Committee and other volunteers to help steward the trails by scheduling volunteer work days.
- Establish an ACF contact email for the public to report trail maintenance needs, user conflicts, or wildlife concerns.
- [Maintain an active ecological resource map to guide decision-making and educate trail users.](#)

[Dan: Management Guidelines \(not resolved in working group 6/30\)](#)

- [Prioritize improvements to existing corridors \(e.g., VAST trail\) to avoid unnecessary fragmentation of forest interior and wildlife habitat.](#) [SP: Covered under action bullet #1, but we don't call out fragmentation— do we need to? BE: I don't think so.](#)
- [Engage users in low-impact, non-motorized recreation that aligns with the ACF's ecological vision.](#) [SP: This seems mostly focused on motorized use, which is covered under "Restrict motorized traffic to comply with the easement." do we need to specify low impact? Aligning with ecological vision should be a given, and is covered in the trail parameters and eco section. BE: I agree, we don't need it. "Engage" sounds better than "restrict," but it implies a more active role in promoting and guiding usage than I think](#)

we'd be able to do. So I'd leave the text as is.

6.1.2 Trail Development Parameters

The following parameters ensure protection of sensitive areas and wildlife, and promote responsible trail building. Trail development **must** follow the [Vermont Town Forest Recreation Planning Natural Resources Guide](#).

Wildlife Habitat Connectors

- Identify, map and maintain major wildlife linkages to support habitat connectivity.
- Prohibit any new trail construction within a 300-foot strict buffer zone.

Riparian Areas

- ~~Consider perennial, intermittent, and ephemeral streams. [BE: Something's missing here—and the next bullet could cover it.]~~
- Avoid trail development within riparian zones (perennial, intermittent, and ephemeral streams) to protect water quality and aquatic ecosystems. [BE: Incorporate "Buffer requirements...." bullet below as text within this bullet? And revise this to exclude ephemeral streams, as in the bullet below?]
- Where perennial and intermittent stream crossings are unavoidable, they must be minimal and perpendicular to the watercourse.
- Use bridges and boardwalks to cross perennial and intermittent streams. Ensure proper crossing height to cover full bank width and provide adequate debris clearance beneath.
- Buffer requirements from top of bank:
 - Perennial - 100ft
 - Intermittent/~~Ephemeral~~ - 50ft
- Where a riparian area is specifically protected as a wildlife connectivity corridor, the buffer should be 300 feet. (designate specific streams and link to ecology section?)

Vernal Pools

- Protect vernal pools and associated species by limiting trail development in surrounding zones by:
 - Avoiding trail development within the Easement's 100ft EPZ [Or, Avoiding trail development within 100 feet of all identified vernal pools.]
 - Restricting trail development within the Easement's 500ft EPZ to foot paths, using boardwalks where necessary. [Or, Restricting trail development between 100 and 500 feet of all identified vernal pools to foot paths, using boardwalks as necessary.]

[BE: I was going to note that these points duplicate the Easement, but upon checking I saw that the Easement protects only the two vernal pools identified to date. By keeping this (and deleting references to the easement's specific EPZs) we can leave room to use the same buffer distances to protect any other vernal pools that are found and confirmed.)

- **Buffer requirements:**
 - ⊖ ~~No trail development within 100ft EPZ~~
 - ⊖ ~~Restrict trail development within 500ft EPZ (restrict new trails to foot traffic, use boardwalks when necessary)~~

Ledges and Talus Slopes

- Prohibit trail development within 100 feet of broken ledge and talus formations due to ecological sensitivity and erosion concerns.
- Protect **likely** bobcat denning sites with 300 foot buffers.

[The work group struggled with the above section. Bobcats, broken ledges, and talus are not specifically called out in Meredith Naughton's report, though the standard buffer for sensitive areas is 300ft. However, the Vermont Town Forest Recreation Planning Natural Resources Guide recommends 100ft buffers for trail development around broken ledges and talus. If a known denning site exists **or has the potential to serve that function**, that would warrant a bigger (300ft) buffer. We would like to reach out to Meredith (or another expert such as Sue Morse) to see if we can get additional guidance on this.]

Slope Guidelines

- Expedite and simplify new trail development by prioritizing new trails on terrain with slopes less than 20%.
- Limit trail development on slopes above 20%. Prioritize soil integrity and erosion control.

Sensitive Natural Communities

Protect sensitive natural communities identified in the conservation easement and ecological surveys.

[BE: Most of the features above and below are natural communities, and the intro to this section notes we're out to protect "sensitive areas and wildlife." Might we omit this?]

Strict 300-Foot Buffer:

- Dry Oak
- Dry Red Oak–White Pine
- Dry Oak–Hickory–Hophornbeam
- Red Pine

Hemlock:

- Focus on protection of Hemlock stands, which serve as critical wintering habitat for deer, turkey, and other species.
- Close trails in and within 300 feet of Hemlock stands during winter months to maintain the critical roles these areas play in sheltering deer and other species from harsh weather.

6.2.2 Trail Approval Process

~~All proposals for new trail construction within the Andrews Community Forest must comply with the ACF Management Plan, [BE: Isn't compliance a given?] the Conservation Easement, and applicable state and local regulations. The following process ensures transparency, ecological responsibility, and community engagement.~~ All new trail development in ACF must adhere to the trail approval process. This ensures compliance, transparency, ecological responsibility, and community engagement.

Document the Need, Purpose, and Identify Proposed Route

- Clearly define the intended use, users, purposes, and estimated costs of the proposed trail.
- Explain how the trail supports goals in the ACF Management Plan and aligns with the easement's permitted uses.
- Justify the trail based on community interest, accessibility improvements, estimated cost, and/or connectivity needs.
- Identify the proposed route using existing forest roads or skid trails where possible.
- Adhere to the trail development parameters to ensure compliance with protecting forest integrity and wildlife habitat.
- Is the proposed trail accessible to all user types? [BE: Big ask there. How about, "Consider ways to broaden the trail's accessibility to a range of user ages and abilities."]

Committee Review

- The proposed trail should then be brought to the ACF committee for consideration

Expert Review and Flagging

- Engage a professional trail designer to flag the preliminary route.
- Hire a qualified ecologist to walk the flagged route and a buffer zone (300ft?) to identify fine-scale ecological features. BE: [300' is a lot jfor a fine-scale assessment.. How about picking up from MP1 and making it 50' on both sides of the trail?]
- Adjust the route as needed to avoid:
 - Rare, threatened, or endangered species

- Fragile soils and erosion-prone terrain
- Conflicts with known wildlife usage
- Any sensitive areas as outlined in the trail development parameters

Overlay Mapping and Zones of Influence

- Map the proposed trail using the respective buffers from ecologically sensitive areas

Committee Review and Public Input

- Present the proposal to the ACF Committee for preliminary review.
- Solicit input from:
 - Richmond Trails Committee
 - Richmond Conservation Commission
 - Neighboring landowners
 - The general public (e.g., through meetings, notices, and comment periods)

Regulatory and Legal Compliance

- Ensure compliance with Richmond Zoning, State, and Federal regulations
- Prepare supporting documents as needed:
 - Site plans
 - Erosion and sediment control plans

Approval and Permitting

- Submit finalized proposal for **formal approval** by:
 - The ACF Committee
 - The Richmond Selectboard
 - Vermont Land Trust

Construction and Stewardship

- Construct the trail using best practices outlined in the Vermont Town Forest Recreation Planning Natural Resources Guide. [BE: ANR has two town forest publications: *Vermont Town Forest Stewardship Guide* and *Vermont Town Forest Trail Design Guide*.]
- Coordinate with volunteers, professional builders, and the Trails Committee.
- Establish a monitoring and maintenance plan with reporting and adaptive management based on use and impact.

6.2.3 Trail Deviation Review Process

This process provides a structured way to evaluate minor ~~or unavoidable~~ deviations from the Trail Development Parameters.

Define “Minor Deviation”

Set clear criteria to distinguish minor vs. major deviations. A minor deviation is defined as:

- No more than 5% of a trail may encroach on a buffer zone. ~~Trail encroachment into a buffer zone by less than 5% of the total trail length.~~ [BE: This would allow a mile-long trail to encroach more than 250' into a buffered area (or areas), largely negating the protections. Smaller but disproportionately critical features could be greatly compromised by long trails.] [SP: I could have written this more clearly... the intent was not to allow longer trails greater allowances to penetrate buffer zones. See new language above.] [BE: Isn't the problem still the same...the longer the trail, the more encroachment that is allowed, putting the most impact on the smallest features? This is a tough one. Maybe we define minor in square feet, not a percentage?]
- Trail passes within the edge of a buffer but does not cut through it (e.g., skirting the edge of a 300-ft zone, not crossing through a vernal pool EPZ).
- Trail follows an existing disturbance (e.g., skid road) [BE: Add ", mast stand, wintering area, denning zone or other sensitive feature."] in a sensitive area with no viable reroute. [BE: Again, what would be "unavoidable"? Why give precedence to a trail vs. maintaining ecological integrity wherever there is no "viable reroute"? This sets up a big, "avoidable" loophole.] [SP: We can probably just remove this?] [BE: I agree on removing it.]

Require a Justification Statement

- Why the deviation is necessary (e.g., terrain constraints, connectivity need, user safety).
- What alternatives were considered and **why they were** rejected.
- **Expected ecological impacts of the deviation.**
- How the deviation will be minimized or mitigated.

Trigger an Enhanced Ecological Review [BE: Would this be for both major and minor deviations?] [SP: My thought here was that only minor deviations would be allowed. Anything qualified as a major deviation from the trail development parameters would be a nonstarter.] [BE: Gotcha. Forget my comment.]

Require a review by a qualified ecologist and/or wildlife expert that includes:

- **Site walk** of the deviation area.
- Assessment of **potential impacts** (wildlife, soil, hydrology).
- Recommendations for:
 - Buffers or reroutes

- Seasonal restrictions
- Infrastructure (e.g., boardwalks, signage)
- Monitoring requirements and impact assessments

Committee Decision and Conditions

The ACF Committee votes to approve with conditions, request modifications, or reject the proposed deviation. If approved, include monitoring requirements, and set a review window to reassess impact.

Documentation

All deviation approvals must be logged in an **addendum** to the Management Plan or Stewardship Plan.

[IS: The following two Figures are already in Appendix D, or should be moved there?] [BE: Yes, these should be in the Appendix.]

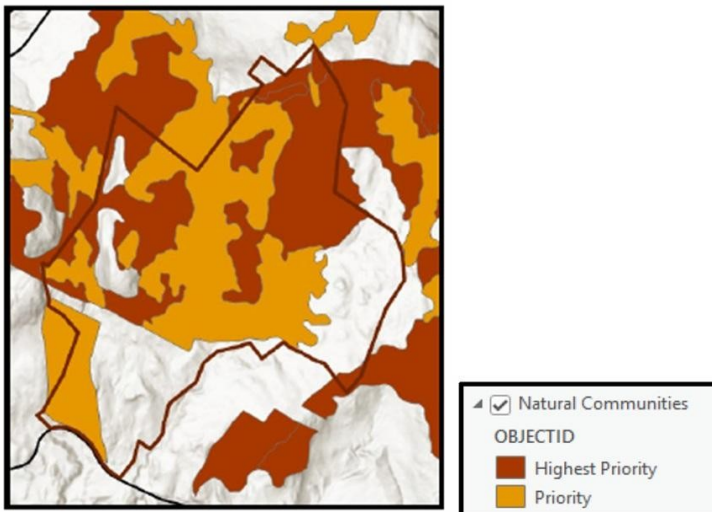


Figure __: On a state-wide scale, Vermont’s Agency of Natural Resources ranks ACF’s natural communities as “high” and “highest” priority for conservation. Note that most are clustered north of the former VAST trail. Source: VT ANR BioFinder.

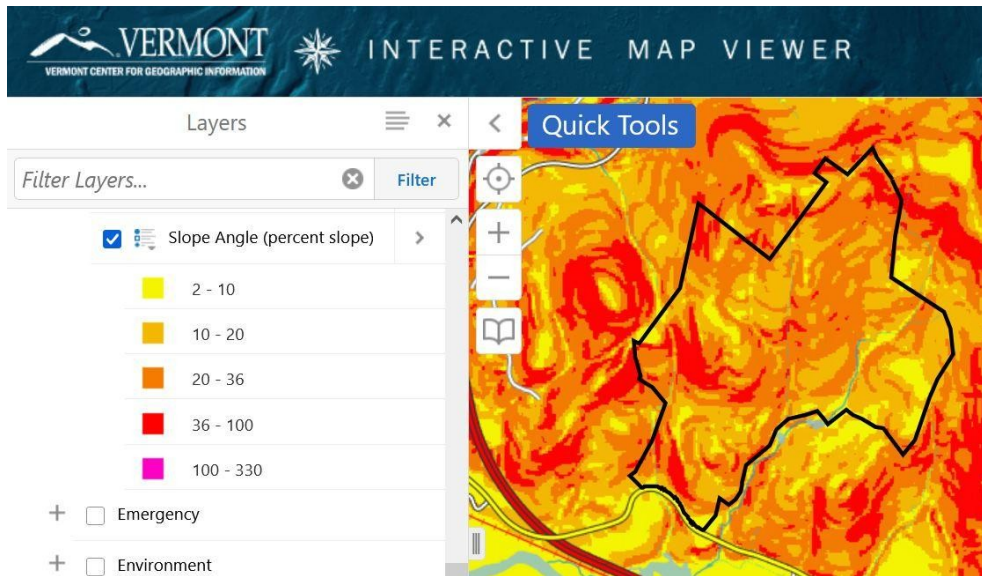


Figure _ : Slopes of terrain in the ACF. Zoning regulations identify special provisions for development on slopes between 20% and 35%, and greater than 35%

B6.2 Trail Monitoring, Maintenance, etc.

[BE: This would benefit from an opening statement describing the purpose, such as: “The Adaptive Management (Section ?) and the Town’s overall stewardship of the forest and its recreational facilities, depend on regular, consistent tracking of trail usage, trail and infrastructure conditions, impacts on ecological processes, and the need and costs of maintenance projects. Benchmarks and trigger points should be established to guide usage of the data as it is gathered. The Trail Stewardship Plan details steps needed to achieve this.”]

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

Monitoring of trail traffic

[SP Comment: Should we consider adding a visitor sign in log?]

[JP: Absolutely, doing so is consistent with all of our goals (conservation, recreation, education, etc)]

[BE: We definitely need to provide for some kind of monitoring but not as a substitute for avoiding sensitive areas in the first place.]

Monitoring should include counting or estimating the number of visits, making periodic surveys of plants (including invasives) and animal populations, and inspecting for trail erosion. The plan should establish baselines and then monitor changes over time.

[BE: How to establish baselines? Set some parameters in the Trail Stewardship Plan and in the Wildlife Stewardship Plan]

Results of monitoring shall be reported annually at a meeting of the ACFC. Management actions shall be adjusted according to the results of the monitoring plan per the adaptive management model in **Figure 3**. Monitoring should start with sensitive areas identified by the [Arrowwood report](#) recommendations, and the 2019 [Field Naturalist Report](#) and employ game cameras, [\[BE: audio traps,\]](#) observations by [volunteers](#), and forest monitoring coordination.

Invasive species management

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

Monitoring impact of human presence in forest

[BE: This title is overly broad, and seems to focus only on soil impacts. Benchmarks and standards relating to trail carrying capacity for ecological protections, user safety, user enjoyment, etc., should be established for any trail.]

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

1. National Bicycle and Pedestrian Documentation Project (2016): A simple method for extrapolating from sample monitoring to estimate longer term traffic volume. <https://bikepeddocumentation.org>
2. SE Group (2017) Monitoring Traffic on Hinesburg Town Forest (2017) https://drive.google.com/file/d/1uUC0Vwym_BjyvSnyVy58z4Qp40p6ElBT/view
3. Monitoring traffic on Johnnie Brook Trail <https://infoacf.files.wordpress.com/2023/04/jbt-kh.pdf>

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

B6.3 Potential Recreation Partnerships

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

- County Forester
- Vermont Fish & Wildlife Department
- UVM Community Forest Program