



FORK RUN TRAIL SYSTEM MASTER PLAN

**PREPARED FOR
GARRETT COUNTY
OAKLAND, MARYLAND**

Prepared By Penn Trails

Final Report Submitted August 7 2026



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INTRODUCTION

Objectives

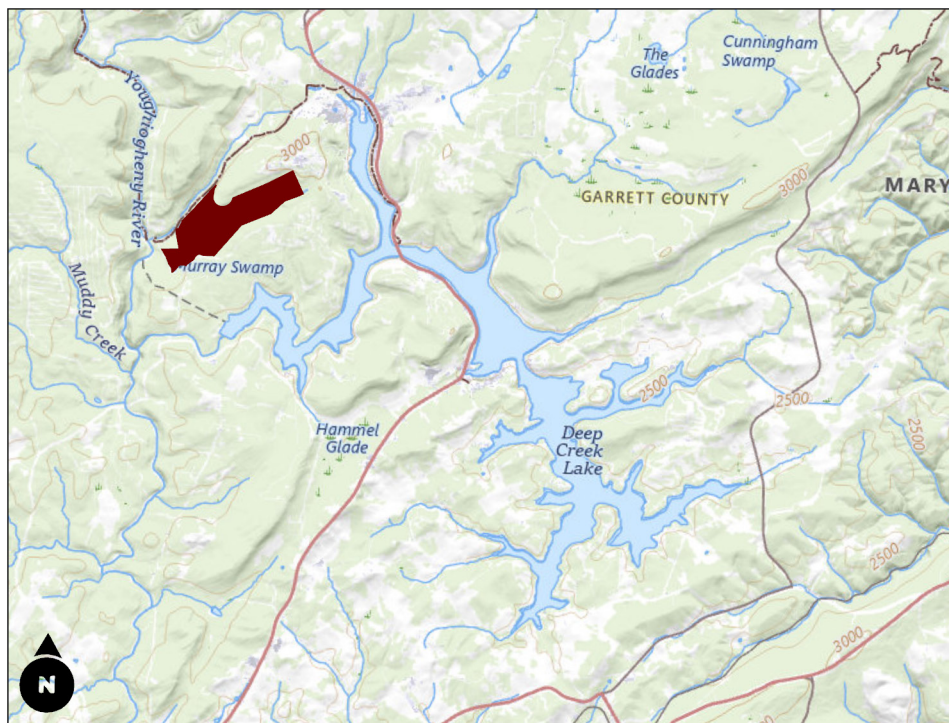
This report details the planning and design process undertaken by Penn Trails and Applied Trails Research related to proposed trail improvements at Fork Run Recreation Area, located in McHenry, Maryland and owned by Garrett County. The process included stakeholder input and feedback, site analysis, trail assessment and feasibility analysis, development of trail management objectives, design parameters, conceptual layout, and selected corridor flagging for proposed trail improvements.

Background

Fork Run Recreation Area is comprised of approximately 676 acres located just east of the Youghiogheny River in McHenry, Maryland, 10.6 miles north of Oakland.

The property is owned by Garrett County and managed to provide public access for passive recreation, to protect the sensitive riparian corridor of Fork Run, and to improve forest health. Fork Run is subject to a Maryland Environmental Trust conservation easement and a Forest Stewardship plan last revised in 2018.

The purpose of this project phase is to understand the goals and objectives of Garrett County and other stakeholders related to recreational use, scout the



LOCATION

subject area to observe site conditions and assess existing trail conditions and feasibility for trail network expansion, and develop conceptual recommendations for the design of proposed new trails and improvements to existing trails within Fork Run.

Site visits were conducted in Fall 2025 through Summer 2026. Weather conditions during each site visit were average for the time of year, with typical precipitation and temperatures preceding each site visit. Numerous site visits allowed the project team to gain a comprehensive understanding of site characteristics impacting trail construction and to observe how existing trails performed under various seasonal conditions.



The Primary Access parking area



The Primary Access trailhead

Process

The initial project goals involved assessment of existing trails and conceptual planning for new trails, especially related to sustainability, user experience, and accessibility.

The project team participated in two virtual stakeholder engagement meetings. Initial stakeholder input was considered during the conceptual planning process for the trail system. The conceptual trail system plan was then presented to stakeholders at the second meeting, and stakeholders were invited to share feedback on the proposal.

Following approval of the conceptual plan by Garrett County, trail corridors for new trails and trail realignments were flagged in the field.

This report represents a summary of the planning and design processes, stakeholder input, and recommendations for trail improvements at Fork Run Recreation Area and is intended to provide Garrett County with an implementation roadmap including typical details and specifications to support future grant applications and subsequent planning, design, and construction.



A view of Fork Run

Deliverables

For the purpose of this report, trail corridors are assumed to be 60' unless otherwise noted. A combination of off-site review and in-person observation during the site visits informed analysis performed as part of this project phase.

Information consulted for this analysis and for all provided maps includes United States Fish and Wildlife Service National Wetland Inventory (NWI) mapping, NRCS Web Soil Survey data, client-provided parcel data, LiDAR terrain data and aerial imagery available from the State of Maryland, MDOT

State and Local roads data, County-provided stream data, and ESRI base layers. GPS data for the linear trail route, control points, and significant features were collected using either a smartphone, a Trimble Geo 7X, or a Garmin GPSMap64.

GIS data is mapping-grade and does not represent survey-level accuracy.

SITE CONDITIONS

The project team has completed an inventory and analysis of site conditions as they pertain to recreational trail development to the best of its ability. Study by specialty consultants may be required if additional information is necessary for permitting, future improvements, impact analysis, or for any other purpose outside the scope of this trail planning phase.

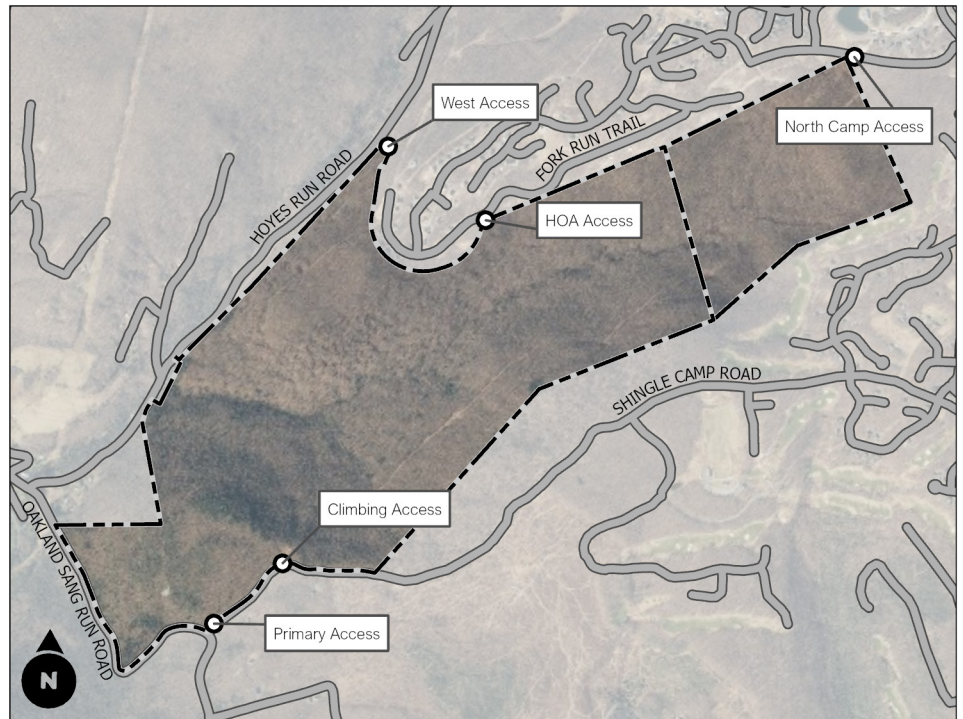
Site Access

The site has numerous access points that were investigated as part of this planning phase.

The primary access is located near the intersection of Shingle Camp Road and Oakland Sang Run Road, and consists of a 700-foot paved driveway leading to a 5,000 square foot parking lot and trailhead that is open to the public. This access point will remain the primary access point for public visitation and maintenance purposes.

The climbing access is a secondary access point located along Shingle Camp Road, not far from the primary access. This site has been considered for development as a secondary public parking area and trailhead to provide faster access to the climbing area.

The North Camp access is a secondary access point located at the northeast corner of the



SITE ACCESS

— Roads [] Site Boundary



The North Camp Access



The Primary Access parking area



View of the West Access



The Access Road at the North Camp Access

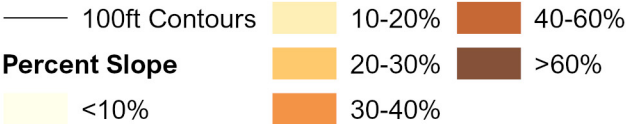
site alongside Wisp Adventure Road. Currently it consists of a gated gravel road that travels alongside the property’s eastern boundary through a County-held Right-of-Way before entering the property for a short distance and then exiting the property onto neighboring privately owned land. There is no formal trailhead here, but informal parking is available on the road shoulder and signage indicates that access to the property on foot is permitted. A trail connection to this access point and recommendations for future development as a public parking area and trailhead was specifically requested by Garrett County as part of this planning phase.

The HOA access is a point alongside Fork Run Trail, a private road located in the North Camp neighborhood. It is not served by any existing trails, but access to this point is desired by the North Camp Homeowners Association and a trail connection to this point was also included as part of this planning phase.

The west access point is located off Hoyes Run Road, and can be reached via a steep gravel driveway that leads to a property owned by Garrett County and connecting the Fork Run Property to Wisp Resort. This access point was identified during early desktop analysis and was investigated as a possible fourth public access point, but was discarded due to difficult vehicle access, poor visibility



TOPOGRAPHY AND SLOPE



when turning onto Hoyes Run Road, and topography that limits options for trail development.

Topography

The site is split down the middle by Fork Run, which originates on the eastern end of the property and flows toward the southwest. The site forms a three-sided bowl draining toward Fork Run. From its lowest point at 2082’ above sea level, the property climbs 894’ to its highest point at 2976’ above sea level.

Slopes are mostly under 40% grade, with some steeper portions of the property exceeding 60%. Two “peaks” are formed on the property’s western side on either side of Fork



Typical forest character



Large geologic features are scattered throughout Fork Run

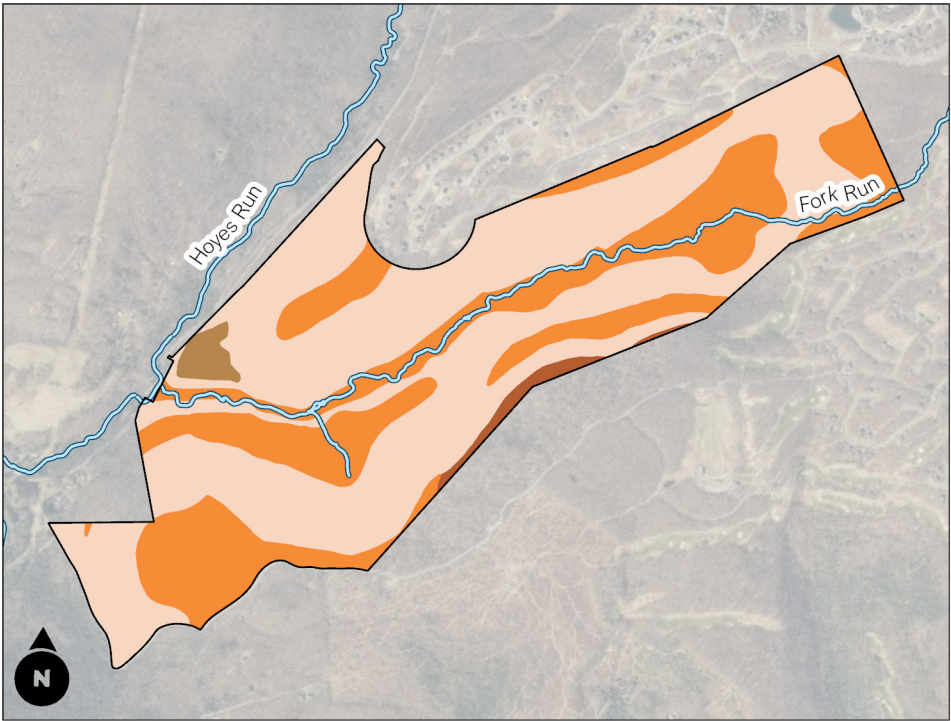
Run, with the steepest slopes concentrated in these areas.

Past logging activities have left significant evidence in the landscape in the form of a dense network of skidroads throughout the property. Some of these roads form wide bench cuts with steep shoulders, while others are aligned to the fall-line forming channels for surface water to follow. In most locations the skidroads have altered surface water flow, either redirecting channelized drainages or creating areas where water ponds on the surface. It is possible for existing skidroads to be utilized as trail corridors, but care should be taken to ensure that trails in these locations are adequately drained and meet other trail parameters for sustainability and user experience.

Hydrology

The dominant hydrologic features on the site are Fork Run and numerous unnamed tributaries to Fork Run. Not all appear on official GIS layers, and many are intermittent.

Fork Run originates off-property to the east, and flows through the middle of the property toward the southwest. Fork Run is designated by the State of Maryland as a III-P use class (Nontidal Cold Water and Public Water Supply) and is not believed to support adult trout populations.



SOILS AND HYDROLOGY

-  Streams
-  Channery loam
-  Very stony sandy loam
-  Very stony loam
-  Extremely stony loam

The unnamed tributaries that flow into Fork Run appear to be largely intermittent and reliant on seasonal surface flow, snow melt, or groundwater. Many are well established, forming in natural swales on the slopes and flowing either on the surface or below boulder fields.

The abundance of surface flow and seeps poses a challenge for trail development as is evident from the extensive drainage issues on the existing trails. Proposed trail improvements should prioritize armoring and drainage to improve long term trail sustainability, improve user experience, and reduce soil erosion.



A view of Fork Run



A minor drainage at Fork Run

Soils

Soils in the subject area are identified as primarily very to extremely stony loams. This is consistent with site observations during field work. Exposed soil on existing trails appears to be very stony, with the proportion of rock providing protective qualities against erosion. The site is blanketed with pockets of boulder fields punctuated in a few locations by large rock outcroppings, exposed bedrock, and exposed cliff bands.

The availability of rock will aid in constructing rock armor and technical trail features, but also creates challenges as trail alignments that pass through boulder fields will need to utilize stone as tread material due to the lack of available mineral soil.

Proposed trail improvements should respond to localized soil conditions, seek to use high quality mineral soil from borrow pits where practical, and avoid overly steep alignments that contribute to tread erosion.

Plant Communities

The forest is relatively homogenous, characterized by mature tree canopy with light to medium brush in the understory.

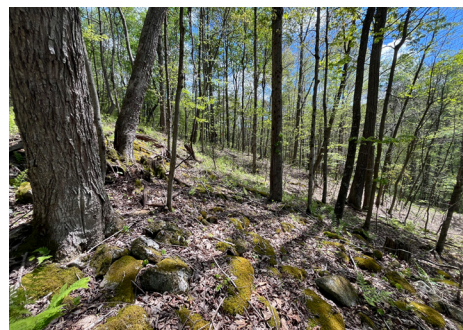
Pockets of thicker vegetation created by mountain laurel or invasive plant species such as barberry or stiltgrass are present throughout the property but not to the extent that they limit trail development.



A view of Fork Run



Typical trail conditions



A dry south-facing hillside



An area with open understory



An area with dense brushy understory
species have been identified on the property to date.

The 2018 Forest Stewardship Plan for Fork Run identifies four distinct forest stands within the property, providing forest management recommendations for each. The plan notes that no rare, threatened, or endangered

STAKEHOLDER ENGAGEMENT

As a part of this master planning process, a series of stakeholder engagement meetings was held to generate input and feedback related to the existing trail system and a vision for improved trails at Fork Run. The first stakeholder meeting was held on January 26, 2026, to identify opportunities, concerns, and user priorities. A second meeting was held April 6, 2026, to review the conceptual trail system and obtain feedback prior to corridor flagging.

A group of stakeholders was identified by Garrett County with direct experience relevant to trail use, recreation planning, and on-the-ground knowledge of Fork Run. Identified stakeholders were invited to two virtual meetings, the first intended to provide feedback related to the existing trail system at Fork Run and desired improvements and experiences at the site. The second consisted of a review of the proposed trail system and an opportunity to provide feedback.

Identified stakeholders included representatives from Garrett College, the Western Maryland Climbing Coalition, local residents including the North Camp community and Homeowners Association (HOA), the Garrett County Coyotes MTB Team, Deep Creek Adventure Bureau, Wisp Resort, and Garrett Trails.

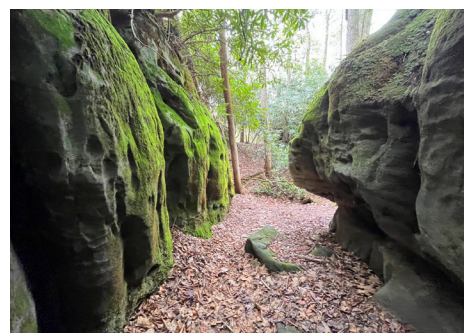
Input Summary

General Site Opportunities

- Desire to incorporate overlooks and destination features into the trail network, as noted by early trail builder Steve Green (High Mountain Sports) in pre-meeting discussions.
- Interest in improving bridge conditions, wayfinding and trail signage, and overall clarity of trail difficulty and navigation
- Broad support for balancing improvements with preservation of Fork Run's backcountry character.

Rock Climbing

- Climbing areas were initially developed around 2005 during ASCI management, including rhododendron clearing and bolt installation.
- Stakeholders reported minimal to no conflict between climbers and hikers/bikers due to terrain separation.
- Existing bolts are approximately 20 years old and due for assessment and replacement.
- Replacement should prioritize modern safety standards, potentially including glue-in bolts and revised bolt spacing appropriate for beginner and progressive climbers.



Climbing access area

- Some access trails to climbing areas require clearing and light maintenance.
- The site is considered highly suitable for climbing due to short approach distances and beginner-friendly routes.
- Additional climbing opportunities may exist elsewhere on the property if managed thoughtfully.
- No immediate safety hazards were identified, but upgrades are considered timely and prudent.
- Western Maryland Climbing Coalition expressed willingness to partner on assessment, rebolting, and maintenance.

Mountain Biking

- Fork Run is widely regarded as a challenging, backcountry-style trail system, which users value and wish to preserve.
- Garrett County Coyotes MTB Team uses Fork Run as a late-season training location once riders have developed sufficient skill.
- Strong desire to retain difficulty and backcountry feel.
- Recognition that limited cell service presents safety considerations, particularly for less experienced users.
- Preference for additional loops, options, and selective realignments, particularly on the North Camp side, to improve flow and climbing

efficiency.

- Feedback that legacy trail construction does not always align with modern riding styles, making it difficult to maintain momentum.
- Interest in potential single-direction or downhill-only trails, if access and terrain allow.
- Interest in adaptive mountain bike trail modifications where feasible.
- Stakeholders noted that higher-quality, purpose-built trails (as seen at Margraff) tend to increase visitation, raising concerns about parking and access capacity.
- Stakeholders emphasized the importance of the existing porta-potty, noting its value for general users, women, and accessibility.
- Consideration was suggested for more permanent restroom facilities, similar to the Cherry Creek pit toilet model.

North Camp Connections

- The HOA has long envisioned a trail connection and trailhead linking North Camp to Fork Run.
- A small parking pad exists, but a right-of-way across a private parcel has not yet been secured; negotiations are ongoing.
- Even if completed, the

connector would not function as general public access, as North Camp is a gated community.

- North Camp residents frequently use Fork Run for hiking and recreation.
- Wisp Adventure Road, which connects to the western edge of Fork Run, is currently maintained by the HOA, though it functions as a de facto public access road.
- The HOA expressed interest in Garrett County assuming road maintenance, which could have implications for future access planning.



The bridge over Fork Run



Signage and wayfinding at Fork Run

EXISTING TRAILS

Overview

Fork Run Recreation Area currently hosts 8.8 miles of trail.

Existing trail types as characterized for the purposes of this trail assessment include:

- Mixed-Use Roadbed
- Mixed-Use Semi-Developed
- Mixed-Use Primitive
- Pedestrian-Only Primitive

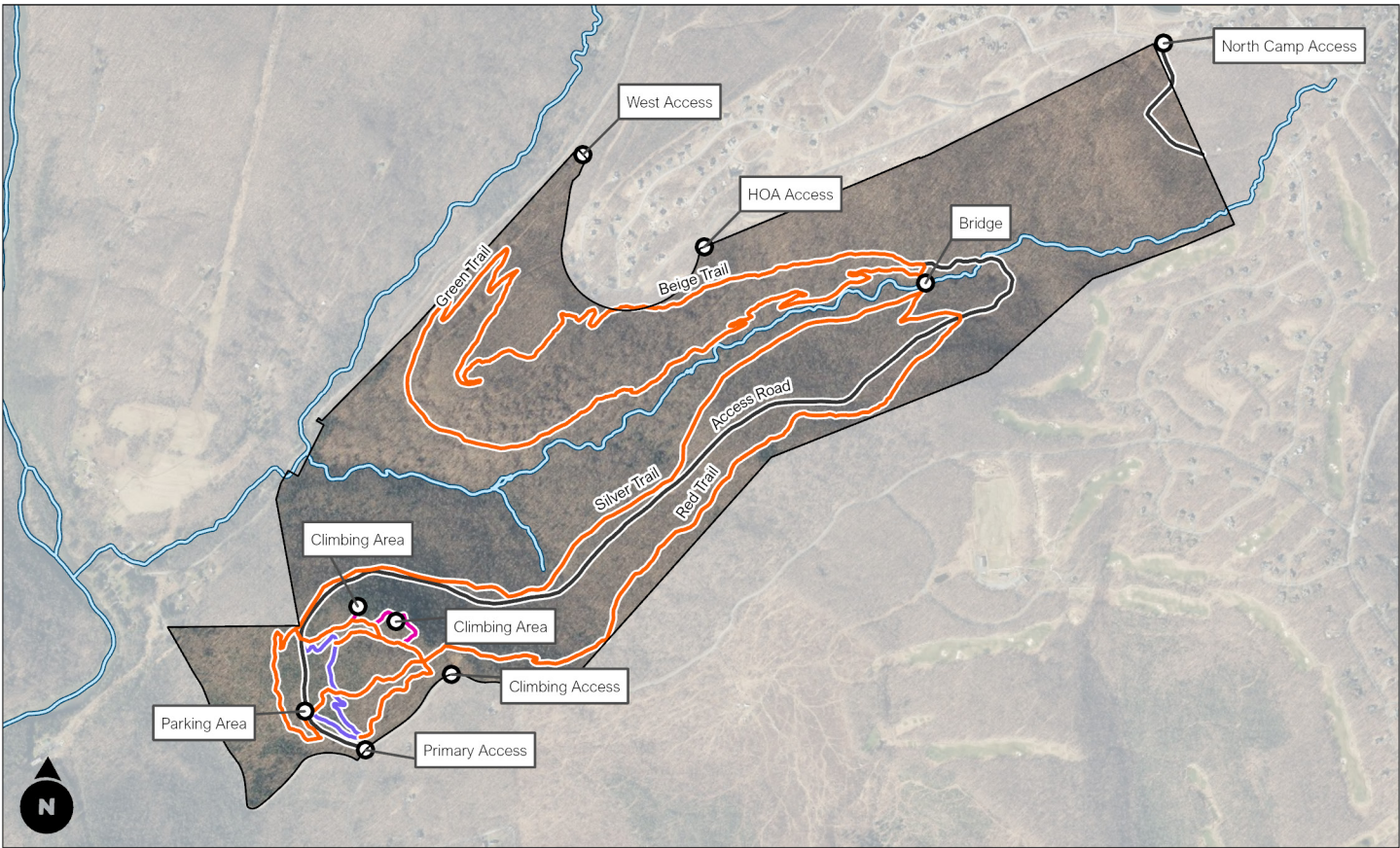
The trail system is relatively low density, with low mileage relative to the acreage of the site. It consists of mostly backcountry

singletrack trails (Mixed-Use Primitive) that were built by volunteers on an ad-hoc basis. These trails are a mix of rake-and-ride or hand benched singletrack, along with sections of skidroads.

There are some trails around the trailhead that feature more modern trail construction methods and by contrast these trails are relatively dense, with an excessive number of intersections and confusing layout.

Overall, the trail system has a backcountry feel with options for short loops around the trailhead and 5- and 8-mile loop options to explore the rest of the site.

Steep segments and choppy routes interrupt rhythm for cyclists and hikers, and significant drainage challenges impact user experience and sustainability.



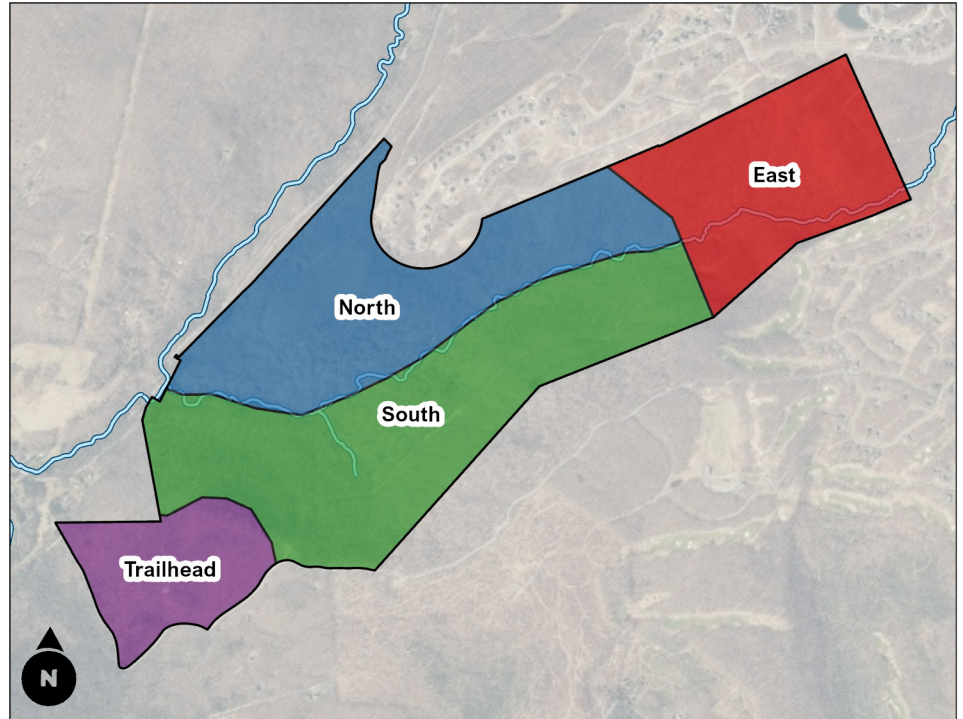
EXISTING TRAILS

- | | |
|------------------------|---------------------------|
| Streams | Mixed-Use Semi-Developed |
| Existing Trails | Mixed-Use Primitive |
| Mixed-Use Roadbed | Pedestrian-Only Primitive |

Existing Trails

Trail naming conventions at Fork Run typically refer to the blaze color. Garrett County has started utilizing alternative names for some trails (i.e. Maple Swirl), but in most cases for the purpose of this analysis the current blaze color name is used.

To aid in analysis and discussion, Fork Run has been divided into four zones. These zones are influenced by topography and site access, are not intended to represent management regions, and are for organizational purposes only.



TRAIL ZONES

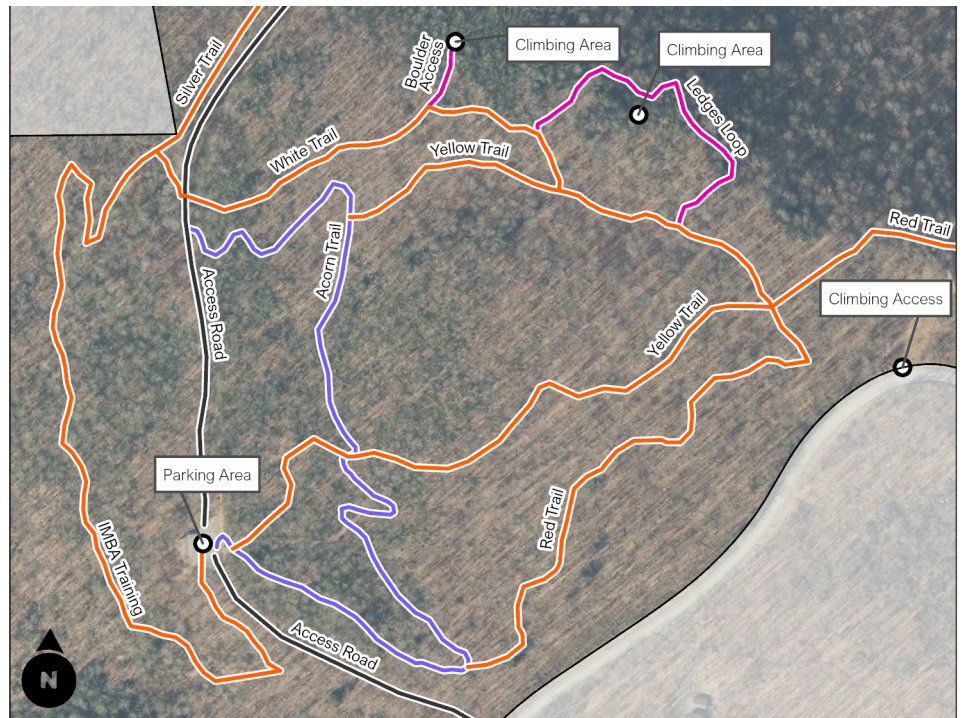


Trailhead Zone

Existing trails in the trailhead zone form a dense network of short segments that begin at the parking area and allow visitors to explore the plateau in the southwest corner of the property or access trails that lead around Fork Run.

Trails in this zone include:

- The Acorn Trail (2,507 LF) was constructed in 2023 to provide an adaptive mountain bike trail experience at Fork Run. The trail is 5-6ft wide and surfaced with a superficial layer of crusher fines.
- Yellow Trail (2,542 LF) is a short loop that bisects the Acorn Trail and connects to the intersection with the Red Trail before returning to an intersection with the Acorn Loop.



TRAILHEAD ZONE TRAILS



- Ledges Loop (808 LF) and White Trail (974 LF) primarily access two climbing areas.
- Coyote Loop (2,341 LF) was built to demonstrate sustainable trail construction techniques and forms a loop on the downhill side of the parking lot.
- Other trails accessed from the Trailhead Zone include the Red Trail, the Silver Trail, and the Access Road.

The Trailhead Zone is characterized by a dense network of interconnected trails. While some design and planning has resulted in a range of user experiences, the number of intersections is confusing and many segments are redundant and lack a clear purpose, destination, or meaningful length. Some trails appear to be informal and unmaintained and the lack of a clear structure has resulted in social trails around the climbing area.

South Zone

The South Zone refers to all existing trails on the north-facing slope to the south of Fork Run and includes:

- Red Trail (10,038 LF) begins at the Acorn Loop in the Trailhead Zone and follows the southern property boundary before descending to the Bridge over Fork Run. While counterintuitive, the Red Trail climbs for most of

its length before crossing the Access Road and descending to the bridge.

- Silver Trail (8,110 LF) begins at the Coyote Loop and parallels the Access Road in a long descent to the Bridge.
- The Access Road (10,144 LF) begins at the Parking Area and descends to the Bridge.

The Red and Silver Trails consist of sections of hand-built singletrack interspersed with sections of old skidroads. This results in a user experience that is choppy and inconsistent, with trail alignments frequently descending rapidly only to climb again. Sections of skidroad tend to either be overly steep or not steep enough, with both instances subject to drainage issues.

The Access Road is an old skidroad alignment and is riddled with drainage challenges caused by undersized or poorly designed culverts. During colder times of year this trail is impassable due to standing and flowing water on the trail, and during summer it is overgrown with grass and other vegetation so it does not provide a positive recreational experience.

From the Parking Area, the loop formed by the Red and Silver Trails is just under 4 miles and provides a destination hike with a logical scenic stopping point at the bridge over Fork Run.



The Acorn Trail



The Coyote Loop



Typical signage



Typical Red and Silver trail conditions

For hikers, this loop provides a 1-2 hour backcountry hiking experience. For beginner and intermediate mountain bikers, inconsistent grades, abrupt transitions between climbing and descending, and extended rocky sections require a high level of effort relative to the quality of the riding experience. For advanced riders, the Red-Silver loop lacks engaging technical features or flow and does not provide a meaningful riding experience due to its short length.

North Zone

The North Zone refers to all existing trails on the south-facing slope to the north of Fork Run:

- Green Trail (11,060 LF) begins at the Bridge and parallels Fork Run before climbing the slope on the western property boundary before turning into the Beige Trail.
- Beige Trail (7,410 LF) begins at the Bridge, climbing above the Green Trail to the summit of the peak to the north of Fork Run, before descending to meet the Green Trail.

The Beige and Green Trails offer hikers and bikers the option to extend their experience to form an approximately 8-mile loop from the Parking Area. Like the South Zone Trails, the Beige and Green Trails consist of mixed sections of hand-built singletrack and legacy skidroad, resulting in an inconsistent user experience for both hikers and bikers.

East Zone

The East zone is the least developed area of Fork Run, with an extension of the Access Road forming a short trail designated as the Blue Trail, and another access road on the far east property boundary. The Blue Trail is shown on some maps and blue blazes were present on skidroads on the south-facing hillslope, but it appears that the Blue Trail receives very little use and is blocked off at the location where it intersects with the Beige Trail. This zone is identified as the location of a desired connection to the North Camp Trailhead via the eastern access road.

Below: Typical trail and ground conditions in the North and East Zones



Trail Amenities and Features

Amenities

- The primary site access is a parking lot located in the Trailhead Zone off of Shingle Camp Road. The parking area is approximately 60x80 feet in size, comfortably parking 8-9 vehicles with limited overflow space. Numerous trails connect to the parking area without a centralized trail access point. A kiosk and large map are present at the trailhead but display outdated maps and do not appear to be regularly maintained or updated.
- Blazing, signage, and wayfinding are inconsistent throughout the site. Trails are typically named for their blaze colors but changes in trail names over time have led to conflicting signage and obsolete blazing. Recent efforts to update blazing have resulted in renamed trails with carsonite posts and stickers indicating trail names and difficulty, with provided QR codes linking to an online trail map. A lack of cell service in the area makes it difficult to utilize this feature, and underscores the importance of quality on-site wayfinding.

Features

- The climbing area is located within the Trailhead Zone and is accessed by a series of informal trails. The climbing area provides a destination not just for climbers, but for hikers seeking a shorter walk. Social trails provide access around and top of the rock formations, providing opportunities for exploration and a sense of risk taking.
- The existing bridge crossing over Fork Run marks the transition between South and North Zone Trails, and provides a destination for riders completing the Red-Silver Loop. The bridge itself is built from dimensional lumber with telephone pole stringers set on concrete and stone abutments. Fork Run flows over a series of large boulders and drops in this location, and provides a scenic resting spot with the sound of rushing water throughout most of the year.
- Numerous rock formations are present throughout the site in addition to the designated climbing area. These take the form of either scattered boulders on the surface, or exposed bedrock that forms bands of rounded cliffs. These geological features provide visual interest along the existing trails and could be identified elsewhere within the site to anchor proposed trails.



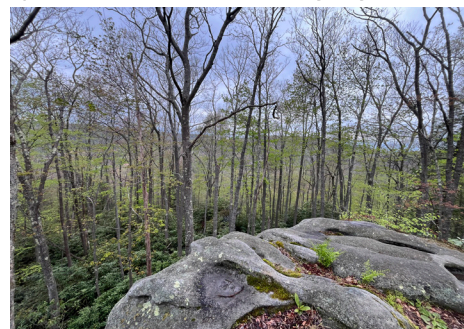
The primary trailhead



The bridge over Fork Run



Typical trail identification signage



A view from the top of the climbing area

SUSTAINABILITY ASSESSMENT

Background

Garrett County has expressed that the purpose of the existing trail assessment is to evaluate *sustainability, safety, accessibility, and user experience* and that any improvements should seek to *advance Fork Run's role in the regional trail network, including connections to Wisp Resort and North Camp as a future countywide trail system link.*

With those objectives in mind, the assessment explores three interrelated facets of sustainability:

Physical Sustainability

The durability of the trails and their ability to withstand trail use and environmental stressors, as well as their relationship to their surrounding environment and likelihood of contributing negative environmental impacts such as erosion. This includes a broad assessment of trail characteristics and condition relative to their location on the landscape, running grades and cross slopes and the relationship to topography, the natural or created ability to shed water, and the stability of the trail tread surface itself.

User Sustainability

The potential for safety-related incidents between users, navigability of the trail system, quality of trail experiences, use patterns such as type of use, visit time, and access locations, and capacity.

Managerial Sustainability

The capacity of maintenance staff and volunteers, in terms of skills, knowledge, tools, hours, budget, and fundraising, to manage the trail system, and potential management conflicts related to trail system management and capacity.

These facets of sustainability were assessed through field investigation of the trail system, engagement with selected stakeholders (detailed in the previous section), and discussions with representatives of Garrett County Planning.

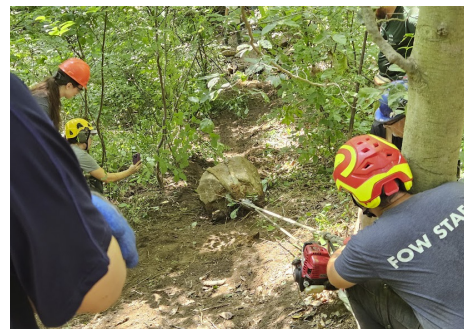
Based on the findings of this assessment, recommendations have been created for overall trail system size and layout, realignments of existing trail segments, design, maintenance practices, and trail-related infrastructure and amenities. This master plan is intended to be a tool for Garrett County to assist in management decision-making and future planning at Fork Run.



An example of a trail with poor physical sustainability (Image not from Fork Run)



Use type influences User Sustainability



One element of Managerial Sustainability involves maintenance capabilities and tools

Physical Sustainability

Physical trail sustainability relates to how the trail is located on the landscape and how characteristics such as tread material, running grade, and cross slope interact with surface water flowing across the trail. Trails that are too steep or fall-aligned (perpendicular to contour lines) tend to channel water down their length. Water channelized in this way gains momentum and erosive force, degrading the trail profile and leading to sedimentation. Conversely, trails that are too flat do not adequately shed water, leading to soft and muddy tread conditions and unstable soils that are more prone to displacement.

Both circumstances detract from user experience and lead to social trails, widening, and braiding as users attempt to find dry and stable routes around eroded or muddy sections of trail.

Trail alignment, profile, and surface material also play a role in physical sustainability. Trails that are too steep to withstand user pressures (such as volume or type) experience accelerated erosion in combination with poor drainage. Soil composition impacts soil stability and erosion potential, with rocky soils and armored sections of trail providing protective qualities that resist surface erosion in combination with proper drainage design.

The development background of Fork Run has resulted in a choppy network composed of hand and machine-built singletrack, skidroads, and short sections of purpose-built trail. While rocky soils provide some protection from erosion, on average many segments sit at either end of the trail running grade spectrum and are either too steep or not steep enough. This has resulted in significant erosion exposing large rocks and roots in steeper sections, and water ponding on flatter sections.

Volunteer maintenance efforts have focused on drainage management along the existing trails, with numerous areas of armoring and box culvert installations to harden the trail surface or allow surface water to pass over or underneath. These interventions work during dry times of year, but during wetter times of year many sections of trail become channels for surface water, impacting natural drainage patterns, eroding the trail surface, and negatively impacting user experience.

Physical Sustainability Recommendations:

- Reduce erosion and improve tread longevity by prioritizing drainage improvements, trail armoring, and realignment of excessively steep or poorly drained trail segments.
- Replace or rehabilitate legacy skidroad alignments



Rock armoring stabilizes tread to provide protection from erosion



Exposed roots and rocks characteristic of fall-aligned trail erosion (not taken at Fork Run).



Snowmelt flowing down a trail in Spring



Ponding water indicates poor drainage

where they create unsustainable grades, channel water, or provide a poor trail experience.

- Develop new trails in accordance with sustainable BMPs, utilizing rolling contour design and implementing tread armoring where necessary
- Concentrate recreation on sustainable trail corridors to reduce the proliferation of social trails and minimize impacts to surrounding natural resources.

User Sustainability

User sustainability relates to how visitors interact with the trails and with other visitors. Assessment focuses on use patterns and access as well as navigability and user conflicts. These factors influence the quality of a visitor's experience and whether and how often they return. Local culture and the site's position within the broader recreational context can influence visitor expectations and type of use. Clearly defining user goals for the site in terms of user type, volume, and characteristics of the experience is critical to shaping recommendations that improve the visitor experience.

Reviewing trail count data from the Garrett Trails 2025 Trail Counter Program Report, from 2023 to 2025, visitor counts at Fork Run averaged approximately 10 per day, representing some of the highest of those measured outside of highly developed trails in densely populated areas or

popular tourist destinations. For comparison, in 2025 following the opening of new purpose-built mountain bike trails at Margraff Plantation, visitor counts increased dramatically. According to the report, *"improvements to the trail network at Margraff have significantly increased user activity...While the distribution of use across a week hasn't changed much, average counts have increased by 9 to 15 times with the newly created trail."* While usage at Fork Run has remained steady and is similar to other trails of its type throughout the County, the increase in visitorship at Margraff demonstrates that development of high quality purpose-built mountain bike trails results in higher utilization of the recreational resource which implies a better user experience.

Fork Run is characterized by a remote backcountry character and rugged trails that were built primarily to provide recreational access around the site. User experience is limited by an inconsistent trail network that provides uneven experiences for different user groups. Legacy trail alignments that prioritize connections to skidroads instead of utilizing available terrain, frequent intersections in the Trailhead Zone, inconsistent grades, and limited wayfinding create confusion and reduce the overall quality of the visitor experience. While the site offers opportunities for both short



Balancing access and user experience with protection of natural resources is a key goal of recommendations.

outings and longer backcountry loops, the existing trail system does not consistently meet the expectations of hikers or mountain bikers across a range of skill levels. Recommendations focus on creating a more intuitive trail network with clearly defined experiences, improved navigation, and experiences that better align with the site's intended users and recreational goals.

Garrett County is known for its natural resources, with visitors and residents often citing the natural beauty of the landscape and remote character as desirable qualities. Within the regional trail context, Fork Run is one of many trail destinations that offer remote single track trails for hiking and mountain biking. Nearby trails at Big Bear Trail Center, Herrington Manor State Park, Deep Creek Lake State Park, Margraff Plantation (State Forest), and Broadford Park (Town of Oakland), offer varying recreational experiences at opposite ends of the spectrum. Herrington, Margraff, and Broadford provide easy beginner trails and adaptive (aMTB) trails for early skills progression, socialization, and exercise. Deep Creek Lake State Park and Big Bear Lake Trail Center offer intermediate to advanced trails with chunky technical features and challenging climbs that can be intimidating for novices and limiting for intermediates. Within this regional context, Fork Run is well positioned to serve

early to advanced intermediate riders, with the acreage, terrain, and geology to support both short and long trip lengths and intermediate mountain bike trail features.

User Sustainability Recommendations:

- Develop a more cohesive trail network that expands on existing trails to provide more route options, meaningful movement through the property, connections to logical destinations, strengthens trailhead connectivity, and provides experiences that appeal to a broader audience of beginner to advanced users.
- Improve trail experiences for target user groups by creating trails with consistent grades and appropriate technical challenge while reducing unnecessary physical difficulty. Utilize rocky terrain to develop intentional and inclusive skill-building opportunities.
- Simplify navigation and reduce user confusion through improved trail hierarchy, consolidated intersections, updated wayfinding, and consistent trail naming.



Typical trail conditions at Fork Run

Managerial Sustainability

Managerial sustainability relates to the capacity of land managers to maintain the trails to meet the design parameters and intended level of service. This includes elements such as personnel, funding, administration, stewardship, tools and training, risk management, and incident response. Each trail system has unique considerations and structures surrounding its management, and it is rare for a trail system to be wholly maintained by paid staff. Typically, some combination of agency staff and volunteers composed of user group representatives is utilized. Ensuring that administrators, maintenance staff, and volunteers are aligned on trail system goals and priorities is critical to development of capacity and partnership to create successful management strategies.

Fork Run is owned by Garrett County but has been primarily managed by volunteer trail stewards acting on behalf of Garrett Trails, a local non-profit organization. Garrett County has typically taken responsibility for maintenance of the parking lot and amenities, and has undertaken recent efforts to improve blazing at Fork Run. Volunteers have typically conducted acute and seasonal trail clearing and drainage maintenance, but no

formal maintenance schedule is currently in place.

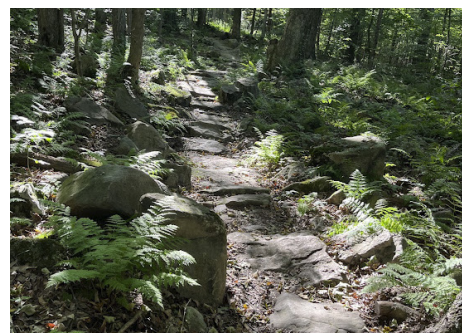
This history of piecemeal trail development and informal maintenance is evident in the trail condition throughout the site and the dense layout of trails in the Trailhead Zone. Recent trail development in that area (Acorn Trail) did provide a different type of trail experience but did not address larger circulation issues.

Managerial Sustainability Recommendations:

- Simplify the trail system by removing redundant, obsolete, or low-value trail segments to reduce long-term maintenance obligations.
- Prioritize investments in durable infrastructure on existing trails such as drainage structures, armoring, and realigned sections built using sustainable trail construction techniques that reduce recurring maintenance needs.
- Establish a clear maintenance hierarchy that focuses available staff and volunteer resources with a regular schedule for basic maintenance.
- Standardize trail management practices through consistent signage, mapping, naming conventions, and trail classifications to improve operations and reduce ongoing management.



Improved signage will assist maintenance



Armored tread is durable infrastructure that prevents erosion



Regular trail corridor clearing is a critical maintenance task



Seasonal leaf blowing improves user experience and tread longevity

RESILIENCE AND SAFETY RECOMMENDATIONS

Trail Sustainability

All proposed trail corridors align with International Mountain Bike Association (IMBA) trail design parameters and accepted industry norms for trail sustainability. Maintaining gentle running grades not only supports a positive user experience, but helps prevent trails from becoming conduits for surface water and accelerating erosion.

Trail construction should adhere to accepted industry best management practices to minimize erosion and disperse stormwater, including utilizing an outslope or crowned tread profile where appropriate to shed water away from the tread surface, frequent grade reversals to prevent water from running down the length of the trail, and tread armoring in naturally wet areas.

Garrett County should take steps to ensure that selected contractors are qualified and have previous experience constructing purpose-built trails utilizing sustainable construction techniques. Because trail construction requires numerous field adjustments in response to existing site conditions, qualified construction oversight is equally important.

Oversight by an experienced trail professional helps ensure that field decisions remain consistent with the design intent, protects

critical trail features and drainage elements, and results in a trail that is sustainable, durable, and provides the intended user experience.

Following construction, it is recommended that Garrett County emphasize a systematic maintenance approach and work to expand trail maintenance capacity to ensure that trails remain in good condition.

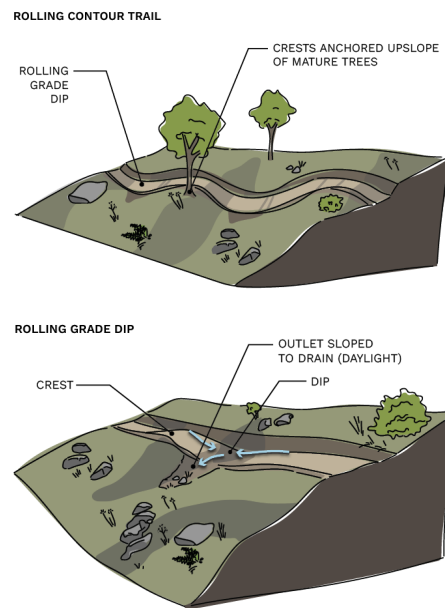
Resources:

- [IMBA Trail Solutions Guide to Building Sweet Singletrack](#)
- [VMBA Best Management Practices for Trail Construction & Maintenance](#)
- [USFS Trail Maintenance and Construction Notebook](#)

Emergency Access

Like many locations throughout Garrett County, Fork Run is located in an area with limited cell service.

Current emergency access points are located at the Primary Trailhead adjacent to Shingle Camp Road to the southwest, the proposed location of the North Camp Trailhead adjacent to Wisp Adventure Road to the north, and a driveway to an adjacent county-owned parcel accessed via Hoyes Run Road to the northwest. All access points are gated.



Rolling contour construction with rolling grade dips are two signature elements of sustainably built trails

Even at full build-out, users in the most remote locations of Fork Run will be 1.5-2 miles from any access point. Improving the existing access road to minimally allow UTV access would vastly improve response times for emergencies and provide more options for patient extraction.

Additional access roads should be evaluated to determine if they would meaningfully aid in emergency response from either of the other access points. This evaluation, along with development of an Emergency Response Plan, should take place in coordination with emergency response authorities.

Signage and Wayfinding

Existing signage and wayfinding at Fork Run is obsolete and confusing. It is recommended that trail naming and blazing move away from color-based systems to avoid confusion with color-coded trail difficulty ratings and to improve accessibility for visually impaired users. A signage and wayfinding plan should be developed to improve user experience through a more streamlined and cohesive system of kiosks, trail identification signs, and blazes.

Some recommended guidelines to incorporate in the signage and wayfinding plan:

- Trail names should be short, unique, and memorable.
- Trail identification should rely on trail names rather than blaze color.
- Trail maps and blazes should utilize a consistent color scheme to reflect trail difficulty ratings.
- Trail identification signs should be installed at all trail intersections and major decision points.
- Orientation kiosks with “You Are Here” maps should be installed at primary trailheads and other key access points.
- Warning signage should be provided in advance of advanced technical features, mandatory drops, or blind turns where appropriate.

- Signage should maintain consistent graphic standards, terminology, and symbology throughout the trail system.
- Emergency location information should be incorporated at trailheads and key intersections to facilitate emergency response.

Forestry Management

Garrett County should prioritize active forestry management alongside recreation improvements. Forest quality not only provides numerous ecosystem services, it impacts recreation experience.

In addition to maintaining and following a current Forest Stewardship Plan, it is recommended that Garrett County emphasize invasive species management, particularly around areas developed for recreation. Disturbance associated with new trail construction can create conduits for the spread of invasive species such as *Microstegium vimineum* (Japanese stilt grass). There is already a seed bank present at Fork Run and so trail development activities should be accompanied by invasive species management efforts to protect habitat and recreational quality, and reduce long term management burdens.



Examples of simple, clean, and effective trail signage (from top: Tioga MN, Gravity Eden NSW, Derby TAS)

CONCEPTUAL TRAIL SYSTEM

Background

Following site inventory and assessment, gathering of stakeholder input, and conversations with representatives of Garrett County Planning, a set of recommendations has been developed to address the expressed goals and address the recommendations that resulted from the sustainability assessment.

Proposed trail types are intended to standardize trail system management by providing a defined set of trail design parameters to ensure consistency for maintenance, stewardship and user expectations. Trail types utilize standardized IMBA difficulty ratings for mountain bike optimized trails, and generally accepted parameters for pedestrian-only or mixed-use trails. Mixed-use trail in this context refers to hiking, biking, and other passive activities such as snowshoeing and cross country skiing.

Accessibility

The proposed trail system prioritizes easy/green-rated trails (for both mountain bikers and hikers) near major trailheads, with difficulty increasing alongside distance from the trailhead. This progressive access framework concentrates trails with a higher development

level and more novice users in areas that are close to vehicle access points for safety and user comfort.

While the proposed trail system utilizes IMBA design parameters for conventional mountain bikes, some trails could be modified to accommodate adaptive mountain bike (aMTB) use. There is no nationwide standard for aMTB trail design parameters, but the Kootenay Adaptive Sport Association (KASA) has published a set of generally accepted standards to assist in planning, design, and construction of safe and enjoyable aMTB trails. The primary differentiating factors for aMTB trails in Fork Run are:

- Trail width is a minimum of 40" to accommodate the majority of adaptive MTB equipment (which is also primarily 3-wheeled in nature)
- Limiting off-camber sections and features or providing ride-arounds to prevent tipping

Given the terrain and geology of Fork Run, construction of aMTB trails will be more intensive to accommodate the increased width, eliminate off-camber sections or provide ride-arounds, and to construct inclusive rock features and wider radius turns.

Adaptive modifications should be considered within the context



The blue-rated aMTB trail at nearby Margraff Plantation.



Image from Kootenay Adaptive Sports Association

RECOMMENDED aMTB TRAIL WIDTH		
GREEN	BLUE	BLACK
1.80 m 6 ft 72 in	1.50 m 5 ft 60 in	1.20 m 4 ft 48 in

Figure 2 - Recommended aMTB Trail Width

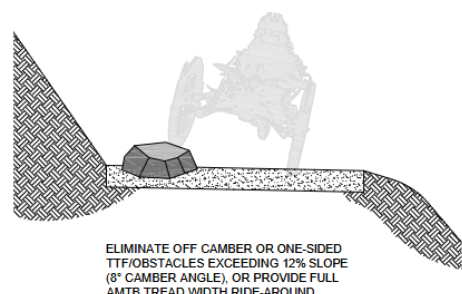


Figure 3 - Off-Camber Hazard

Excerpt from Kootenay Adaptive Sports Association 2020 Adaptive Trail Standards

of the system. While the Acorn Trail currently meets standards for an aMTB blue-rating, its relatively short length and lack of a meaningful destination or connection to a broader trail network limit the overall recreational experience. As a stand-alone trail, it does not provide a sufficient riding opportunity to justify a dedicated visit for many adaptive riders. If additional aMTB trails are developed, they should strive to create a meaningful and complete recreational experience and provide sufficient length, destinations, sense of challenge and adventure, and amenities (such as accessible parking, restroom, picnic area, and signage) to support a positive experience for adaptive riders.

Recommendations utilize conventional MTB trail standards, but note trails where aMTB development could be considered within the framework of the larger trail system.

Proposed Trail Types

Proposed Trail types for Fork Run are:

- Walking Trails are pedestrian-only singletrack trails provided for access to the climbing area.
- Green rated trails are mixed-use, dual-direction mountain bike optimized trails designed for beginner or novice mountain bikers.
- Blue rated trails are mixed-use, dual-direction mountain bike optimized trails

designed for intermediate to advanced mountain bikers.

- Black rated trails are mixed-use, dual-direction mountain bike optimized trails designed for advanced and expert mountain bikers.
- Access Roads are mixed use dual-direction trails located on existing access roads. These trails are intended to be used by light maintenance vehicles for maintenance and emergency access.

Recommendations are summarized by Trail Zone and symbolized according to the proposed trail type.

IMBA Trail Difficulty Rating System					
					
	EASIEST WHITE CIRCLE	EASY GREEN CIRCLE	MORE DIFFICULT BLUE SQUARE	VERY DIFFICULT BLACK DIAMOND	EXTREMELY DIFFICULT DBL. BLACK DIAMOND
TRAIL WIDTH	72" (1,800 mm) or more	36" (900 mm) or more	24" (600 mm) or more	12" (300 mm) or more	6" (150 mm) or more
TREAD SURFACE	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
AVERAGE TRAIL GRADE	Less than 5%	5% or less	10% or less	15% or less	20% or more
MAXIMUM TRAIL GRADE	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
NATURAL OBSTACLES AND TECHNICAL TRAIL FEATURES (TTF)	None	Unavoidable obstacles 2" (50 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 36" (900 mm) or wider	Unavoidable obstacles 8" (200 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 24" (600 mm) or wider TTF's 24" (600 mm) high or less, width of deck is greater than 1/2 the height	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or wider TTF's 48" (1,200 mm) high or less, width of deck is less than 1/2 the height Short sections may exceed criteria	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or narrower TTF's 48" (1,200 mm) high or greater, width of deck is unpredictable Many sections may exceed criteria

IMBA Trail Difficulty Rating System (www.imba.com)

Overview

The proposed trail system illustrates a buildout scenario for Fork Run that balances increases to trail volume and connectivity while maintaining backcountry character.

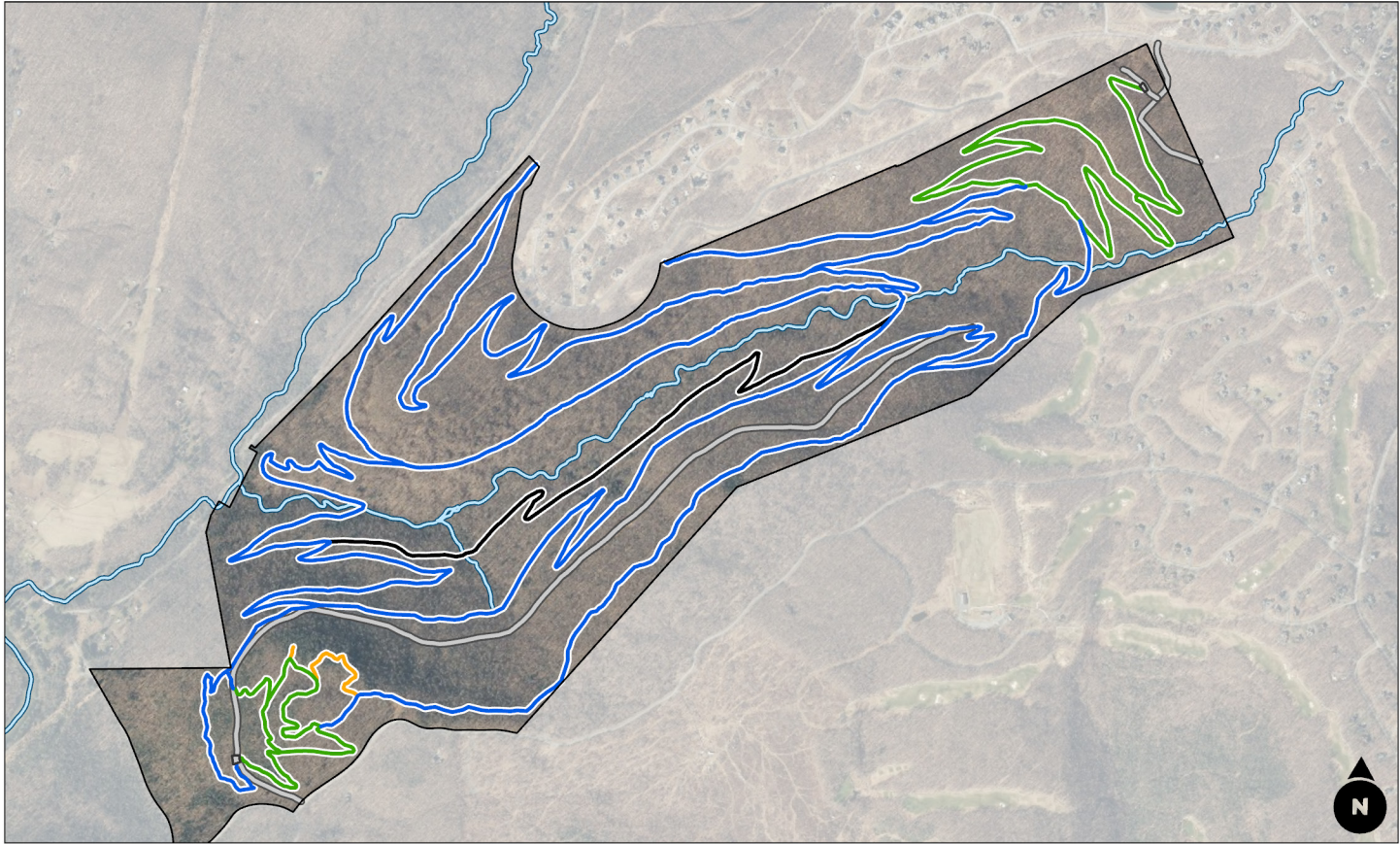
The plan utilizes existing trail corridors where practicable and realigns them where necessary to achieve more sustainable running grades or meet desired trail design parameters. New trail development prioritizes connections to new trailheads at North Camp and the HOA and providing recreational access to

previously underutilized portions of the property.

A second bridge crossing over Fork Run is proposed downstream of the existing bridge crossing. This second crossing expands route opportunities for mountain bikers and hikers alike, and provides a second access to the stream which serves as the most compelling destination on the site.

Refining the Plan

At this stage, the proposed trail system represents conceptual alignments only and illustrates circulation, rough connecting points, and trail distribution on the site. The next step in the trail planning process involves ground-truthing and flagging trail alignments to define a 60-foot corridor. The ground-truthing process reveals ground conditions that influence acute trail layout and design including but not limited to surface drainages, micro-topography, vegetation character, and destinations. Through ground-



PROPOSED TRAIL SYSTEM

- | | | | |
|---------|------------------------|-------|------|
| Streams | Proposed Trails | Green | Blue |
| Walking | Access Road | Black | |

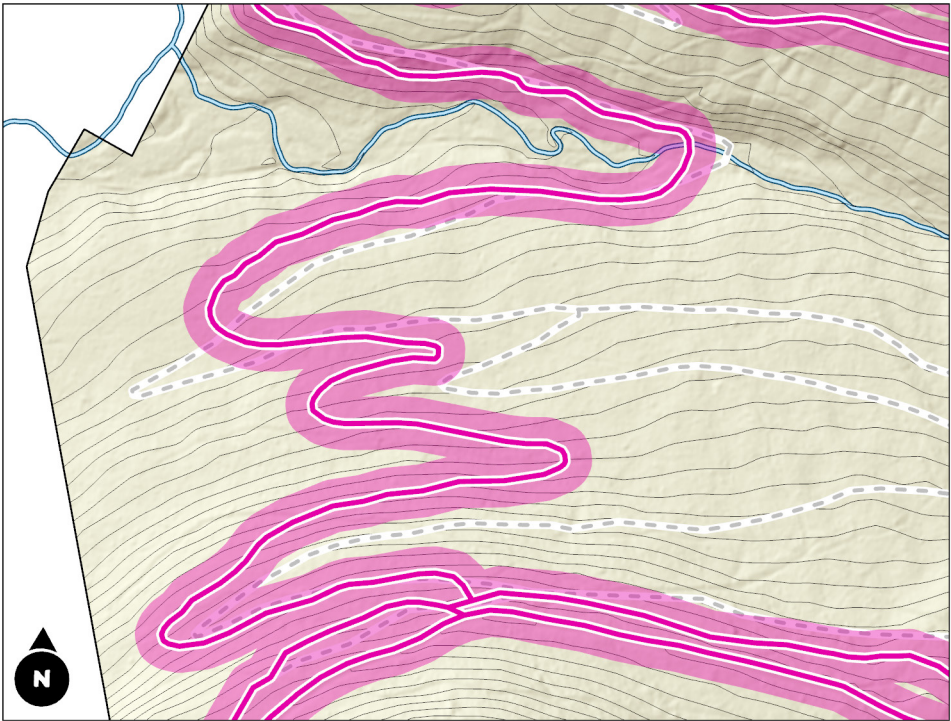
truthing and corridor flagging, it is common for trail alignments to change dramatically.

Corridor Flagging

Following approval of the conceptual system plan, ground-truthing and corridor flagging was completed for selected trails, representing the majority of the trail system.

The corridor flagging process involves site investigation to assess ground conditions and lay out a flag line according to prescribed trail design parameters. This process generally utilizes known control points such as identified potential crossing locations, connections and intersections, trailheads, and points of interest, and then identifies additional control points in more detail. The design process evaluates trail feasibility more acutely and identifies where site conditions will require structures such as boardwalk or rock armor.

The result is a 60-foot corridor in which the final trail alignment will be built. This corridor is broad enough to provide flexibility for the selected contractor to work creatively, but narrow enough to allow for work item estimates to be generated to inform construction budgets and to create a narrative around trail experience, look, and feel.



CORRIDOR REFINEMENT

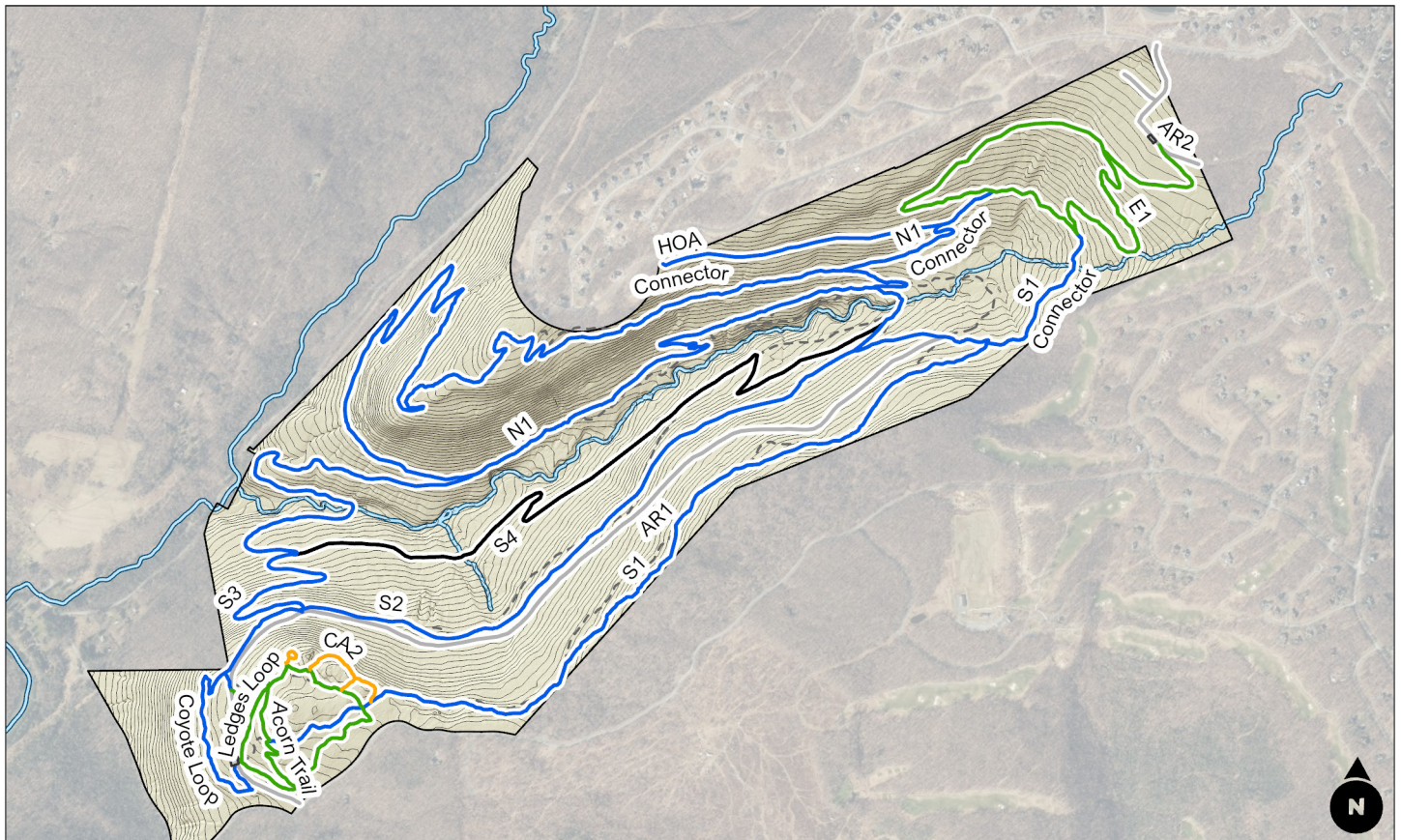
-  Streams
-  10ft Contours
-  Flagged alignment
-  Trail Corridor
-  Trail System Concept

A portion of the proposed Fork Run trail system showing the conceptual trail alignment overlaid with the flagged alignment and approximate corridor where the final trail may be built.



Examples of flagging at Fork Run. Triple flags indicate the beginning or end of a flagged segment, single flags represent corridor centerline, and double flags represent turns.

PROPOSED TRAIL PLAN



PROPOSED TRAIL SYSTEM

Streams	Proposed Trails	Blue	Trail Closure
10ft Contours	Walking	Black	
Parking Area	Green	Access Road	

Proposed Trail Alignments

The flagged corridor alignments did not vary drastically from the conceptual trail plan.

While some trails remain conceptual-only, the majority of the trail system was flagged, resulting in 11.46 miles of proposed new trail, complemented by 4.91 miles of existing trail, for a total trail system of 16.37 miles. This represents an 85% increase in

trail quantity over the existing 8.8 miles of trail.

While the quantity of trails nearly doubled, trail density remains relatively low to preserve the backcountry experience that was identified by stakeholders as a core recreational value for Fork Run.

Flagging did not reveal any major unforeseen field conditions. Overall, the proposed trails utilize more of the existing trails than originally projected, prioritizing

heavy-handed maintenance to realign segments to improve running grades and drainage and to bring all trails within a consistent standard. New trails provide recreational access to new terrain, providing numerous route and loop options and a progressive experience with easier trails closer to the main access points and more difficult trails embedded deeper within the system.

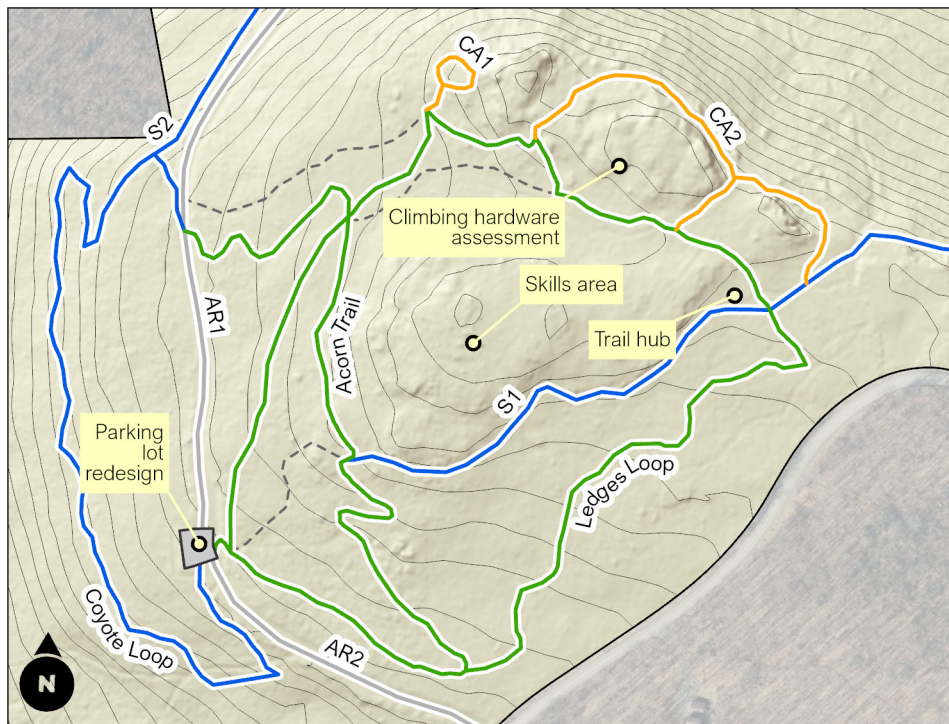
Trailhead Zone

Primary recommendations for this zone are streamlining circulation and balancing accessibility improvements with preservation of backcountry character while minimizing risk and potential user conflicts around rock climbing features.

All proposed trails are mixed-use (pedestrian and mountain-bike) except for trails designated as Walking Trails.

Trail Descriptions:

- Acorn Trail remains in its existing location and form. As the most recently installed trail, it represents an easy walk or beginner riding experience (meeting conventional green or aMTB blue standards) and its condition is conducive with its expected level of service.
- Coyote Loop remains in its existing location. It is recommended that Coyote Loop be refreshed with heavy-handed clearing and maintenance to improve user experience. Individual features should be addressed to determine if they meet difficulty ratings and either modified or alternate routes provided. As a trail directly adjacent to the parking lot, Coyote Loop should serve as a primarily green trail with blue features available for skills progression practice. This loop could be considered for modifications to meet



TRAILHEAD ZONE TRAILS

10ft Contours	Proposed Trails	Blue
Parking Area	Walking	Black
Trail Closure	Green	Access Road

aMTB standards to expand opportunities for adaptive riders.

- Ledges Loop (Red, Yellow, and White Trails) are streamlined to remove redundant segments and create a more direct access to the climbing area. A trail hub is proposed at the intersection of the Red Trail (S1) with the Trailhead Zone, creating a gathering space at the transition from the more developed Trailhead Zone to the backcountry areas of the site. This loop could be considered for modifications to meet aMTB standards to expand opportunities for adaptive riders.



Terrain and rock features in the vicinity of the proposed Skills Area

- A potential Skills Area Loop could be located in the vicinity of the existing Yellow trail if user volume and demand support additional development following buildout of the rest of the trail system. This skills area is envisioned as an inclusive skills development area primarily composed of natural technical trail features like those that would be encountered elsewhere in the system.
- Climbing Access trails remain in their current locations, but receive heavy-handed maintenance to improve clearing width and sight distances, cross slope and drainages, user safety, and tread stability. An additional trail is provided to create a more functional loop with the rest of the system.



Hardware and a ladder at the climbing area



Examples of progressive natural skills features

Other Improvements:

- It is recommended that the Parking Area be reconfigured to provide an ADA parking space and Accessible Route to the trailhead and restroom as well as new signage kiosk, seating, and more centralized trailhead.
- A signage plan should be developed and implemented throughout the property to standardize blazing, wayfinding, and intra-system signage.
- An assessment of hardware in the climbing area should

be conducted to evaluate condition and safety, and any deficient hardware replaced as necessary.

South Zone

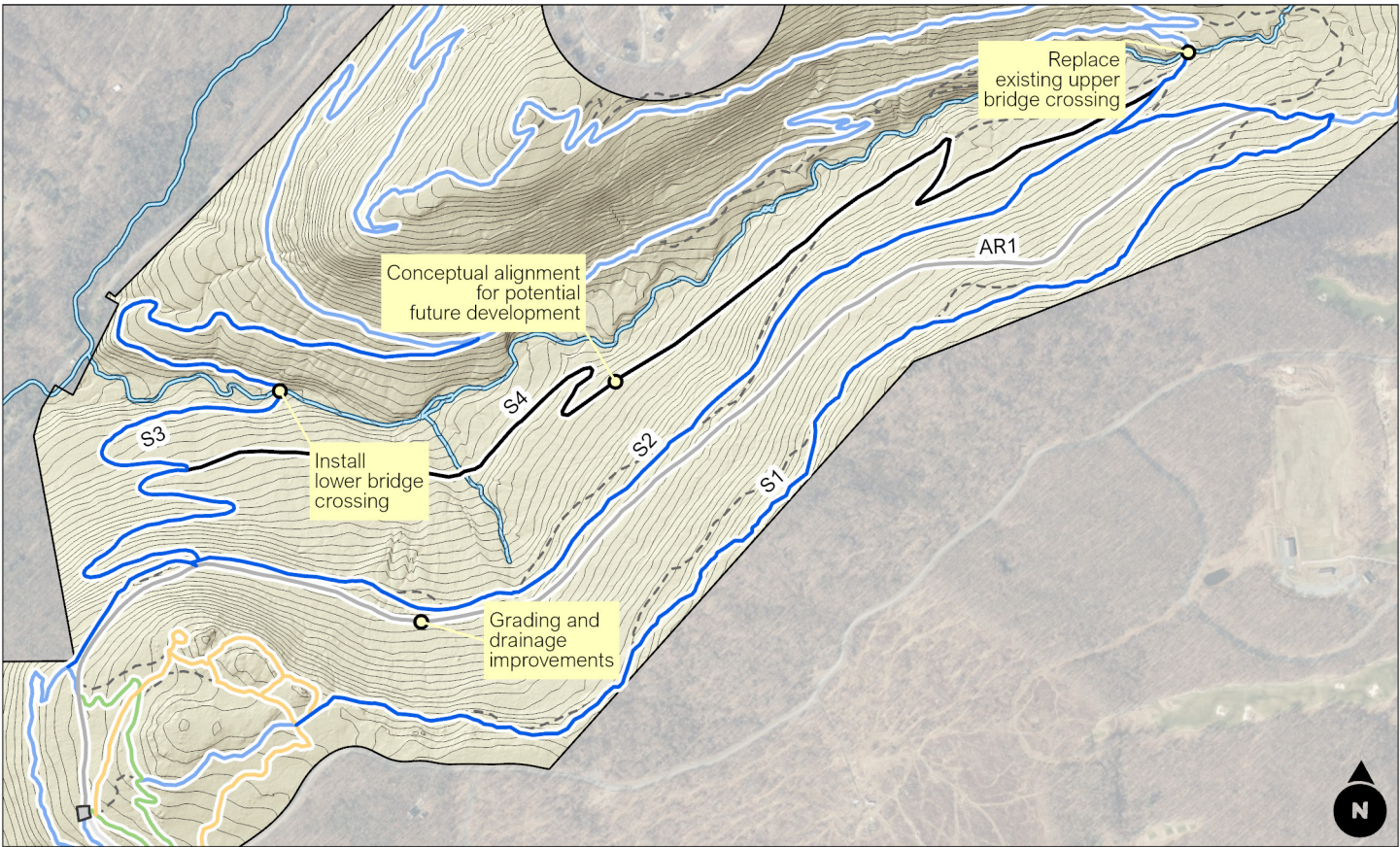
Primary recommendations for this area include heavy-handed maintenance on the existing Red and Silver trails to improve trail drainage and user experience. Realignment segments to reduce abrupt running grade changes will reduce the physical effort needed to explore the south side of Fork Run and to access the Upper Crossing. Proposed new trail development includes a descent to a second crossing over Fork Run and a more difficult black rated trail that parallels the stream.

Trail Descriptions:

- S1 (Red Trail) and S2 (Silver Trail) receive heavy-handed maintenance and targeted realignment to improve user experience and physical sustainability. Realignment to reduce sections with steeper running grades will make the trail more accessible to users in early intermediate skill progression. Shaping of the trail to introduce more frequent grade reversals and to armor the tread will improve trail drainage and tread stability. This



Ground conditions in the South Zone



SOUTH ZONE TRAILS

Streams	Proposed Trails	Blue	Trail Closure
10ft Contours	Walking	Black	
Parking Area	Green	Access Road	

loop could be considered for modifications to meet aMTB standards to expand opportunities for adaptive riders.

- The Access Road remains in place and receives targeted improvements to resolve major drainage issues including culvert replacement and armored grade dips. Specific recommendations related to the Access Road are outside of the scope of this planning phase and will require an engineer to assess optimal solutions to manage cross drainage and repair culverts.
- S3 is a proposed new trail that descends from the Coyote Loop to a new crossing over Fork Run, and then climbs the opposite side to meet the N1 (the

Green Trail).

- S4 is a proposed new trail that parallels Fork Run and provides a black-rated trail experience to provide an additional more difficult loop option on the south side of Fork Run. This trail alignment will require ground-truthing and corridor flagging prior to construction if user volume and demand support additional trail development following buildout of the rest of the trail system.

Other Improvements:

- The existing bridge crossing (Upper Crossing) is near the end of its service life and is recommended for replacement.
- A second Bridge (Lower Crossing) is proposed at the western end of Fork

Run. This crossing expands recreational opportunities on the property by allowing for numerous loop and route options of varying lengths. It also creates a second stream access destination.



Abutments of the existing bridge crossing over Fork Run



The existing bridge over Fork Run

North Zone

Primary recommendations for this area include heavy-handed maintenance on the existing Green and Beige trails to improve trail drainage and user experience. Realigning segments to reduce abrupt running grade changes will reduce the physical effort needed to explore the north side of Fork Run.

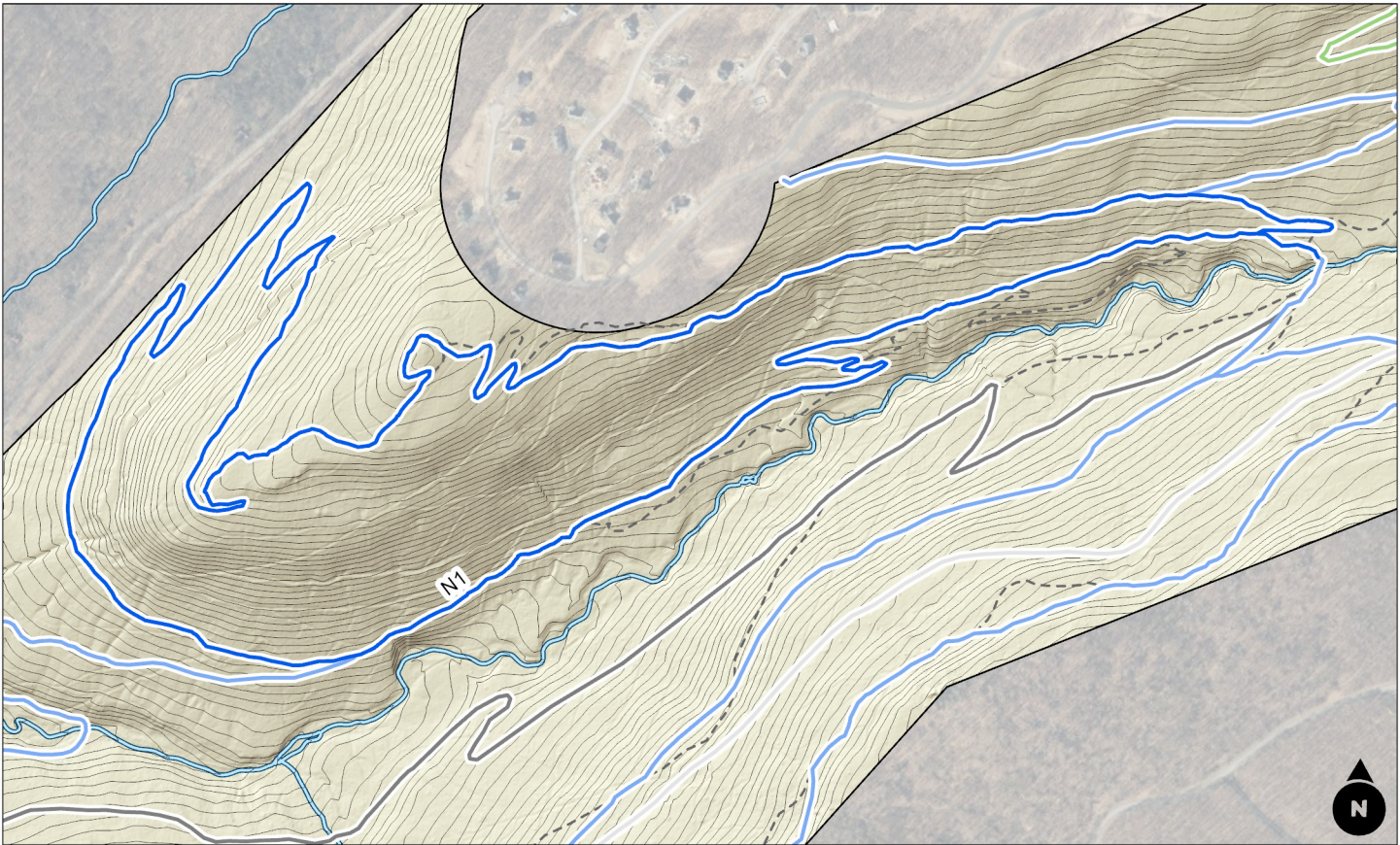
Trail Descriptions:

- N1 is a loop consisting of the existing Green Trail and Beige Trail, which will receive heavy-handed maintenance and targeted

realignment to improve user experience and physical sustainability. Realignment to reduce sections with steeper running grades will make the trail more accessible to intermediate users. Trail shaping to introduce more frequent grade reversals and to armor the tread will improve trail drainage stability.

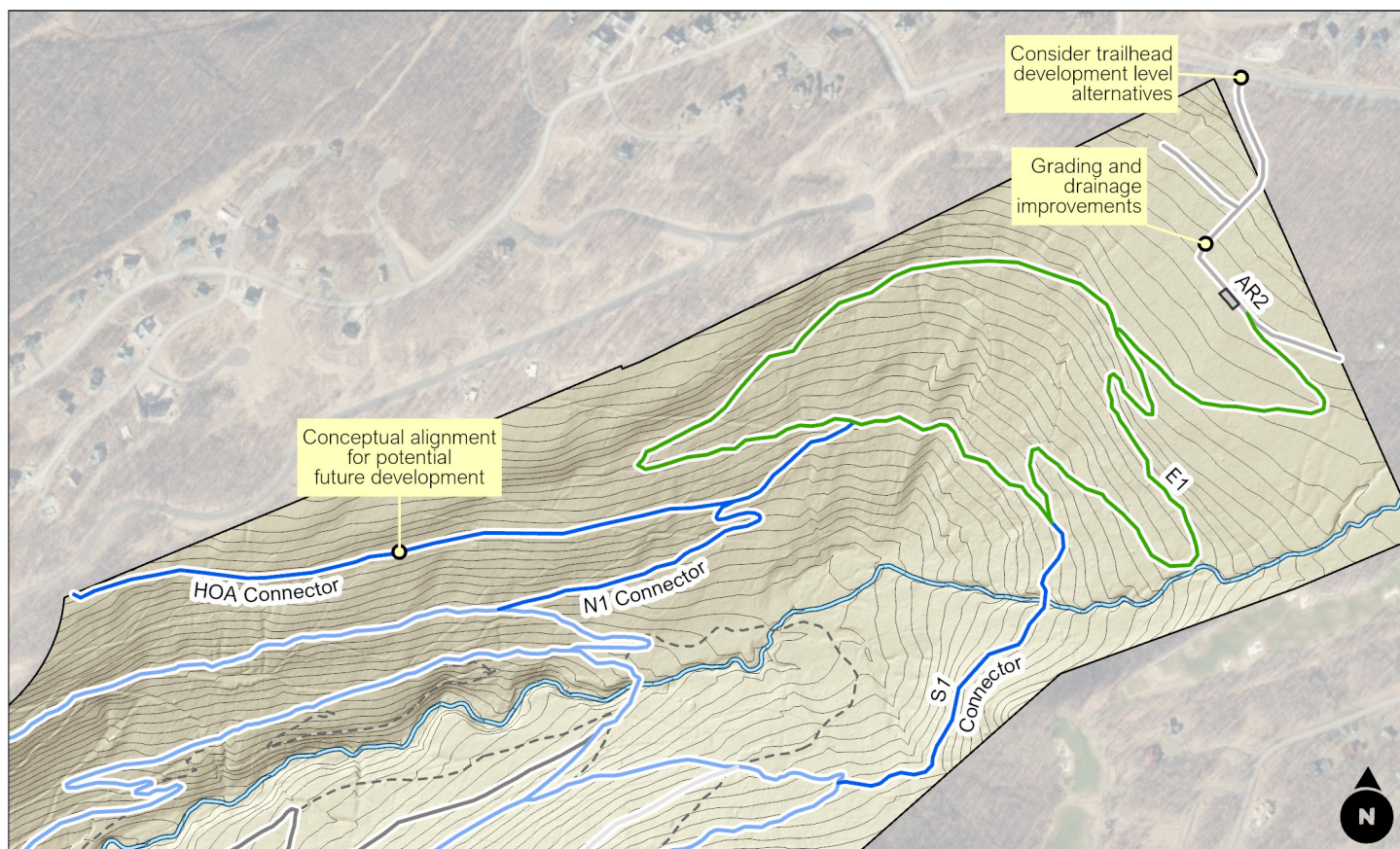


Typical terrain in the North Zone



NORTH ZONE TRAILS

Streams	Proposed Trails	Blue	Trail Closure
10ft Contours	Walking	Black	
Parking Area	Green	Access Road	



EAST ZONE TRAILS

Streams	Proposed Trails	Blue	Trail Closure
10ft Contours	Walking	Black	
Parking Area	Green	Access Road	

East Zone

Primary recommendations for this area include new trail development to connect from existing trails to the public trailhead in the North Camp neighborhood. This new trailhead would provide recreational access that connects Fork Run to Wisp Resort, ASCI whitewater center, and the neighborhoods at the top of the mountain.

Trail Descriptions:

- E1 is a proposed green-rated trail loop to provide an easy beginner experience adjacent to the public North

Camp Trailhead. This loop connects to both the North and South Zone Trails to provide options for long or short length hiking and riding. This loop could be considered for modifications to meet aMTB standards to expand opportunities for adaptive riders.

- S1 Connector is a new blue-rated trail the provides a connection from the new green-rated loop to the South Zone Trails. The S1 Connector could be considered for modifications to meet aMTB standards

to expand opportunities for adaptive riders. Together with the N1 Connector, these trails form a short stacked loop with options to connect to all other trails at Fork Run.

- N1 Connector is a proposed new trail that provides a northern connection to the east side of Fork Run and the new proposed North Camp trailhead as well as a new connector to the North Camp neighborhood (via HOA Connector)
- The HOA Connector provides a connection

for residents of the North Camp neighborhood. This is intended to be a pedestrian and bike-access trailhead only with no provided parking. Since the HOA is a gated neighborhood, this connection is dependent on a ROW or fee acquisition of property by the HOA to provide trail access. Signage is recommended where the HOA connector adjoins the public trail system indicating that the trail does not lead to a public trailhead. This trail alignment is conceptual, and will require ground-truthing and corridor flagging prior to construction if a trailhead is developed by the HOA.



Typical tread conditions and acute drainage issues in the North Zone

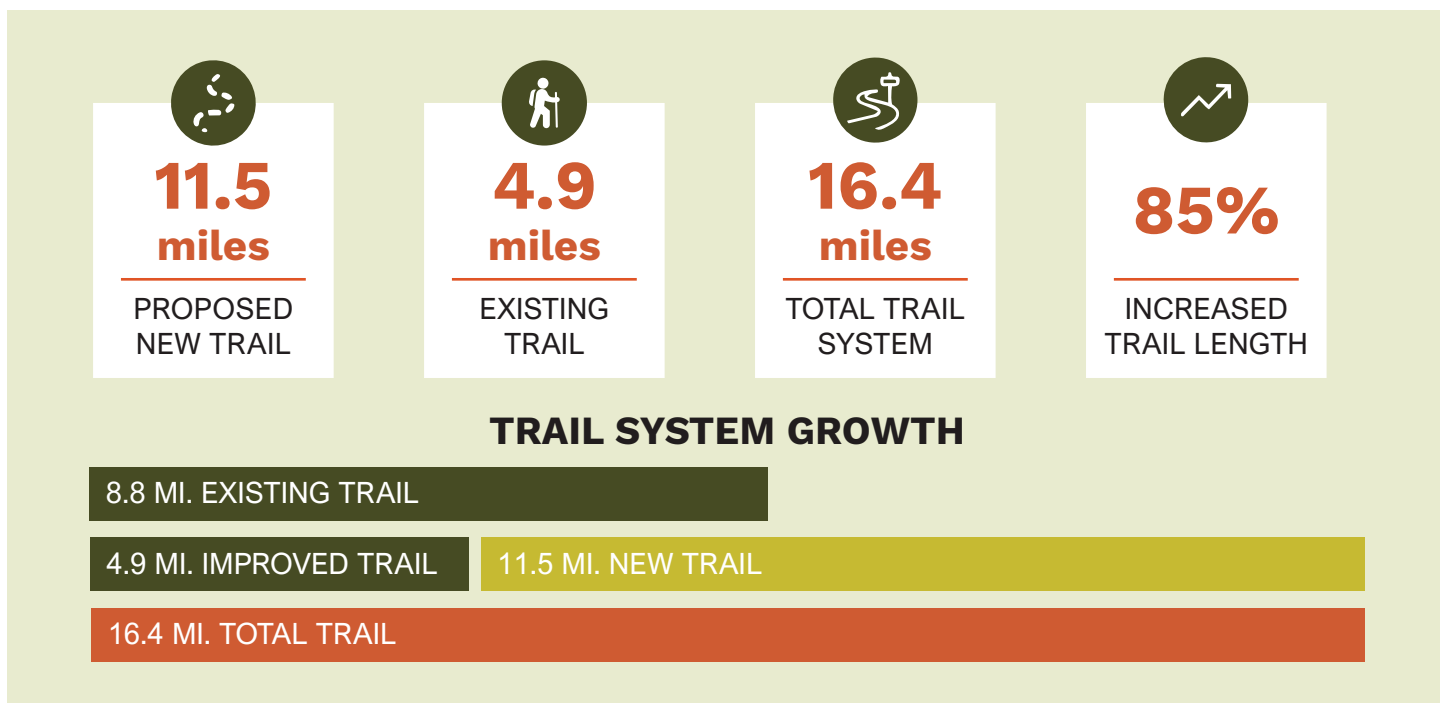
Other Improvements:

- A new Parking Area provides public access to the North Camp Trailhead via an existing access road that is currently gated. Placing the parking area within the property takes advantage of flatter terrain and provides some privacy for surrounding neighbors. From the parking area, E1 provides a single concentrated access to the entire Fork Run trail system.

Trail Index

Trail ID	Zone	Status	Rating	Existing Trail (LF)	Closure (LF)	New and Realingment (LF)	Total Length (LF)	Total Length (MI)
Coyote Loop*	Trailhead	Concept	Blue	2,400	0	0	2,400	0.45
Trailhead Zone*	Trailhead	Concept	Various	3,340	1,510	1,690	5,030	0.95
S1*	South	Flagged	Blue	5,410	3,800	5,250	10,660	2.02
S2*	South	Flagged	Blue	1,670	4,875	7,660	9,330	1.77
S3	South	Flagged	Blue	0	0	9,020	9,020	1.71
S4	South	Concept	Black	0	0	8,900	8,900	1.69
N1	North	Flagged	Blue	13,080	3,800	6,730	19,810	3.75
E1*	East	Flagged	Green	0	0	13,915	13,915	2.64
HOA Connector	East	Concept	Blue	0	0	3,140	3,140	0.59
N1 Cnctr	East	Flagged	Blue	0	0	2,340	2,340	0.44
S1 Cnctr*	East	Flagged	Blue	0	0	1,880	1,880	0.36
Total				25,900	13,985	60,525	86,425	16.37

*Denotes trails that could be considered for modifications to meet aMTB rating standards



PHASING AND NEXT STEPS

Phasing Recommendations

It is generally recommended to fund, permit and construct as much trail as possible at a given time to maximize cost efficiencies. Phasing projects into numerous smaller projects generally results in higher administrative and mobilization costs.

Recommended trail improvements have been categorized to aid Garrett County in making phasing and management decisions.

Core Trailhead Zone Improvements

Improvements to the Trailhead Zone would provide the most dramatic upgrade to user experience for the broadest range of users at Fork Run. As the gateway to Fork Run, this Zone sets user expectations for the entire system and is used by all three target user groups (hikers, mountain bikers, and climbers). Streamlining the trails in this zone and improving accessibility would create a more welcoming and inclusive experience, providing opportunities for short excursions with the climbing area as a unique destination.

These improvements include:

1. Parking Lot and Trailhead improvements (TH1)
2. Climbing Trails

improvements (CA1 and CA2)

3. Climbing Access hardware assessment
4. Ledges Loop Improvements
5. Coyote Loop Improvements
6. Signage and Wayfinding Plan

South Zone Existing Trail Improvements

Trail improvements on existing trails in the South Zone primarily focus on improving trail sustainability and user experience for existing users while also expanding the range of potential users by making a 4-5-mile loop close to the parking area more welcoming and inclusive. These improvements include:

1. Improvements to the Silver Trail (S2)
2. Improvements to the Red Trail (S1)
3. Replacement of the existing Upper Bridge Crossing (including planning and design)
4. Grading and drainage improvements to the Access Road (AR1) (including planning and design)

North Zone Existing Trail Improvements

Trail improvements on existing trails in the North Zone primarily focus on improving trail sustainability and user

experience for existing users. The user base may expand somewhat due to increased accessibility with trail alignments making the trails less challenging, but the length will primarily appeal to mountain bike and hiking enthusiasts. These improvements include:

1. Improvements to the Green and Beige Trails (N1)

East Zone Trails

New Trails in the East Zone are intended to provide an alternate access point to Fork Run from the North Camp Trailhead. This access would primarily serve local users in the neighborhoods at the top of the mountain, and the parking lot is a critical part of this infrastructure since it provides access to the proposed E1 beginner MTB loop. These trails will only meaningfully expand the system if implementation alongside the parking lot and trailhead at North Camp. These improvements include:

1. E1, N1 Connector, S1 Connector and associated North Camp trailhead improvements.

Other New Trail Development

Additional proposed new trail development consists of several trails intended to expand recreational access and route opportunities. These improvements include:

1. W1 connection from S2 to N1 via the new lower bridge crossing
2. Installation of the lower bridge crossing
3. The HOA Connector to provide formal access to the trail system from the North Camp neighborhood

Secondary Trail Hub Improvements

The skills area and trail hub within the Trailhead Zone have been identified as later-phase improvements because they are not essential to initial trail system operation. These amenities are most appropriate to implement after the trail network has been fully developed, visitation levels demonstrate sufficient demand, and Garrett County has established the staffing and maintenance resources necessary to sustain them.

These improvements include:

1. Natural Skills Area
2. Trail Hub at Intersection of Ledges Loop and S1

System-Wide Considerations

System-wide considerations represent planning and management actions that should be implemented both to maintain the current recreational quality at Fork Run and to complement new trail development. Certain forest stewardship activities may be compatible with completion alongside trail improvements.

These improvements include:

1. Trail Maintenance Planning
2. Invasive Species Management Planning

3. Forest Stewardship Plan work and/or Tree Stand Improvement

Permitting Considerations

Construction of natural surface trails in Garrett County, Maryland, requires coordination with local and state regulatory agencies to ensure compliance with applicable grading, erosion and sediment control, stormwater, and environmental permitting requirements.

Trail projects involving earth disturbance generally require review by the Garrett County Department of Community Development, Permits & Inspections Division to determine grading permit applicability. An Erosion and Sediment Control (E&S) Plan must be prepared in accordance with Maryland standards and approved by the Garrett Soil Conservation District (GSCD) prior to issuance of a county grading permit where required. Depending on the extent of land disturbance and site conditions, stormwater management documentation may also be required.

Projects located within mapped floodplains or flood hazard areas may require additional review and approval by Garrett County. Under typical conditions, review and approval of E&S plans and grading permits should be anticipated to require approximately 30 to 60 days following submission of a

PERMITTING HIGHLIGHTS



Begin agency coordination early in design



Nationwide permits may add roughly 2-4 months for review



Individual permits may extend the timeline by 6-12 months or more

complete application, although review durations may increase if revisions are required or project complexity warrants additional agency coordination.

Projects resulting in one acre or more of cumulative land disturbance are subject to the Maryland National Pollutant Discharge Elimination System (NPDES) Construction General Permit for stormwater discharges associated with construction

Task	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Preliminary Design															
Natural Resource Delineations															
Agency Coordination															
Design Refinements															
Permit Application Preparation															
Nationwide Permit Review															
Individual Permit Review															
Finalize Design															
Procurement															
Begin Construction															

A sample permitting and procurement timeline. It is important to have realistic timeframe expectations and to allocate adequate time and funding for pre-construction planning and procurement.

activity. Permit coverage is administered by the Maryland Department of the Environment (MDE) following approval of the E&S Plan by the GSCD and submittal of the required Notice of Intent (NOI). Applicants should anticipate approximately 30 to 45 days to obtain NPDES coverage after submission of a complete application package; however, additional time should be incorporated into the project schedule for preparation of supporting documentation and agency review.

If trail construction involves impacts to jurisdictional wetlands, streams, or the 100-year floodplain, additional authorizations may be required from the MDE Wetlands and Waterways Program under Maryland's nontidal wetlands

and waterways regulations. Activities involving the discharge of dredged or fill material into waters of the United States may also require authorization from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, with Section 401 Water Quality Certification provided by MDE.

Depending on the extent of impacts, environmental permits may range from Nationwide Permits requiring approximately 60 to 120 days for agency review to Individual Permits requiring 6 to 12 months or longer. Accordingly, preliminary environmental resource delineations and agency coordination are recommended during the design phase to identify jurisdictional resources, avoid or minimize impacts,

and incorporate appropriate permitting durations into the overall project schedule.

Estimating Costs

Cost estimates have been developed for the proposed trail system based on per-foot calculations informed by site observations and desired trail types and features.

These estimates are intended for use in guiding project design and budgeting and future construction costs may vary.

Contingencies

Contingencies provide a buffer for general uncertainties that exist with every construction project. A 15% contingency is recommended, but it may be prudent to increase or decrease contingency amounts for

budgeting purposes, especially to account for inflation over time.

Final design and permitting

For these cost estimates, many design details have been assumed. Regulatory requirements and permitting may require changes such as relocation of trail features or changes in design of trail structures. Final design may result in changes to the construction cost.

Adaptive Modifications

For trails where adaptive modifications are desired, additional funding should be allotted for pre-construction planning and design to confirm aMTB feasibility and define necessary modifications. Construction costs should be assumed to be roughly double for both new trail and existing trail improvements intended to meet aMTB standards.

Phasing

Phasing impacts the total construction cost through the cumulative cost of repeated mobilization. It is typically advantageous to construct as much trail as possible at one time to reduce the cost of equipment relocation and crew travel, and to maximize efficiency that occurs when a crew is accustomed to working at a site.

Mobilization

Mobilization includes lodging, mileage, and other administration costs associated with

project setup and equipment transportation. Due to high cost of short-term lodging in Garrett County and a tourist season that coincides with the construction season, mobilization costs of 15-25k should be added to the budget for each individual construction phase.

Hybrid Project

While it is common for trail projects to utilize a hybrid construction approach to reduce costs, this strategy is not recommended for the Fork Run Trail System. Although certain tasks, such as brush clearing, can often be completed by competent staff or volunteers, successful hybrid projects rely on a well-established volunteer base with trail construction experience and a land manager with sufficient staff capacity to coordinate work, maintain quality control, and manage project logistics. At present, these conditions do not exist for Fork Run. Given the scale and technical complexity of the proposed trail system, construction by an experienced professional trail contractor is recommended to ensure consistent quality, efficient implementation, and long-term sustainability.

Volunteer participation may still provide value through organized stewardship activities, routine maintenance, and select low-risk construction tasks as the trail program matures and local trail stewardship capacity grows.

Construction Administration

Construction Administration includes permitting, assistance with procurement document development and contractor selection process, construction oversight, and contract administration by a qualified design professional. For most project phases 10-15% of the total construction cost should be budgeted for Construction Administration.