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# ECOTOURISM OPPORTUNITIES IN THE MOUNT NIMBA LANDSCAPE OF LIBERIA



**United States Forest Service Assessment**

**August 2020**

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## ACRONYMS AND ABBREVIATIONS

|       |  |
|-------|--|
| AML   | ArcelorMittal                                      |
| CF    | Community Forest                                   |
| CFMB  | Community Forest Management Body                   |
| ENNR  | East Nimba Nature Reserve                          |
| FDA   | Forest Development Authority                       |
| FIFES | Forest Incomes for Environmental Sustainability    |
| FTI   | Forestry Training Institute                        |
| LAMCO | Liberian-American-Swedish Mining Company           |
| NGO   | Non-Governmental Organization                      |
| USFS  | United States Forest Service                       |
| USDA  | United States Department of Agriculture            |
| USAID | United States Agency for International Development |



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## 1.0 EXECUTIVE SUMMARY

Stretching across the tri-country region of Guinea, Ivory Coast and Liberia, the Mount Nimba range is one of the highest in West Africa, containing numerous endemic or range-restricted species and iconic geologic features. In Liberia, the Mount Nimba range has transformed from hosting nearly four decades of iron ore mining to now being covered by protected areas, including the East Nimba Nature Reserve (ENNR) and surrounding community forests. In support of the United States Agency for International Development's (USAID) Forest Incomes for Environmental Sustainability (FIFES) program, the U.S. Forest Service (USFS) conducted an assessment of ecotourism assets and opportunities across Liberia's Mount Nimba landscape.

Broadly speaking, tourism across the Mount Nimba landscape in Liberia, while seasonally present, remains underdeveloped and appears largely constrained to "adventure" tourism associated with research, organized overland tours from Europe or weekenders from Monrovia. There are few lodging options available, and those that exist, do not cater to "eco" tourism or even tourists more generally. Information on where to visit, how to visit, and what regulations one must abide by (e.g. entrance fees, obligation to be accompanied by official guides or rangers) are hard to come by for sites across the Mount Nimba landscape. There are little to no designated trails, tourism circuits, or interpretive signage to help guide or enhance the tourism experience. Community forests do not appear to be destinations for any tourism, at present.

An assessment of ecotourism opportunities across the Mount Nimba landscape reveals a diverse

offering of attractive destinations and experiences – rivaling Liberia’s pristine beaches and dense lowland rainforests, in terms of their potential. Given the unique destinations and experiences offered, the Mount Nimba landscape has the potential to become a regionally significant destination for ecotourism that could benefit local communities. To facilitate this transition and to better ensure that local communities stand to benefit, USFS recommends the following actions:

- Expand, integrate and diversify tourism circuits
- Improve site visits and user experience
- Enhance overnighting options
- Conduct marketing and outreach

This report outlines four potential tourism circuits, and what would be required to develop them, as a first effort toward a longer-term suite of ecotourism opportunities across the Mount Nimba landscape in Liberia. The proposed circuits would allow for distinct and diverse experiences, including integration of community forests, and would provide a suite of options for visitors to stay on the landscape from a few hours to a multi-day trip.

This report also provides interim and longer-term recommendations for infrastructure, information, and marketing support to bolster ecotourism across the landscape and complement the circuits. Some overlaps and gaps within the potential circuits are likely in the initial stages, as the necessary development to serve each circuit will be based on resource availability and the engagement of local partners.

Discussions with tourism operators and those who have recently visited the Mount Nimba landscape reveal a latent interest in the area. To capture this demand, a tiered or phased investment strategy is recommended, which could progressively target potential markets, while growing the skillset and capacity of local communities in developing sustainable eco/adventure tourism value chains.

The Mount Nimba landscape presents an opportunity to appeal to new niche tourism markets, including adventure groups, such as birders, hikers and hash house harriers.

The landscape could also absorb more “overlanders,” Monrovia with disposable income, and employees of nearby mining operations. However, facilities and infrastructure at destinations must be sufficient to meet expectations and needs, and information must be more readily available to attract and sustain a modest ecotourism market.



## 2.0 INTRODUCTION

Following the end of the second civil war, and especially since the passage of the Forestry Reform Act (2006) and Community Rights Law (2009), Liberia has pursued a multi-use management approach to its forests – seeking to balance objectives of conservation and decentralized sustainable management by communities with more traditional extractive uses.

To maintain intact forests, preserve biodiversity and increase livelihoods of rural inhabitants, alternatives to commercial logging, agriculture and mining are necessary. While not currently well developed in Liberia, ecotourism offers one option for non-extractive benefit generation from Liberia’s unique natural assets. Combined with other non-depleting revenue generating avenues, such as carbon credits and sustainable harvest of non-timber forest products, ecotourism could serve as an important sustainable value chain for both community forests and state-managed protected areas.

Stretching across the tri-country region of Guinea, Ivory Coast and Liberia, the Mount Nimba range is one of the highest in West Africa – containing numerous endemic or range-restricted species (e.g. Nimba toad, Nimba otter shrew). Guinea, Ivory Coast and Liberia are in the process of paving the main roads that flank Mount Nimba on its north and south – vastly increasing ease of access to the landscape – and presenting both an increase in threats and opportunities for its biodiversity. Protected areas cover most of the Nimba range across the three countries, yet all suffer from lack of investment and struggle to integrate local communities into their management and protection.

Given Mount Nimba’s diverse geographic, natural and cultural resources, combined with the relative ease of access, there is strong potential for ecotourism that could contribute to the sustainable development of the landscape, particularly through circuits that would integrate the complementary natural attractions offered in the protected areas with cultural assets in neighboring communities/ community forests. Over the past 10 years, communities bordering the Mount Nimba range in Liberia have established community forests as part of a shared management of forest and other natural resources across the landscape. Yet current levels of tourism in the landscape, particularly nature-based tourism, represent merely a fraction of the potential.

The USAID FIFES project supports communities to develop sustainable value chains across 11 Community Forests (CFs) in the Nimba and Grand Bassa counties of Liberia. The four CFs in northern Nimba County have determined to pursue non-extractive uses of their CFs, as they go through the development or revision of their management plans. One of the alternative livelihood options they are particularly interested in pursuing is community-based tourism. In support of this initiative, the USFS carried out an assessment of options for ecotourism that included community forests and provided recommendations for increasing and expanding current levels of tourism on the landscape. Specifically, USFS focused on the following objectives:

1. Carry out a reconnaissance of ecotourism offers, opportunities and actors across the Mount Nimba landscape
2. Assess options to increase ecotourism activities on the landscape, with a focus on community forests
3. Identify challenges/obstacles and opportunities to increasing ecotourism
4. Provide recommendations for short- and medium-term investments with significant potential to bolster ecotourism on the landscape, including proposals for integrated circuits

As part of the Liberia Forest Sector Project (LFSP), the Forestry Development Authority (FDA) commissioned Solimar International to compile an Action Plan for Sustainable Tourism Development. The Plan lays out a comprehensive overview of Liberia’s ecotourism potential and challenges and identifies opportunities and priority actions to catalyze tourism in the country. The Action Plan focuses on protected area-based ecotourism across nine targeted landscapes and proposes potential circuits across the landscapes by region. Nimba County and the ENNR were not included in Solimar International’s assessment – thus, this Nimba Region Ecotourism Assessment provides a nice complement to the proposed Action Plan.

## 3.0 OVERVIEW OF FINDINGS

Over the course of two separate 10-day field visits to Liberia across July and December 2019, a three-person team of USFS experts met with diverse national and Nimba County tourism stakeholders from across the government, private sector, NGOs and local communities. Additionally, the team identified and visited the most promising sites and circuits for eco or adventure tourism across the Mount Nimba landscape. These field visits included driving and hiking current and proposed tourism circuits with ENNR rangers or local guides. The July visit occurred during the peak of the rainy season. The December visit was towards the beginning of the dry season in Liberia. The contrasting visits allowed the team to compare site access and visitation levels during both seasons.

### 3.1 CURRENT STATE OF TOURISM IN THE MOUNT NIMBA LANDSCAPE, LIBERIA

Broadly speaking, tourism across the Mount Nimba landscape, while seasonally present, remains underdeveloped and appears largely constrained to “adventure” tourism associated with research, organized overland tours from Europe or weekenders from Monrovia. There are few lodging options available, and those that exist, do not cater to ecotourism or even tourists more generally. Information on what to visit, how to visit, and what regulations one must abide by (e.g. entrance fees, obligation to be accompanied by official guides or rangers) are hard to come by for sites across the Mount Nimba landscape. There are little to no designated trails, tourism circuits, or interpretive signage to help guide or enhance the tourism experience. The few existing trails have not been sustainably designed and have stretches that are washed out and others with steep grades, rendering them largely inaccessible to all but the most adventurous tourists.

Access to the region is relatively easy, compared to many potential destinations in the interior of Liberia, but also highly influenced by rainy vs dry season conditions. Access by vehicle to the Mount Nimba landscape is about to drastically improve as Liberia, Guinea and Ivory Coast are all in the process of paving the main access roads to the region. While facilitating access by tourists, the paved roads will also increase resource use pressure on the landscape and potentially degrade some of its bucolic attributes.

#### 3.1.1 LODGING AND OVERNIGHTING OPTIONS

The most developed and accessible lodging in the Mount Nimba landscape of Liberia is found at Jackie’s Guesthouse in Sanniquellie or Alvinos Hotel in Yekepa, about an hour’s drive from each other. Another potential lodging opportunity exists at the African Bible College in Yekepa. Jackie’s provides safe, air-conditioned rooms and a restaurant serving breakfast, lunch and dinner. Alvinos Hotel also provides safe, air-conditioned rooms, and food is available by walking several blocks away to the ArcelorMittal (AML) commissary. From our interviews and research, most visitors to the Mount Nimba landscape overnight in either Jackie’s or Alvinos.

There is an area adjacent to Blue Lake that experiences limited camping use from groups that bring their own equipment. The site has road access and provides a flat area for vehicles and tents. Currently, some overlanding groups are using the Blue Lake area for overnight camping in their own vehicles. The Blue Lake area provides the best opportunity to develop some overnight eco-tourism opportunities in the ENNR area. It provides paved and improved road access, a dramatic landscape to camp in, is adjacent to many existing trail opportunities, and is in direct proximity to water. The higher elevation at the site also provides a cooler temperature for sleeping than the surrounding lowlands. While camping in other parts of the landscape could likely be arranged with locals (e.g. in or near villages), it does not appear that this is currently happening with any regularity.

#### 3.1.2 INFRASTRUCTURE

Across the Mount Nimba landscape tourism infrastructure is very limited and information on what and how to visit is difficult to find or non-existent. Even established sites, such as Blue Lake within ENNR, have little to no signage or interpretation, and it is difficult for a visitor to find information on how to access and pay entrance fees or contact guides. The surrounding community forests have no tourism infrastructure or developed trail circuits.

In the ENNR two paved roads constructed by the mining company provide access to the ridgeline of Mount Nimba. These roads allow access to other less-developed roads and some user-created trails within the ENNR.

No roads access the interior of the community forests. One rough track is located between the ENNR and Blei Community Forest but was not suitable for full-sized vehicles during the field inventory and is used primarily as a foot path. Several “patrol trails” exist within Blei Community Forest. None of the trails are currently in a condition to allow for tourism. (Discussion of these roads and trails is found in sections below.)

No official website exists for the area with information regarding the area or how to visit, but there are several personal blog sites that provide information on the ENNR, including information on how to arrange a visit and pricing for entrance fees and guides.

iOverlander is an app that appears to be used extensively by overlanding groups. The app includes information on the Blue Lakes area and for Jackies in Sanniquellie.

#### 3.1.3 TOURISTS

Visitors to the Mount Nimba landscape are limited in number and are primarily weekenders from Monrovia, overlanders, and local residents and mining company staff day-users.

From interviews with tourists and review of visitors’ accounts, most tourists appear to organize their trips to the landscape independently, with many not even going through FDA to access ENNR. (This is particularly the case for local day-users.) In terms of organized tours to the landscape, there are the overlanders and Jos Tours. During on-site interviews with one group that was visiting the Blue Lake area, it became apparent that many employees and volunteers of NGOs centered in the Monrovia area are actively searching for ways to get out of the city on weekends and experience what Liberia has to offer. This potential tourist group seems largely untapped.

**OVERLANDERS** are tourists, generally from Europe, who use their own four-wheel drive vehicles to tour West Africa, either by driving them from Europe or having them shipped to a West Africa port.

Overlanders are generally self-contained, but they do need a secure place to camp, buy food and are looking for other activities in which to participate. Because this group is self-contained they are a relatively easy group to provide for as they may not require lodging but simply a safe, secure, interesting place to park their vehicles. Overlanders are already visiting the area around Bossou and the ENNR; this use could be expanded to the broader Mount Nimba landscape. Overlanding West Africa, a commercial tour operator, has been offering tours through West Africa including stops in ENNR at Blue Lake and is restarting a Liberia offering for 2020.

Jos Tours, a Monrovia-based company, is involved in developing destination packages and promoting tourism/ecotourism across Liberia. In 2019, they released the result of a commissioned body of work around tourism options in Nimba County in the form of a promotional magazine, Liberia Exhibit: Tour Liberia; Issue 1: January-June 2019. Jos Tours led successful tours to ENNR in December 2019 and January 2020 focused on participants based in Monrovia. They facilitated half-day excursions in ENNR at Blue Lake but are interested in offering more activities in the landscape when COVID-19 restrictions cease.

Given the unique geography and biodiversity of Mount Nimba, it is also a destination for niche ecotourism for certain wildlife or plant enthusiasts (e.g. birds, amphibians, orchids). A January 2020 birding expedition to Mount Nimba highlights the region’s potential (Birding Africa, 2020).

## BLUE LAKE



### 3.2 NIMBA COUNTY SITES FOR ADVENTURE AND ECOTOURISM

In addition to Liberia's relatively pristine coastal beaches and adjacent primary forests, Nimba County likely offers the most unique and diverse set of experiences for adventure and eco-minded tourists. The Mount Nimba range and landscape is at the heart of what Nimba County has to offer, with the ENNR and surrounding community forests containing most of the remaining primary forests and destinations.



Overview of Liberia, showing route from Monrovia to Sanniouellie, at foot of Mount Nimba Landscape. Kpatawee Falls is located near the town of Gbarnga. The town of Sanniouellie is located to the southwest of Mount Nimba and Yekepa is at the western foot of the mountain.



Former LAMCO iron ore mining pit, now Blue Lake, within ENNR

#### East Nimba Nature Reserve (ENNR), Liberia

As discussed above, some tourism is occurring in the ENNR, primarily associated with the Blue Lake Area. There are two main access routes to the Blue Lake and former Liberian-American-Swedish Mining Company (LAMCO) iron ore mine within ENNR – one is called the Blue Lake road and the other the Radio Tower (or CellCom) road. Both routes are at least partially paved, offer relatively easy access to the core of ENNR (albeit degraded by the abandoned mining activities), and have scenic overlooks and areas that have had limited recent use from picnickers or campers. Access to ENNR from the east or south is more challenging. In the east, separate trails lead to ENNR from the village of Sehtontuo and the FDA/ENNR ranger station in the village of Geipa. The Geipa trail leads to the Yah Waterfall within ENNR, which has a 30 meter high cascade. From the south, ENNR can be accessed via a road/trail from the FDA/ENNR ranger station in the village of Zortarpa.

FDA charges an entrance fee (200 Liberia Dollars [LD]/day [\$1]) and camping fee (300 LD/day [\$1.50]). Additionally, for travel off the roads into Blue Lake and the CellCom Tower, at least one guide is required (1000 LD/day/per guide). The only visitor information is an entrance sign and a small information board along the road to Blue Lake. There is no other advertising or marketing and it is difficult for a visitor to find information on how to access and pay the entrance fee for ENNR. Most travel to ENNR, that is not arranged by a tour operator (e.g. Jos Tours), appears to be organized via word of mouth.

#### Community Forests around ENNR

In addition to ENNR, there are four community forests in the Nimba landscape in Liberia. Of these, Blei Community Forest (CF) is particularly interested in developing ecotourism as part of its management. Blei CF offers some potentially interesting attractions, including a high-elevation (923m) forested ridge, with sweeping views of the surrounding landscape. The ridgeline also includes the remnants of Dr. Harley's residence, which offers possibilities for historical interpretation, in addition to the abundant natural features of the landscape.



Informational sign on road to Blue Lake at ENNR entry



*The high ridge in the Blei Community Forest, rising to 923m*

Blei CF currently has no tourism infrastructure. A small building in the village of Gbobayee provides an office for the community forest. Forest guards access the forest through several patrol trails, but they are very steep and slick and would need to be redesigned to be sustainable and offer tourists an access into the forest. The Cold Water area, located where Blei CF and ENNR come together, could serve as a potential basecamp for exploring both areas, but it currently has no camping arrangements or amenities. The small size of the Blei CF would require that any tourism circuits developed would need to include the larger ENNR and other landscapes in the greater Nimba region.

Based on in-person surveys with parties familiar with the landscape, the USFS team focused only on Blei CF for ecotourism potential and did not have the opportunity to visit any of the other three CFs in northern Nimba County.

### **Kpatawee Falls**

While it's located in neighboring Bong and not Nimba County, Kpatawee Falls is worth mentioning here since it is a known tourism attraction and could provide a nice stop for visitors traveling between sites in Nimba and Monrovia.

Kpatawee Falls is a series of two falls located about 25 minutes off the main road near Cuttington University, just outside the town of Gbarnga. As a result of a planned hydroelectric dam on the upper falls, which has now been abandoned, there is a dirt road connecting access between the two falls. There is a local organization that recently registered as an ecotourism venture to develop Kpatawee Falls – working closely with the Liberia National Tourism Association (LINTA) and the local community. The organization is led by a dynamic Liberian woman who is associated with Cuttington University. During an on-site meeting, members of the organization described plans to develop eco-lodging, food service, and other tourism services on-site. They expressed specific needs on site layout, trail building, interpretation and management of the natural resources on site.



*Kpatawee Falls*

### **3.3 CONSTRAINTS TO (ECO)TOURISM DEVELOPMENT**

USFS has identified several constraints that will shape the direction of ecotourism development across the Mount Nimba landscape. These constraints will require different levels of engagement to overcome, as described in the following sections. For a more comprehensive list of constraints to ecotourism nationally, refer to the Action Plan for Sustainable Tourism Development (Solimar International, 2019).

- Limited or nonexistent infrastructure or services to support tourism, especially regarding overnighting or food service options
- Few developed tourism circuits, including lack of diversified experiences and integration across the landscape
- Limited availability of information (pre-visit and on-site)
- Lack of experience developing and managing tourism business elements (for example, from guide services to hospitality elements)
- Visas for land-based border crossings between Liberia and Guinea are not available at the border, limiting tourists' flexibility
- Significant seasonal access challenges during the rainy season (May – October)

## 4.0 EMERGING OPPORTUNITIES AND RECOMMENDATIONS

While limited in number, there are tourists regularly visiting the Mount Nimba landscape at present, despite significant obstacles to access and limited options for experiences. From the USFS team's interactions with tour operators/service providers, tourists to Mount Nimba (current and former), ENNR management, and community forest representatives, it is apparent that there is significant appetite and enthusiasm for increasing tourism across the landscape. Building off of current tourist circuits and known assets for ecotourism identified and discussed above, there are opportunities to significantly enhance the experience for tourists on the landscape through a combination of strategic, low intensity investments. These investments are identified and discussed below.

### TO INCREASE TOURISM ACROSS THE MOUNT NIMBA LANDSCAPE:

- Expand, integrate and diversify tourism circuits
- Improve site visits and user experience
- Enhance overnighting options
- Conduct marketing and outreach



#### 4.1 EXPAND, INTEGRATE AND DIVERSIFY TOURISM CIRCUITS

Current tourism in Mount Nimba is focused, almost exclusively, on visiting Blue Lake and the tri-country summit within ENNR. Tourists rarely spend more than one day on the landscape and typically don't visit surrounding communities or community forests, leaving the latter effectively cut off from any existing tourism benefits. Expanding, integrating and diversifying tourism circuit experiences are important steps to attracting more tourists to Mount Nimba, keeping them on the landscape for a longer duration, and integrating communities and community forests. The next section proposes a diversified series of integrated circuits and supporting infrastructure investments for doing so.

While this report is focused on Liberia, in order to more effectively raise the profile of the landscape as a regional tourism destination, it will be important to pursue development and coordination of circuits across the three countries that share Mount Nimba (Guinea, Ivory Coast and Liberia), given their complementary assets and access points.

#### 4.2 IMPROVE SITE VISITS AND USER EXPERIENCE

As mentioned above, many of the existing sites and access trails are poorly marked, extremely challenging to access and lack any interpretation of the historical, cultural or ecological significance of the site. Relatively low-cost options to address these current constraints include:

- Invest in trail building and marking to vastly improve ease of access, experience and safety for the user.
- Design trails and circuits with specific destinations and experiences in mind.
- Develop interpretive and informational resources (e.g. directional and interpretive signage) at relevant sites.

- Develop brochures, guides and checklists that highlight the unique flora and fauna on the landscape, catering to birders and other niche enthusiasts. (This will require expeditions, surveys, and desk review to generate species checklists.)
- Build capacity of guides and other tourism service providers to offer unique and professional experiences and enhance the tourism experience.
- Assist actors (private and public) across the landscape to identify and address needs for improved communication and coordination – integrated planning is essential for longer-term development.
- Decentralize and digitize the permit application process. Allow visitors to process permits they acquire either on site or online. Coordinate with Liberia Immigration Service for visa services at border points.

#### 4.3 ENHANCE OVERNIGHTING OPTIONS

There are very few overnighting options in or around Mount Nimba. All existing lodging is in the two towns of Sanniquellie and Yekepa. Current lodging options do not cater to tourists and provide little to no linkages with tourism in and around Mount Nimba. However, lodging operators interviewed, expressed significant interest in improving their capacity to cater to tourists and tourism in the area. The only active camping site is adjacent to Blue Lake, but it has no structures or facilities to enhance experiences or deal with waste. Options to enhance overnighting experiences include:

- Invest in some basic campsite design and infrastructure/facilities – similar to what USFS and the US National Parks have in developed campgrounds.
- Work with current lodging operators to invest in low cost, eco-focused upgrades, including integrating alternative/local building materials.
- Partner with current lodging operators to include information about ecotourism options in the area, including guides, fees (and how to pay), transport, maps and guidebooks.
- Connect local operators to relevant small-scale ecolodge/ecotourism operators in other countries – consider supporting site exchanges to stimulate idea exchange and investments across the Mount Nimba landscape.

#### 4.4 CONDUCT MARKETING AND OUTREACH

There is little to no information available online or through tour operators regarding potential destinations, lodging, and information on how to visit sites across the Mount Nimba landscape. Some initial, relatively low-cost options to start to remedy this would be to:

- Connect current service providers with internet resources such as Lonely Planet, iOverlander, and other platforms to share basic information with potential visitors (e.g. via guides, maps, apps and websites).
- Develop tourist-focused brochures to advertise attractions across the landscape, including how to visit certain areas, where to stay, costs, etc.
- Develop an overview map of the landscape, showing sites, trails, and other relevant contextual information for tourists (similar to what is developed for national forests or national and state parks in the U.S.) – display map in key tourist locations (e.g. hotels, park offices).
- Work with tourism operators such as Jos Travel in Monrovia to integrate tourism circuits across Nimba landscape into their offerings.
- Target outreach efforts to audiences that would be most likely to visit, such as the professional class based in Monrovia, nearby mining company employees (e.g. ArcelorMittal, Nimba Iron), and West Africa Overlander groups.

# 5.0 PROPOSED CIRCUIT AND INFRASTRUCTURE INVESTMENTS

As described above, one of the critical elements to increasing tourism across the Mount Nimba landscape will be to expand, integrate and diversify current options for visiting. In order to achieve this, USFS has identified a diverse set of circuit and activity options, which would offer tourists experiences across the landscape, ranging from a half-day, up to 4-5 days (Figure 1). The identified circuits integrate ENNR, Blei Community Forest, communities surrounding ENNR and Kpatawee Falls. At present, these are mostly focused on eco or adventure-oriented tourism. Blue Lake in ENNR offers a promising base camp for a 2-3 day circuit within ENNR and surrounding communities, via combination of hiking and driving. These initial circuit recommendations reflect a proposed multi-year effort. As tourism opportunities and delivery of initial services are reinforced by increased stability of the sector, a 'second tier' of development can begin to diversify offerings and further extend potential benefits. For example, the team visited the 'Cold Water' site at the edge of Blei community forest. As potential demand is realized and investments are supported, infrastructure for a rustic camp at this site may help further expand and diversify area lodging and access options. Other resources, such as cultural tourism elements, are still in the research phase.

## PROPOSED CIRCUITS

- Circuit #1: Tri-Country Summit
- Circuit #2: Blue Lake Overlook
- Circuit #3: Yah Waterfall
- Circuit #4: Blei Community Forest



For the purpose of circuit descriptions, it is assumed that visitors would enter the Mount Nimba landscape via either the town of Sanniquellie or Yekepa. Most circuits would include the option to do part of the circuit in a vehicle and the rest on foot.

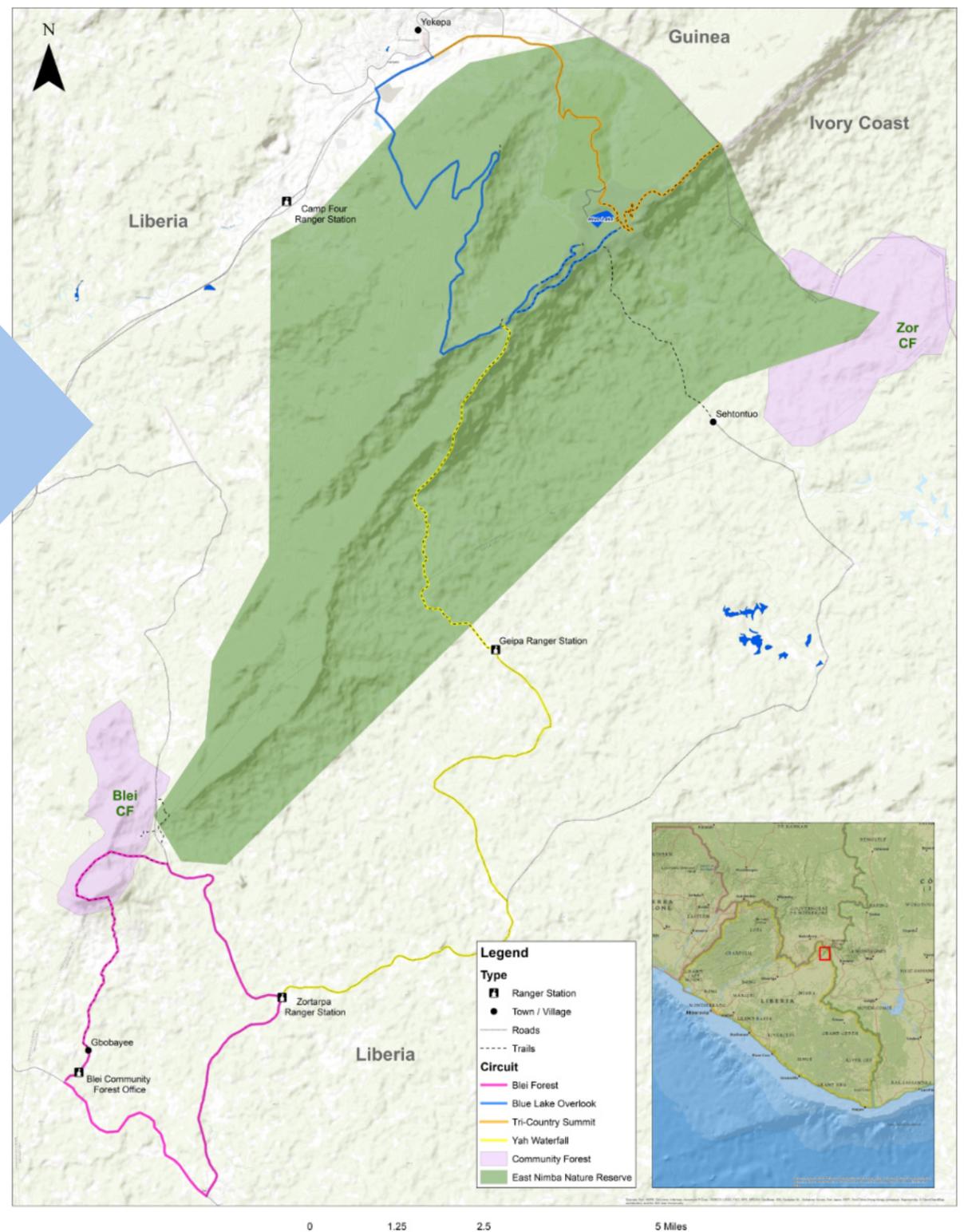
All circuits assume the following:

- Given ENNR and CF access regulations, all visitors would need to be accompanied by a park ranger, tour guide, or both. Before entering the ENNR visitors will need to contact the FDA in Yekepa, Zortarpa or Geipa to pay the entrance fee and arrange for a guide. Two guides are required for groups of three or more.
- Existing trails need additional work to make them sustainable and safe to use for tourism. New trails and trail connectors are also recommended to allow for loop walks. A more detailed, technical description of all trail options and recommendations can be found in Appendix I.
- Visitors would either stay at lodging in Yekepa or Sanniquellie or camp at Blue Lake or near one of the villages close to the trailhead.
- Partners in the tourism and resource management sectors (e.g. tour operators, FDA, CF representatives) are critical to the success of all proposed circuits.

The proposed circuits would require varying degrees of development and investments to prepare them for tourism. These circuits offer a range of experiences, levels of intensity, time commitment and ease of access. In conjunction with partners in the tourism sector, this report suggests a base level of investment to support initial circuits.

# PROPOSED CIRCUITS

- CIRCUIT #1: TRI-COUNTRY SUMMIT
- CIRCUIT #3: YAH WATERFALL
- CIRCUIT #2: BLUE LAKE OVERLOOK
- CIRCUIT #4: BLEI COMMUNITY FOREST



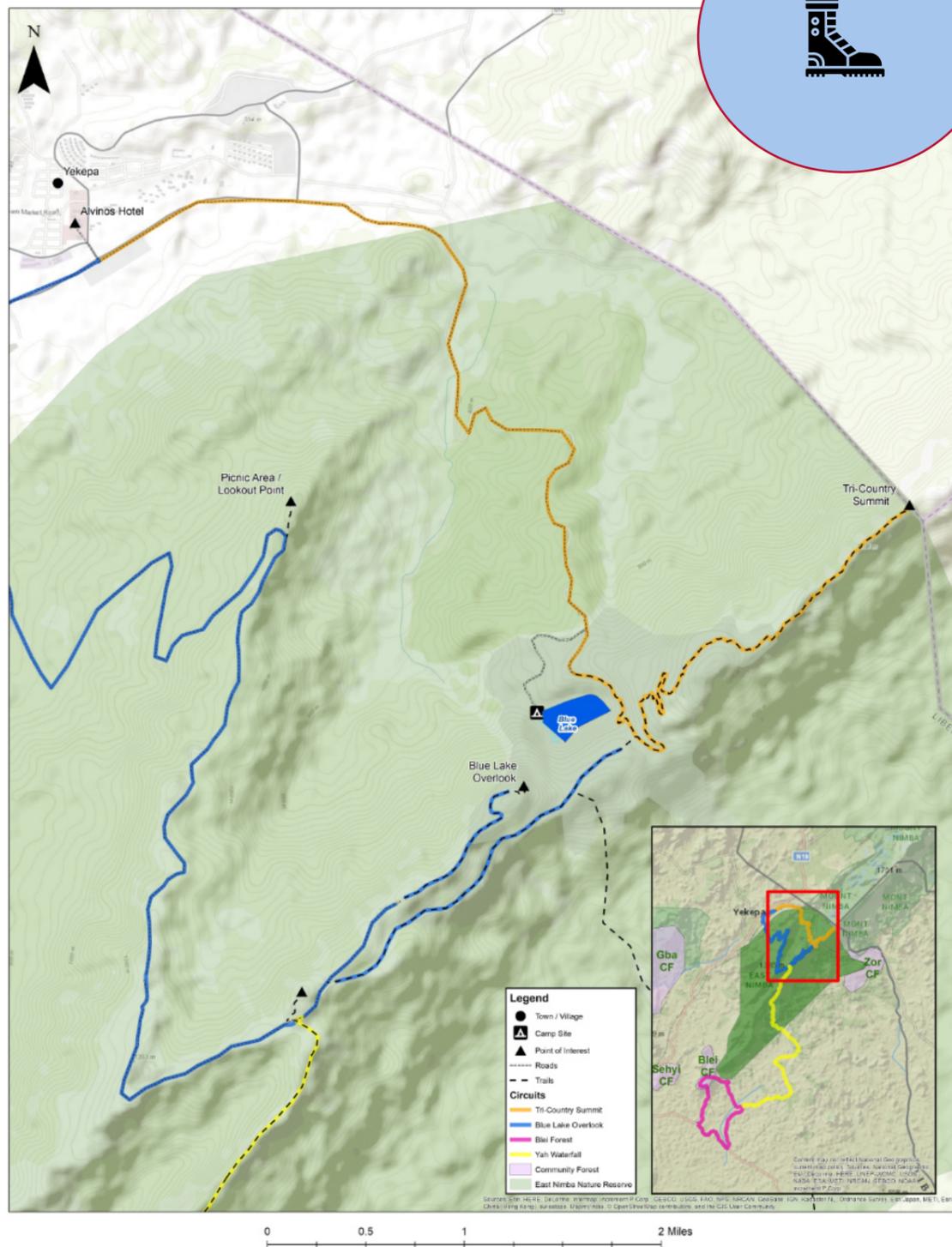
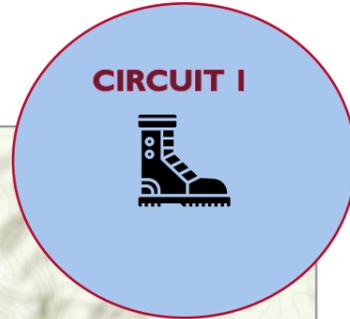
## 5.1 CIRCUIT #1 – TRI-COUNTRY SUMMIT TRAIL

**OVERVIEW:** Hike the ENNR from Blue Lake to the tri-country summit and back, taking in the expansive mosaic of landscapes across Liberia, Guinea and Ivory Coast from nearly 1300 meters (4265ft).

**LEVEL:** Moderate adventure, challenging

**DURATION:** Full day. (5-6 hours active hiking time)

**ELEVATION CHANGE:** 366m (1200ft)



**DESCRIPTION:** The drive to Blue Lake is 25 miles from Sanniquellie or 5.5 miles from Yekepa. The road between Sanniquellie and Yekepa is improved dirt road; the road to Blue Lake within ENNR is paved but steep and starting to deteriorate.

The Tri-Country Summit trail begins on a bench above Blue Lake and climbs for 3 miles (6 miles round trip) to the border of Liberia, Guinea and Ivory Coast. The hike is challenging due to heat and terrain; several areas of trail are eroded and slick due to soils (graphite, rocky) and very steep.

After hiking the Summit Trail, it's a short hike or drive to the shore of Blue Lake. While the views from the shore of Blue Lake are not necessarily of pristine nature, they are dramatic. The area provides a great place to relax after hiking and visitors have the opportunity to wade or swim in the lake to cool down. Visitors could camp at the lake or return back to lodging in Sanniquellie or Yekepa (see following discussion of potential for Blue Lake basecamp).



**INFRASTRUCTURE INVESTMENT RECOMMENDATIONS:** Most of the trail is located on the old mining terraces and does not need much work, however the pitches between the terraces need to be rerouted and switchbacks need to be added to create more sustainable grades. Pitches that could not be rerouted need to have stone or wood **steps constructed** (see right). There are several washed out areas that need to be rerouted and bench cuts should be added to create tread for a safer, more sustainable trail. The portion of the trail that follows the main ridgeline and climbs the undulating hills also needs to be rerouted to create a more sustainable trail grade. This trail should also be managed as a Class I Hiker/Pedestrian Trail (see table in Appendix I).



### Step Construction

Steeper sections where no reroute is possible may require the construction of stone or wood steps to decrease erosion and create a safer travel route for visitors. The drawing above shows typical trail stairs.

This circuit would benefit from complementary interpretive signage or brochures that tell the history of key locations and events, such as the political and physical geography along the mountain range where the three countries come together, and the history of the area as a former iron ore mine.



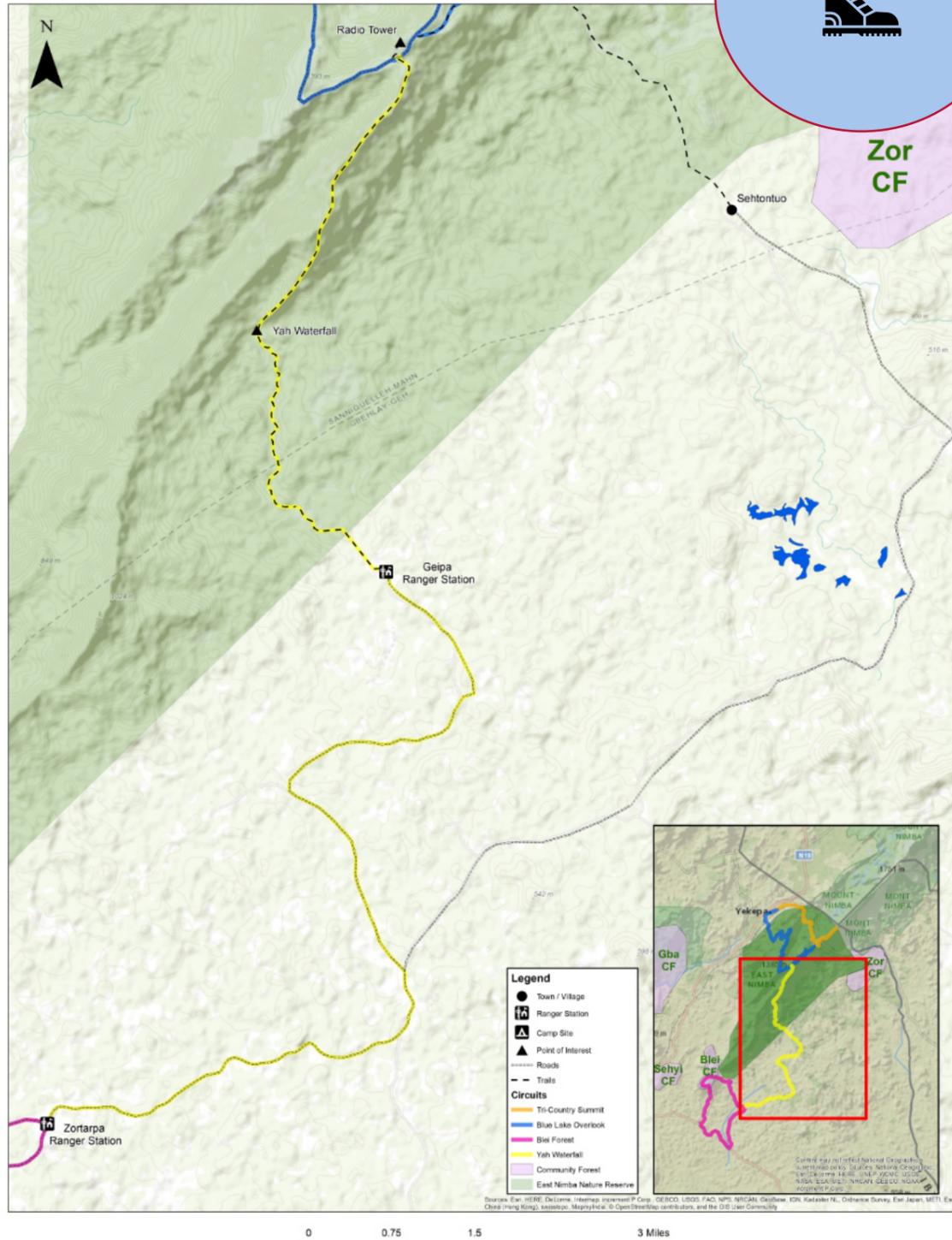
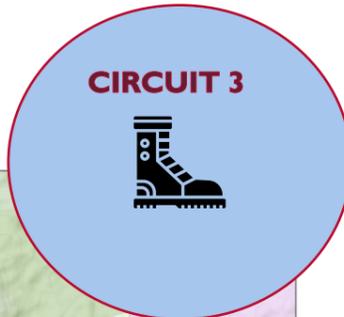
### 5.3 CIRCUIT #3 –YAH WATERFALL

**OVERVIEW:** Hike down Mount Nimba from the Radio Tower to the Geipa village and ranger station, visiting the impressive Yah Waterfall along the way.

**LEVEL:** High adventure, challenging

**DURATION:** Full day (5-6 hours minimum active hiking time)

**ELEVATION CHANGE:** 853m (2803ft)



**DESCRIPTION:** This circuit offers several different options including an out and back hike to the Yah Waterfall from the village of Geipa, or the potential to connect the Blue Lake/Radio Tower Area to Geipa, via the Yah Waterfall. The whole circuit could be approached either as a climb up Mount Nimba from Geipa to the Radio Tower and on to Blue Lake, or in reverse. This circuit connects to the Blue Lake Overlook circuit (Circuit #2) from the base of the Radio Tower.

Commencing the circuit from the Radio Tower would include either starting out from Blue Lake or the Radio Tower Road. From the base of the Radio Tower, the circuit initially follows a ridge and former mining road to the south. The ridge provides sweeping and dramatic views of the forest and savanna landscape below – well into Ivory Coast. The trail then begins a rather steep descent from the ridge, into the forest and on to the Yah Waterfall. From the waterfall, the trail essentially follows the Yah River out of ENNR to the village of Geipa, which has the most remote of the ENNR ranger stations.

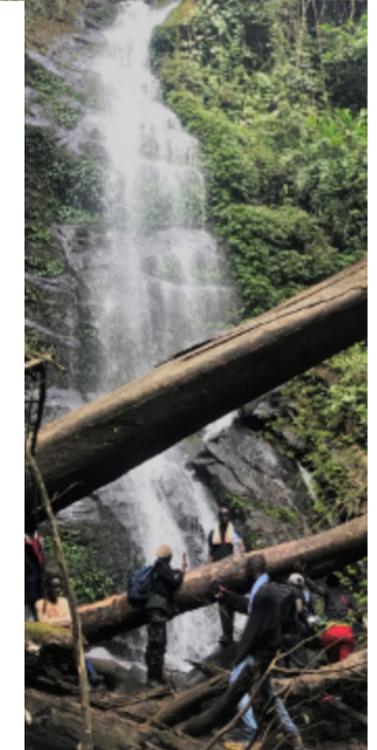


Top left: View of surrounding landscape from ridge trail leading to the Yah Waterfall from the Radio Tower. Right: Yah Waterfall.

The village of Geipa does not have lodging, but it would be possible to camp near Mano village. The road back to Sanniquellie from Geipa is 24 miles (44 miles to Yekepa). There are several challenging bridge crossings on the road to Geipa that would likely need to be addressed if this area is going to remain accessible to vehicles.

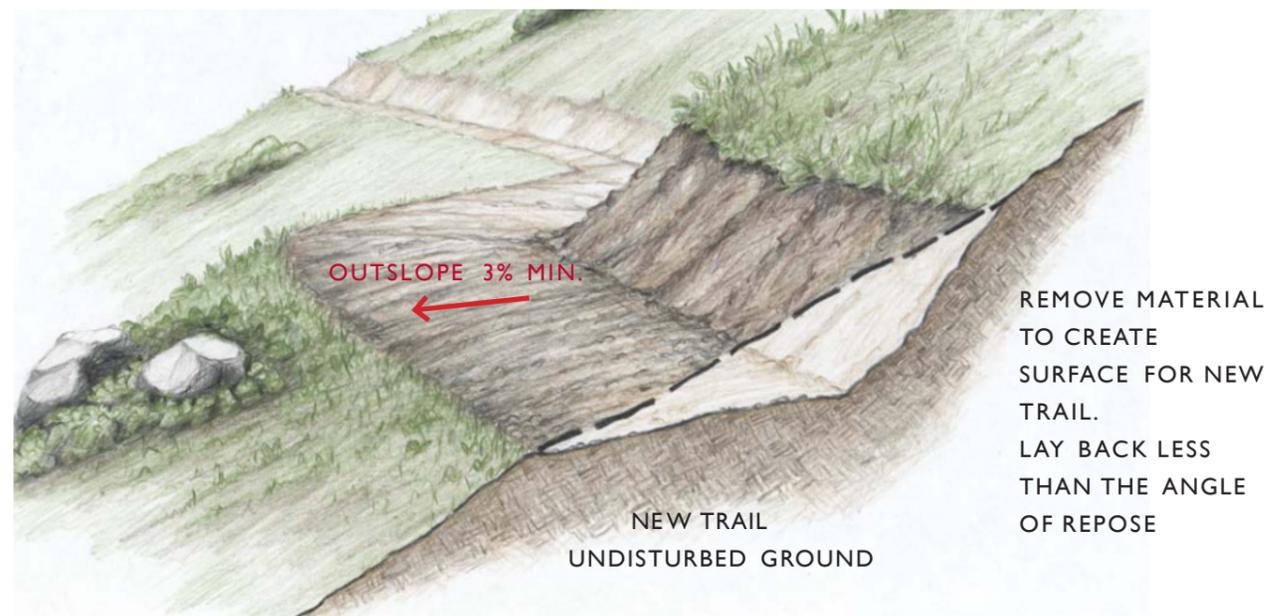
A potential add-on to this circuit would be to hike back down the mountain to the village of Sehtontuo, from Blue Lake. This would add another 4.5 miles and take approximately 3-4 hours. However, the Sehtontuo leg of this circuit needs further scouting to better determine its feasibility.

All through-hike options would require arranging vehicle transport at both ends of the circuit. The vehicle shuttle from Blue Lake to Geipa would be approximately 50 miles. Blue Lake to Sehtontuo would be approximately 55 miles.



**INFRASTRUCTURE INVESTMENT RECOMMENDATIONS:** Most of the lower trail (towards Geipa) is located along a good route and has a sustainable grade. The entire trail needs brushing and several large fallen trees across the trail need to be removed. Several portions of the trail need to be **bench cut** (see below) to provide a comfortable tread to walk on. The stream crossings could also be improved with simple log bridges or at least cutting a flat walking space on the existing logs. Trail should be managed as a Class 1 Hiker/Pedestrian Trail.

The connector trail between the Yah Waterfall and the ridge will still need to be assessed, designed and constructed, as the USFS team did not have a chance to hike this connection. The ridge trail (connecting to the Radio Tower) is heavily overgrown and will need to be cleared.



**Full Bench Cut Tread Construction** - Tread would be built to Forest Service standards and would include building a full bench cut trail as shown in the drawing above. Tread would be built 12"-18" wide

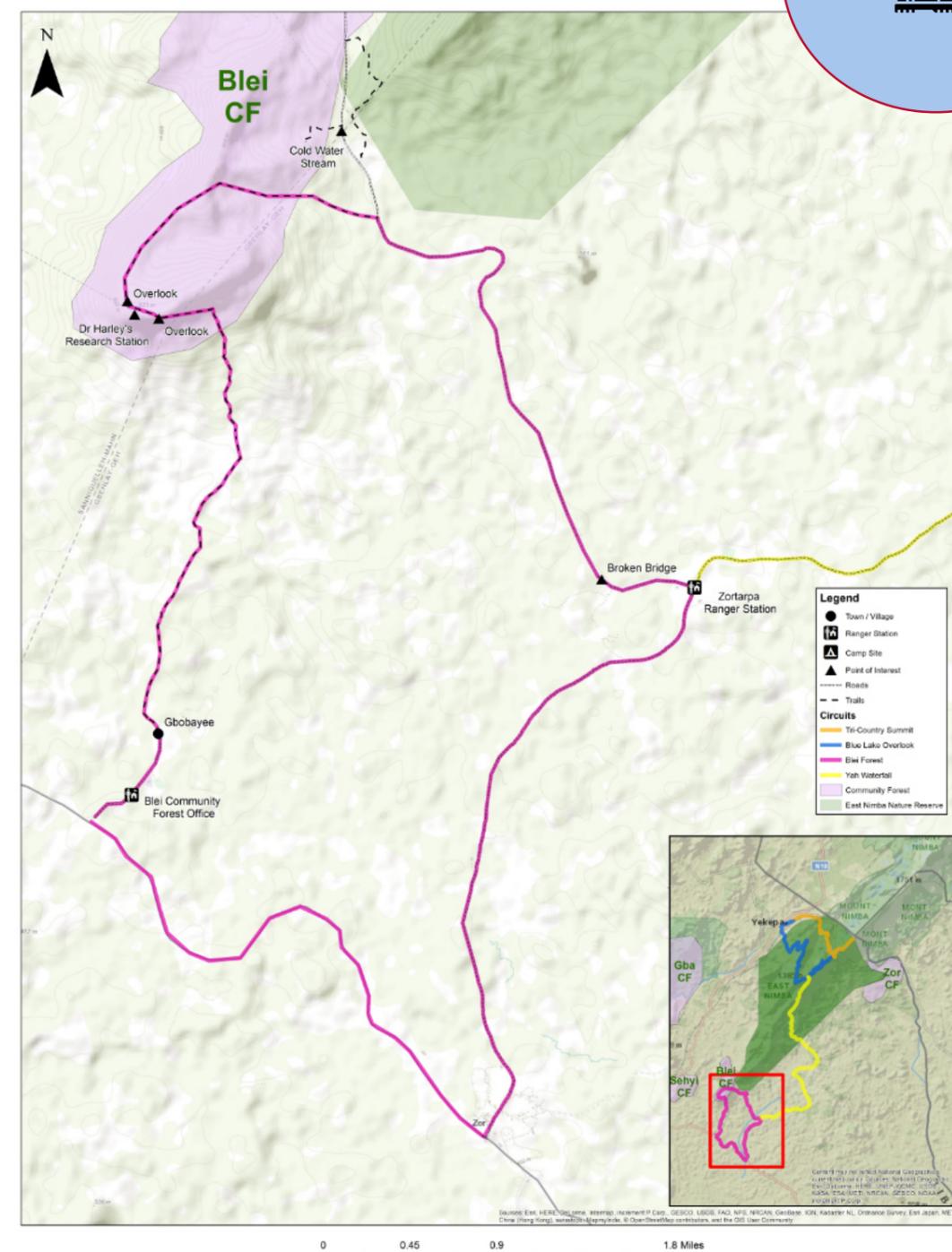
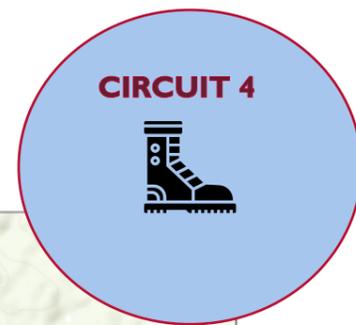
## 5.4 CIRCUIT #4 – BLEI COMMUNITY FOREST

**OVERVIEW:** Hike the scenic ridgeline of Blei Mountain, taking in the ruins of Dr Harley’s research station, fields, farms and villages along the way.

**LEVEL:** High adventure, challenging

**DURATION:** Full day (6-7 hours active hiking time)

**ELEVATION CHANGE:** 457m (1500ft)



**DESCRIPTION:** This circuit is within the Blei Community Forest, and is the only proposed route outside of the ENNR. To avoid retreading the same trail, this circuit would be best approached as a through hike from the village of Gbobayee to that of Zortarpa. The drive from Sanniquellie to Gbobayee is approximately 8 miles and to Zortarpa is 14 miles. A Community Forest Office is located in Gbobayee and can provide guides and information on the area. From Gbobayee, hikers can follow the road/trail to the boundary of the Blei Community Forest. From the Community Forest boundary, a steep route can be followed to the ridge top where several overlook points can be accessed as well as the ruins of Dr. Harley's research station. From the research station, hikers follow a ridge trail on a moderate descent through a pristine Upper Guinean rainforest with impressively large trees along the way. The trail leaves Blei Community Forest near the Cold Water stream, joining up with a road that serves as a border between the community forest and ENNR and leads back to the village of Zortarpa. There is a bridge on the road, right before Zortarpa, that is unsafe for most vehicles; however, it is regularly crossed with motorcycles. Being able to use a vehicle between Zortarpa and Blei CF, would shave off approximately one hour from the overall circuit and allow visitors to start their hike right at Cold Water.

There is currently no lodging available in either Zortarpa or Gbobayee; however, camping in or around the villages could be organized. The Cold Water area offers a relatively open and flat piece of land that could serve as a potential base camp. According to locals, previous research and prospector expeditions have camped near Cold Water.



The ruins of Dr. Harley's field station would be an interesting location to interpret for tourists. Interpretation could include either on-site signage or off-site brochures and trail guides)

The viewpoints could also be developed to provide better views and provide interpretation of the surrounding area as well.

Remnants of Dr. Harley's research station in Blei Community Forest

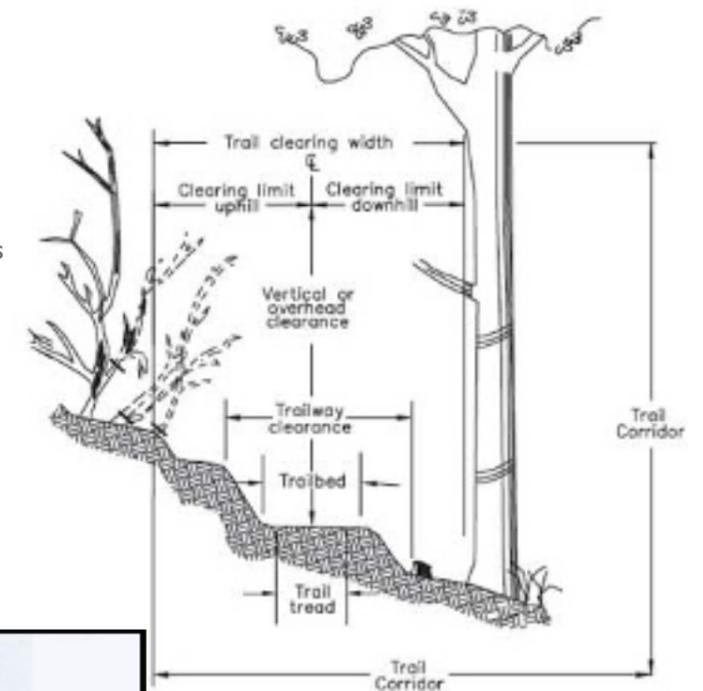
Infrastructure investment recommendations: Of those proposed, this circuit would require the most investment by the community to make it a viable tourist route. While the ridge along the top of Blei CF is relatively easy to walk, the long road approach from either village and lack of developed trail (steep grade, heavy vegetation) on the approach and descent to the ridge are significant challenges. Designing an improved trail routing to the Blei Mountain ridge will require further assessment of the ascent and descent options. The reroute would likely need to include several switchbacks and steps. The area around Cold Water may provide a reasonable approach to the ridgeline and should be further scouted for that possibility.

Trail corridor and tread would need to be constructed which would include:

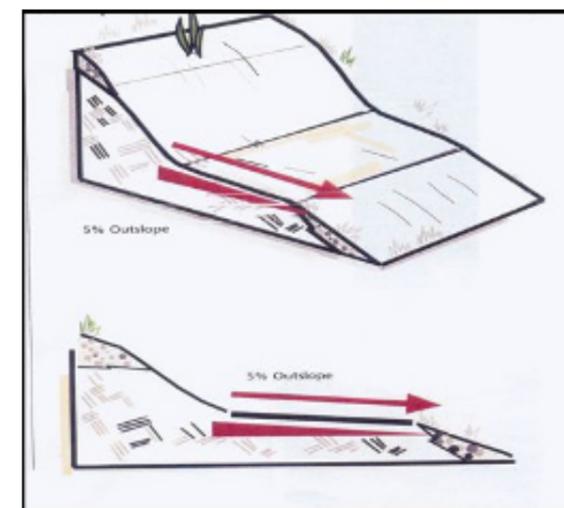
- Brushing and clearing vegetation
- Full bench cut tread construction
- Outsloping the tread
- Drainage structures (i.e. grade reversal, rolling dips, water bars - see next page)
- Construction of stone or wood steps

The trail should be designed and constructed to the standard of a Class I Hiker/Pedestrian Trail as shown in Table 1 in Appendix 1.

## Brushing and Clearing Vegetation



## Outsloping the Trail Tread



Clearing would generally involve removing brush and small diameter shrubs and grass from the area where the tread would be built. Clearing would be 6' to 7' high and 24" to 48" wide.

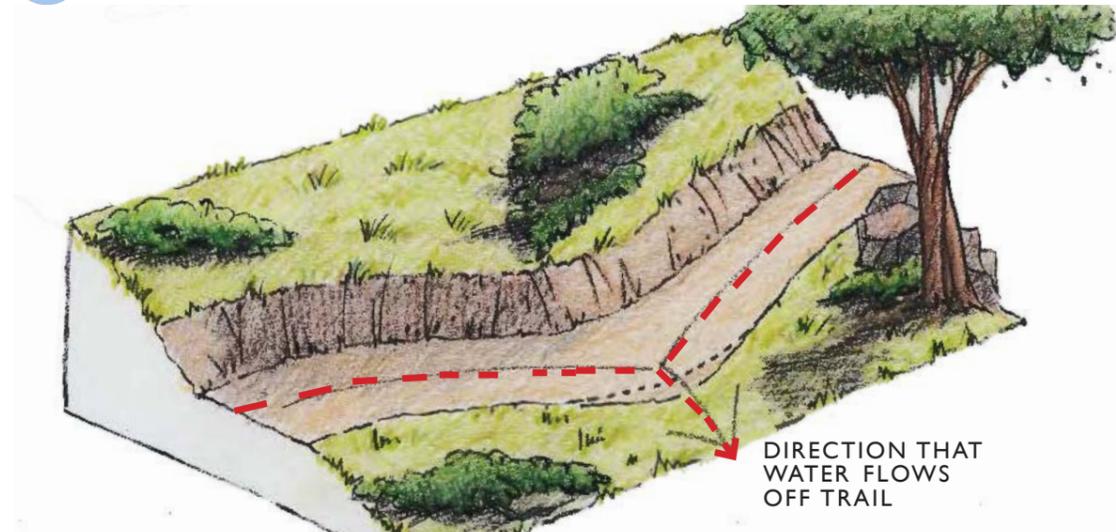
Large and medium diameter trees would not be cut but would be built around.

Trail tread would be outsloped 5% to allow water to flow across the tread and not down the tread, which creates erosion issues.

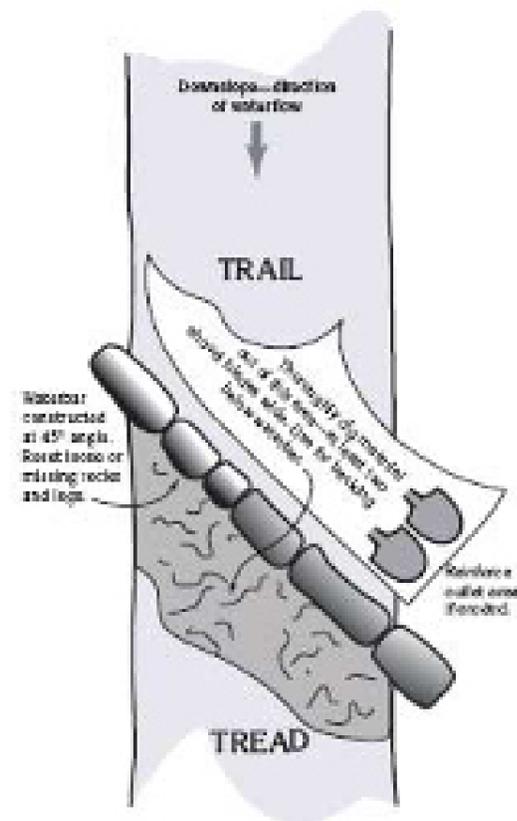
# Drainage Structures

A variety of drainage structures would be built to remove water and its erosional effects from the trail including grade reversals, rolling dips and water bars.

1 Example of a grade reversal and rolling dip



2 Example of a water bar

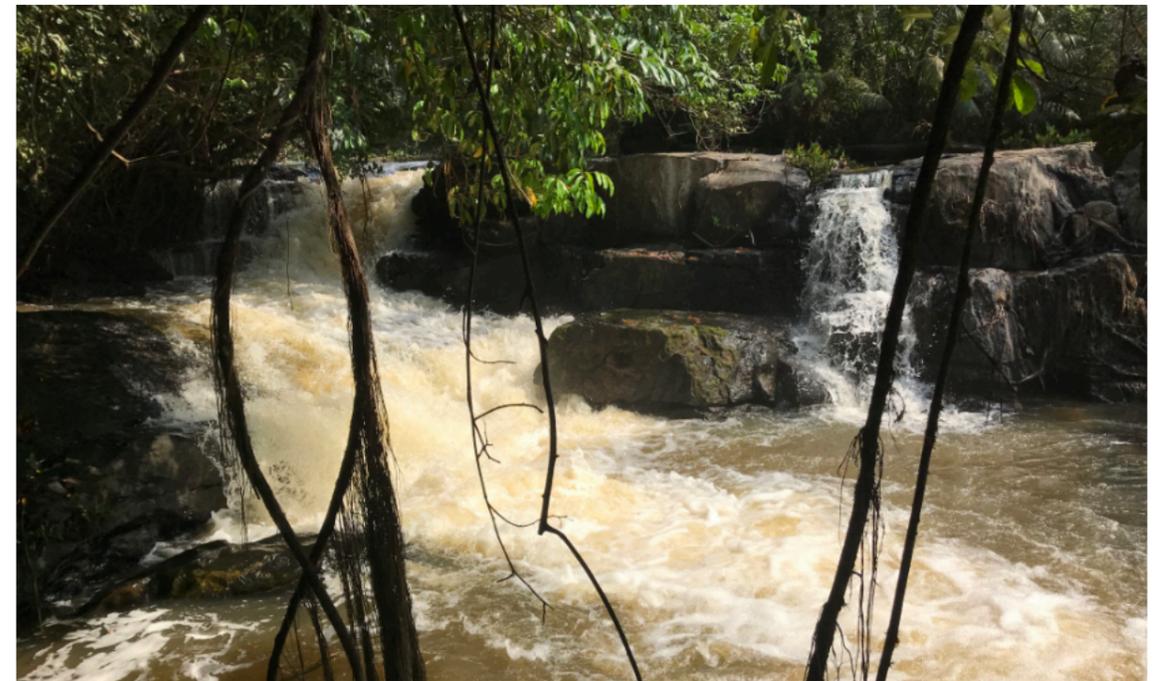


## 5.4.1 MOUNT NIMBA CIRCUIT ADD-ONS

In addition to the four circuits described above for the Mount Nimba landscape, USFS proposes two additional options for ecotourism activities that would integrate well into visitation of the Mount Nimba landscape.

### Kpatawee Falls

As described above, Kpatawee Falls is a relatively well-known tourism site, just outside of the town of Gbarnga, situated about 4 hours from Monrovia and 2.5 hours from Sanniquellie. For visitors to Mount Nimba from Monrovia or traveling to Monrovia after, Kpatawee Falls could serve as a nice stop-off destination along the way. While the lower falls has a cleared area adjacent to the falls, there is currently no lodging, food/restaurant services, or developed interpretive trails at the site. The cleared land below the falls is relatively flat and could serve as a nice camping location. The community association and ecotourism venture that manage the falls area charges a small fee to enter.



**INFRASTRUCTURE INVESTMENT RECOMMENDATIONS:** Development of an interpretive trail between the lower and upper falls would allow for visitors to hike between the two falls, under canopy, which would be much more pleasant than the current hike or drive up the degraded dirt road. Interpretation of the unique cultural and ecological aspects of the area would further enhance this experience.

In addition to the ecodge development currently proposed by the Kpatawee ecotourism association, design and development of tenting platforms and improved restrooms/latrines and waste management capacity would greatly enhance the ecotourism experience at the site.

### Links to circuits in Guinea and Ivory Coast

Given that the Mount Nimba landscape stretches across Guinea, Ivory Coast and Liberia, integrating development of tourism circuits in Liberia with those either existing or planned in neighboring countries would increase the attractiveness of the entire landscape as a regional tourism destination. Ecotourism assets in Guinea, including the habituated chimpanzees of Bossou, the highest peak on the Mount Nimba range, and notable waterfalls and caves across the landscape, would complement proposed circuits in Liberia. Future investments in ecotourism in Liberia should thus seek to integrate with operators and experiences offered across the Mount Nimba landscape in Guinea and Ivory Coast.

## 6.0 INTERIM INFRASTRUCTURE NEEDS

As highlighted above, there is very little in terms of tourism related infrastructure or services across the Mount Nimba landscape. In addition to expanding and diversifying circuit options for visitors, as this report proposes, investing in strategic, relatively basic infrastructure and services will help draw more visitors to the landscape and entice them to stay longer or visit more frequently. A good place to start with this investment would be Blue Lake within ENNR, since it is relatively easy to access and already a primary destination for those visiting the reserve.

According to stakeholders interviewed by the team, there are, on average, 3-5 groups who camp out alongside Blue Lake annually. Amongst these are the Overlander tourists who travel across the region in fully self-contained caravans, bringing all their camping infrastructure with them. Adding basic camping and recreation infrastructure and services at Blue Lake would allow for a greater number of visitors to spend the night or extend their day-use of the site. Blue Lake would be an ideal location for a base camp from which to experience 3 of the 4 proposed circuits.

To enhance the potential of Blue Lake as a base camp and day-use site, USFS proposes the following investments:

- Camping platforms
- Day-use facilities to enhance interaction with Blue Lake
- Planting shade trees
- Restrooms and waste management

An initial sketch of how these investments might look on the landscape are presented on the following page. Recommendations for infrastructure development are further discussed below.

FDA states that there are no restrictions to developing modest camping facilities at Blue Lake (ENNR) or to partnering with a private sector operator to manage these facilities or carry out tours within ENNR, and they voiced openness to exploring further partnership options with the private sector and surrounding communities. Overall, there is already a good base of collaboration across stakeholders in the Mount Nimba landscape; new investments should build on this.

### Camping

Investing in basic camping/tenting infrastructure would go a long way toward making Blue Lake an attractive destination to spend the night, or several nights. Factors to consider in developing camping infrastructure include comfort, flexible use, cost, local materials, privacy, views, impact on landscape and initial desired capacity. Taking these into account, USFS recommends wood platforms with locally sourced roofing material, built around Blue Lake at strategic locations to maximize views and privacy for users. An initial investment of about five platforms would allow for piloting the concept while limiting initial financial commitment. If demand warrants, more platforms could be added in the future. An example of what this might look like at Blue Lake is presented on page 33 Figure A.

### Enhance day-use facilities

A modest investment to increase use by local residents and nearby mining company staff would be to enhance day-use facilities and recreation options around Blue Lake. Currently, most visitors drive up to Blue Lake, spend some time looking out at the vistas, then down at the lake shore, and depart. Providing basic infrastructure and landscaping to allow for getting into or on the water and picnicking would entice visitors to spend more time at the site and visit frequently. As part of an initial suite of investments, USFS recommends a) providing for day-use structures near the water (e.g. shade platforms and/or palaver huts), b) landscaping part of the shoreline to remove overgrown invasive grasses and replace them with native vegetation and c) installing a sand beach to provide water access for a canoe or kayak. At the Blue Lake in Tubmanburg, sand was brought in to build a small beach, which has contributed to developing the location as a popular attraction for locals and weekenders from Monrovia. A presentation of what these investments might look like on the ENNR landscape is presented in page 33 Figure B.

## BLUE LAKE RECREATION SITE: AERIAL VIEW



# Blue Lake Simulations



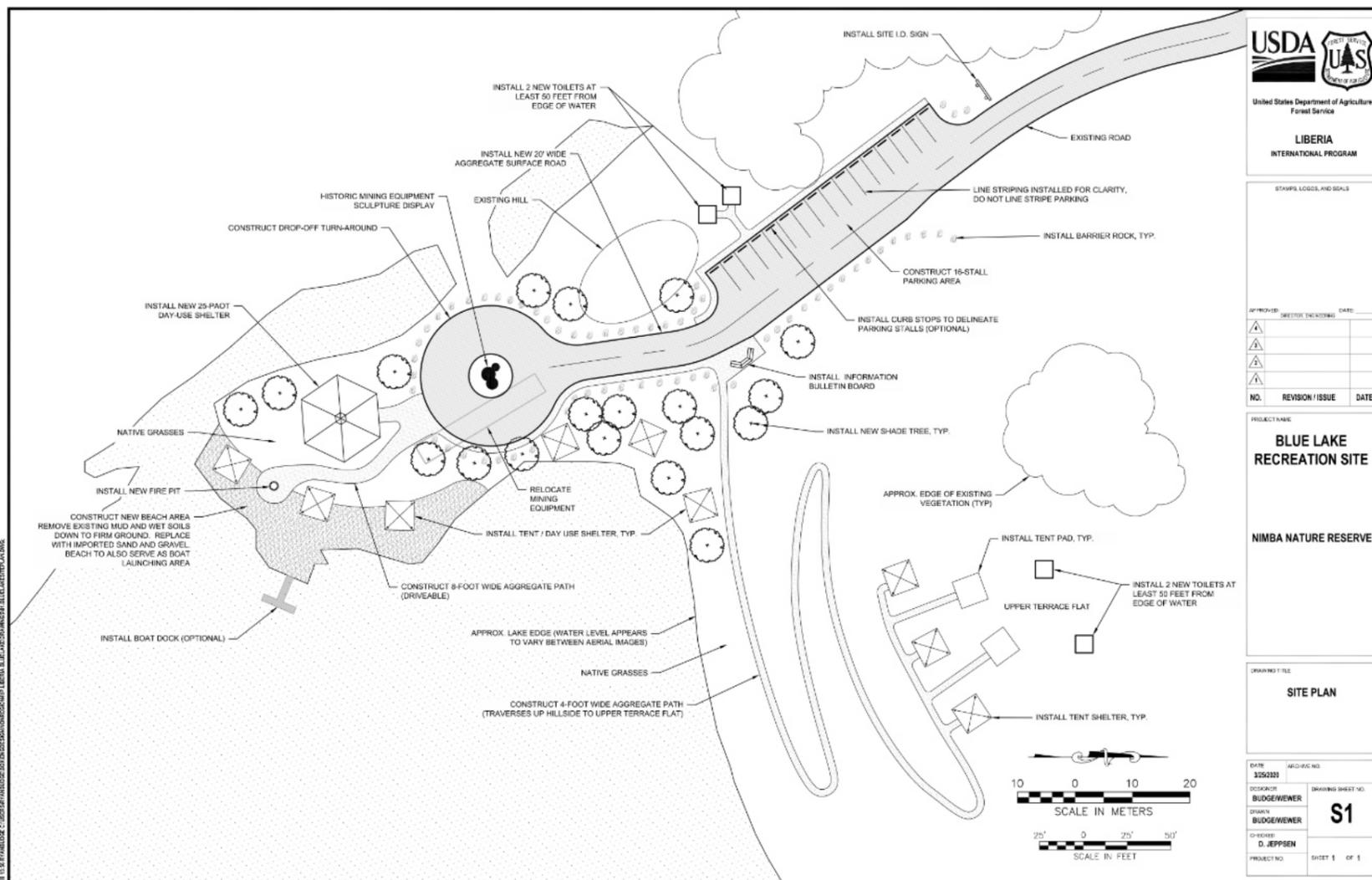
Figure A. Camping platforms



Figure B Enhanced day-use facilities



Figure C Improved facilities and waste management



### Incorporate shade trees

As part of the mining operations that created Blue Lake and surrounding impacts on the landscape, all original trees and vegetation were removed, along with topsoil. Three decades after the mine closed, very little has grown back, leaving the site fully exposed to sun. Planting native shade trees in strategic locations would not only help restore this degraded land but also allow for critical respite from the, at times, sweltering heat.

### Improve facilities and waste management

Planning for waste management will need to be part of any plan to enhance tourism at Blue Lake and within ENNR, both for the comfort of visitors and to reduce negative impacts on the landscape. Given the remote, undeveloped context, integrating restroom or toilet facilities that are effective, yet require little regular maintenance, is key. There are several relevant examples in use across US Forest Service and National Park lands that could be adapted for use at the Blue Lake site. Page 33 Figure C provides a schematic representation for how this might be incorporated into other infrastructure investments.



## APPENDIX I. US FOREST SERVICE STANDARDS FOR HIKING TRAILS

| Designed Use<br>Hiker/Pedestrian |                                 | Trail Class 1   | Trail Class 2  | Trail Class 3   | Trail Class 4   | Trail Class 5  |
|----------------------------------|---------------------------------|---|--|---|---|--|
| Design<br>Tread<br>Width         | Wilderness<br>(Single Lane)     | 0"-12"  | 6"-18"   | 12"-24"<br>Exception: may be 36"-48" on steep side slopes   | 18"-24"<br>Exception: may be 36"-48" on steep side  | Not Applicable   |
|                                  | Non-Wilderness<br>(Single Lane) | 0"-12"  | 6"-18"   | 18"-36"   | 24"-60"   | 36"-72"  |
|                                  | Non-Wilderness<br>(Double Lane) | 36"   | 36"  | 36"-60"   | 48"-72"   | 72"-120"   |
|                                  | Structures                      | 18"   | 18"  | 18"   | 36"   | 36"  |
| Design<br>Surface                | Type                            | Native ungraded<br>May be continuously rough            | Native ungraded<br>May be continuously rough                     | Native, with some on-site borrow or imported material where needed for stabilization and occasional grading<br>Intermittently rough | Native with improved sections of borrow or imported material and routine grading<br><br>Minor roughness | Likely imported material, and routine grading<br><br>Uniform, firm, and stable |
|                                  | Protrusions                     | <24"<br>Likely, common and continuous                   | <6"<br>May be common and continuous                              | <3"<br>May be common and continuous   | <3"<br>Uncommon and not continuous  | No protrusions   |
|                                  | Obstacles                       | 24"   | 14"  | 10"   | 8"  | No obstacles   |
| Design<br>Grade                  | Target Grade                    | 5%-25%  | 5%-18%   | 3%-12%  | 2%-10%  | 2%-5%  |
|                                  | Short Pitch Max                 | 40%   | 35%  | 25%   | 15%   | 5%   |
|                                  | Max Pitch Density               | 20%-40% of trail  | 20%-30% of trail   | 10%-20% of trail  | 5%-20% of trail   | 0%-5% of trail   |
| Design<br>Cross<br>Slope         | Target Cross Slope              | Natural Side Slope                                      | 5%-20%   | 5%-10%  | 3%-7%   | 2%-3%<br>(or crowned)  |
|                                  | Maximum Cross Slope             | Natural Side Slope                                      | 25%  | 15%   | 10%   | 3%   |
| Design<br>Clearing               | Height                          | 6'  | 6'-7'  | 7'-8'   | 8'-10'  | 8'-10'   |
|                                  | Width                           | ≥24"<br>Some vegetation may encroach into clearing area | 24"-48"<br>Some light vegetation may encroach into clearing area | 36"-60"   | 48"-72"   | 60"-72"  |
|                                  | Shoulder Clearance              | 3"-6"   | 6"-12"   | 12"-18"   | 12"-18"   | 12"-24"  |
| Design<br>Turn                   | Radius                          | No minimum  | 2'-3'  | 3'-6'   | 4'-8'   | 6'-8'  |

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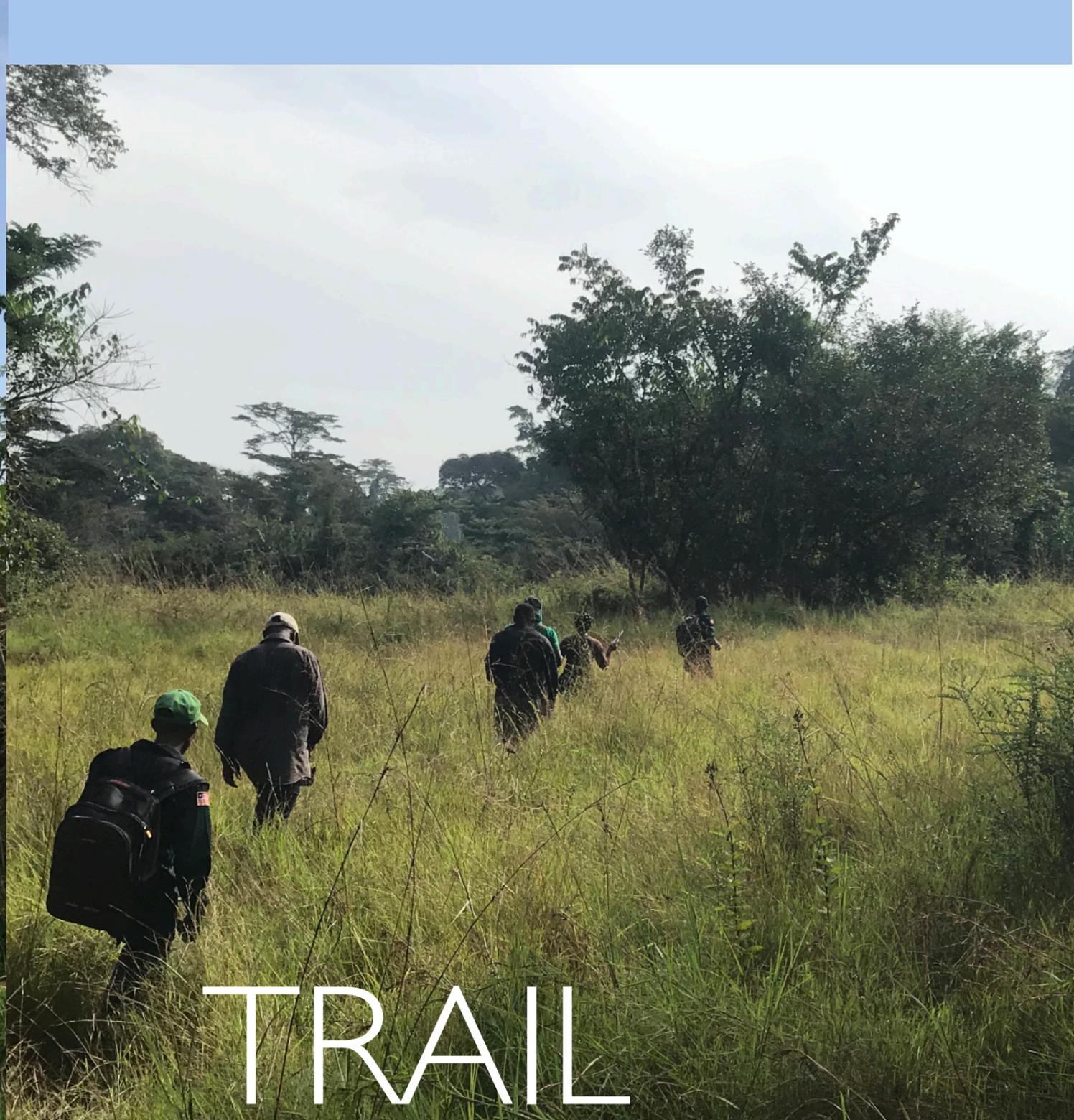
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# TRAIL

# GUIDE

# Tri-Country Summit

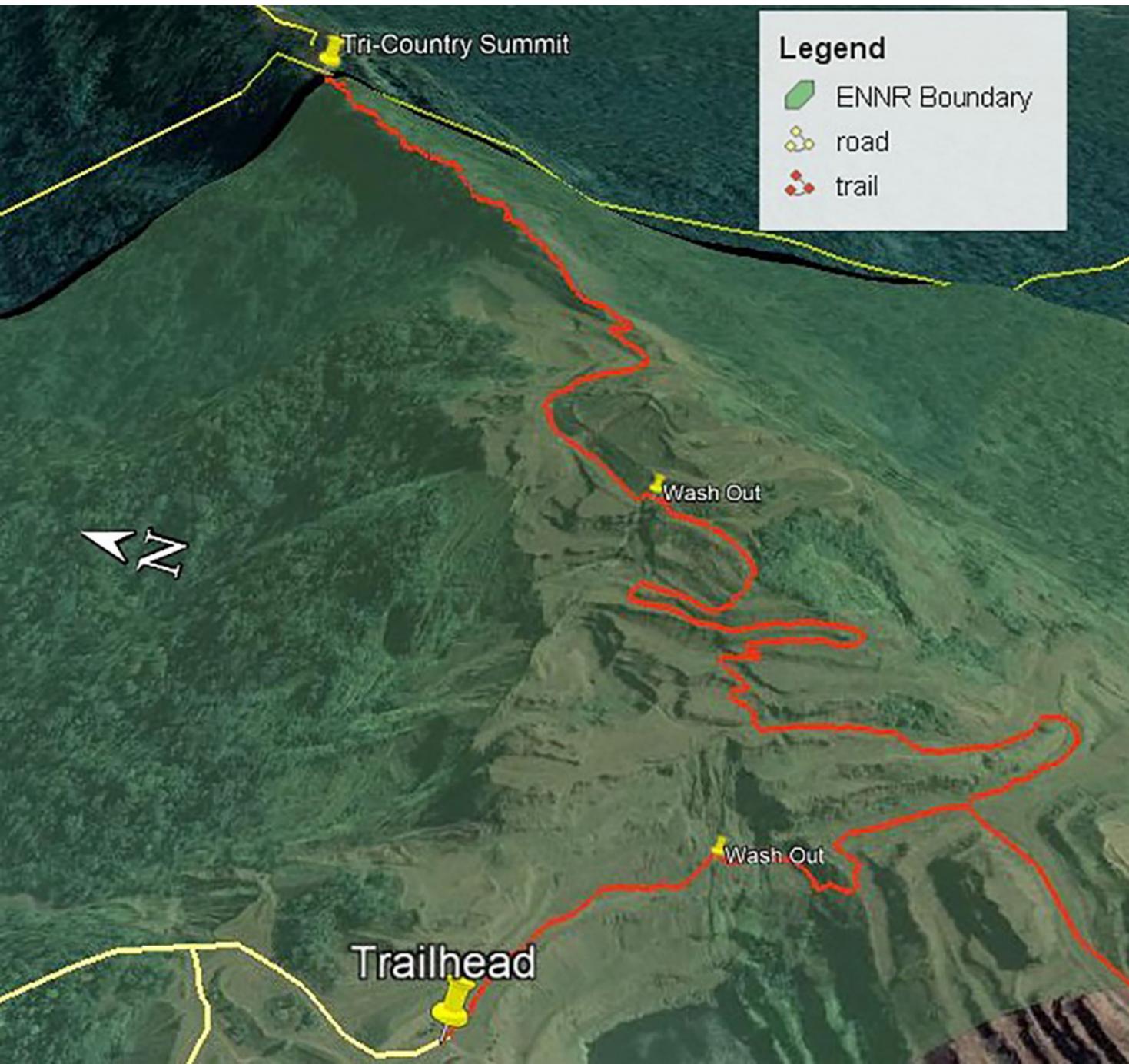
## TRAIL DISTANCE

6 miles round trip from trailhead near Blue Lake to the Tri-Country Summit and back

## TRAIL ELEVATION GAIN

1200 feet

### TRI-COUNTRY SUMMIT TRAIL



## TRAIL DESCRIPTION

This trail leaves from a bench above Blue Lake and traverses above the lake on an old mining terrace. The trail encounters a washed-out eroded area that contains a steep (30%) grade to cross the wash out. After the washout the trail continues to use old terraces from the mining operation. When using the terraces, the trail is on a sustainable grade (3-5%). Between terraces the trail uses very steep climbs to gain the next terrace. These climbs are very steep (30-45%) and eroded. Some of the climbs have steps carved into the hard soil to assist hikers. At one point another loose washed out area is reached and must be traversed. This crossing is not necessarily dangerous, but it does feel exposed and could be difficult for some visitors to cross. Around mile 2.5 the trail leaves the old mining operation behind and travels across the main ridge of Mount Nimba. This ridgeline is undulating, and the trail climbs several steep hills and high points in this area. The ridgeline has been burned by wildfires and is open and grassy with interspersed groves of trees. This is the most scenic portion of the hike as you are no longer in the impacted mining area and the ridgeline provides great views. After traversing the ridge, the trail reaches its end at the Tri-Country boundary of Liberia, Guinea and Ivory Coast. There is an "ENNR" boundary sign on top of the ridge at this point marking the end of the trail. This area provides a pleasant place to rest and eat under a grove of trees. Views along the main ridgeline into Guinea and the taller peaks of Mount Nimba are visible from this point as well.

# Blue Lake Overlook

## TRAIL DESCRIPTION

Several interesting hikes and trails are accessed by the Radio Tower Road outside of the town of Yekepa. This road is one of the two primary roads that were used when the ENNR was being actively mined by LAMCO and much of the road remains paved.

The first short hike from the road is to an old picnic spot/overlook that LAMCO built. The hike to the picnic spot uses the old and heavily overgrown road. The hike is short and ends at the old cement foundation of the picnic area. The area does provide an interesting view of the ridgeline of Mount Nimba and of the valleys below.

At mile 9.5 from Yekepa the trail/road heads north to the radio tower and a trail heads south and follows a major ridgeline. The radio tower route is used to drive fuel to the radio generators. The road is very steep and loose but provides a way to hike to the radio tower. Hikers can see into Guinea and Ivory Coast from the radio tower. While the views are interesting, the constant noise of the generators detracts from the area. The trail that heads south down the ridge follows an old overgrown mining track that stays on the crest of the ridge. The ridge sits high above the surrounding lowlands. Vegetation along the ridge is tall grass which allows for great views into the surrounding forest below the ridgeline.

FDA rangers said that the ridge trail continues and could be used to connect with the Yah Waterfall and trail.

At 10 miles from Yekepa the Blue Lake Connector Trail leaves the main road and can be used to hike between the Radio Tower Road and the Blue Lake Road.

At 10.5 miles from Yekepa a trail leaves the main road and travels along another old mining track to an overlook of Blue Lake. The trail follows along the flat mining track through the slowly recovering mine. Giant contours and benches are seen throughout this area as a result of past mining operations. The overlook is located in a grassy spot high above Blue Lake. Views into Guinea and Ivory Coast are found here. Blue Lake sits 1300 feet straight below the overlook providing for a very dramatic viewpoint.

## TRAIL DISTANCES

Picnic Area Trail- .4 miles round trip of hiking on overgrown road to the picnic area

Radio Tower Trail- .4 miles round trip of hiking to Radio Tower Overlook

Ridge Trail- 2 miles round trip of hiking on the ridge trail

Blue Lake Connector Trail- 2.6 miles hike to Blue Lake

Blue Lake Overlook- 2 miles round trip of hiking to the Blue Lake Overlook

## TRAIL ELEVATION GAIN

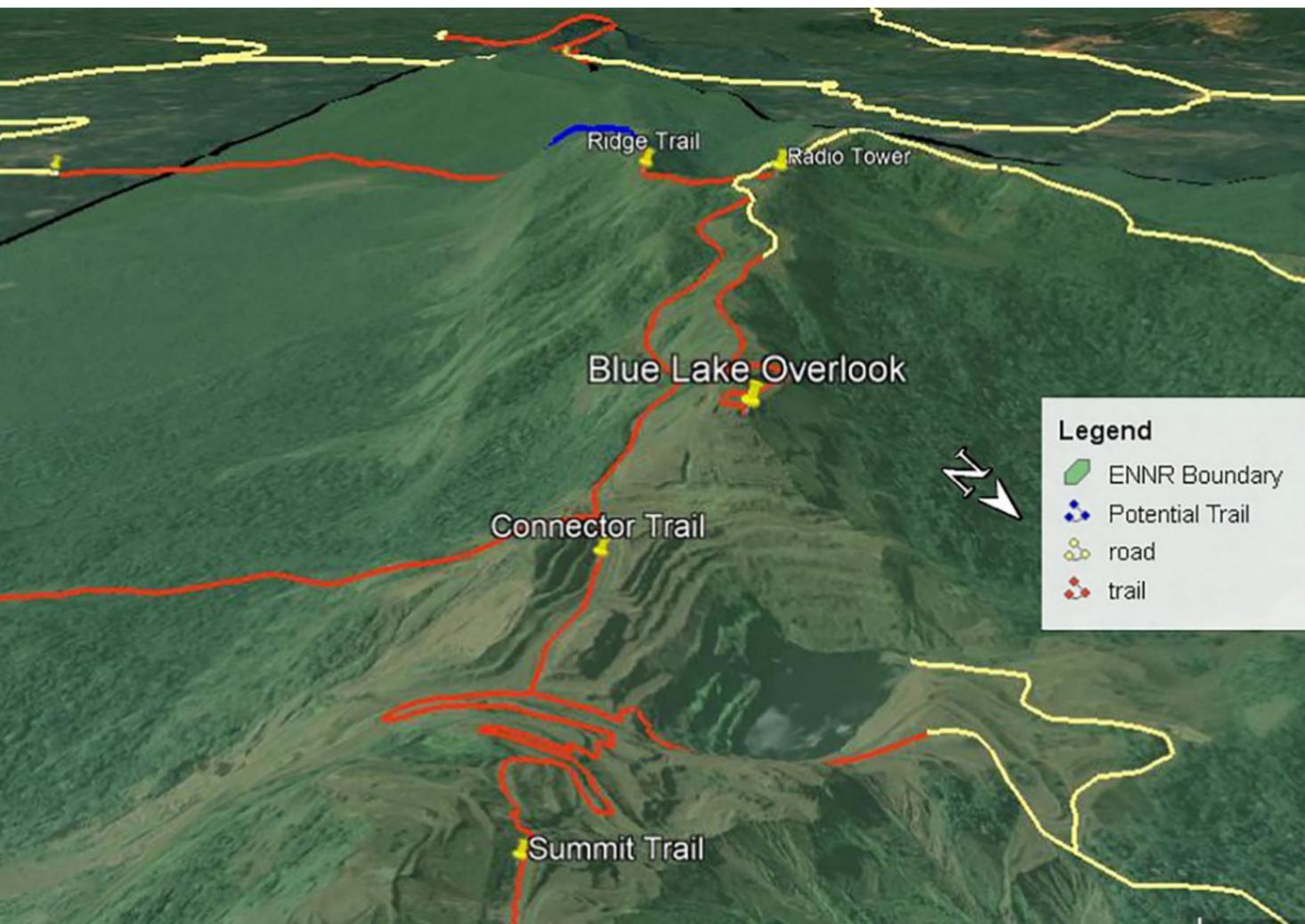
Picnic Area Trail- 40 Feet

Radio Tower Trail- 120 feet

Ridgeline Trail- 200 Feet

Blue Lake Connector Trail- 1300 feet

## BLUE LAKE OVERLOOK TRAIL



# Yah Waterfall

## TRAIL DISTANCE

Waterfall Trail - 6 miles hiking round trip from the village of Geipa to the Yah Waterfall

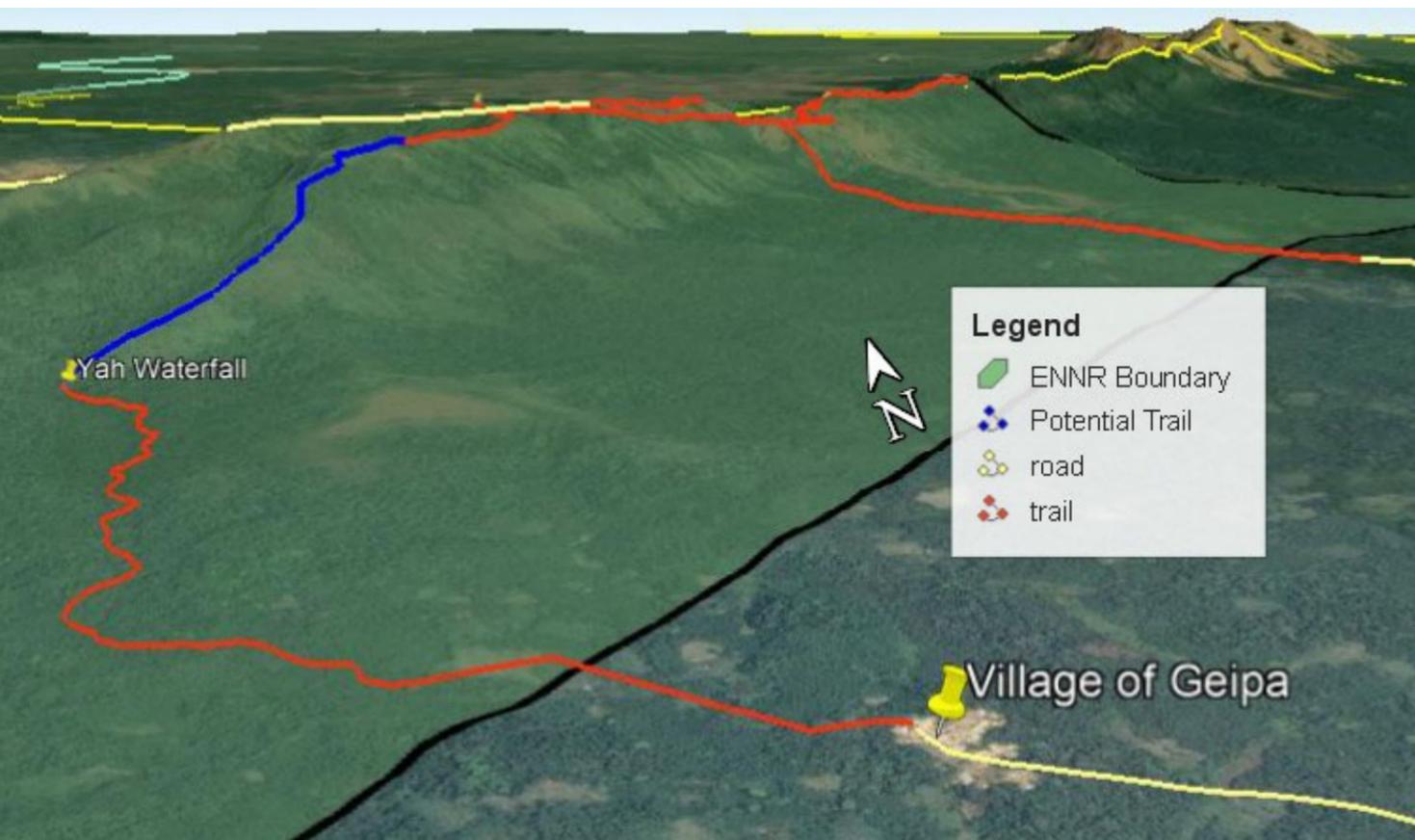
Yah Waterfall to Radio Tower Road Trail - 3 miles one way

## TRAIL ELEVATION GAIN

Waterfall Trail - 700 feet

Waterfall to Radio Tower Road - 2,200 feet

## YAH WATERFALL TRAIL



## TRAIL DESCRIPTION

The Yah Waterfall Trail starts at the small village of Geipa, which is also one of three FDA Offices for ENNR. The trail heads out the north end of the village and quickly crosses a shallow spot on the Yah River. Hikers can wade across or traverse a large log just downstream of the crossing. The log can be very slippery after rains.

After crossing the river, the trail traverses farm fields for several miles. The trail grades through this area are generally low (less than 5%) and there is no need for rerouting or drainage structures. Views of ridge lines with primary forests are seen from the trail in this area.

After the trail leaves the farming areas it quickly enters the primary forest and the ENNR. The first portion of the trail in the ENNR follows an old reclaimed logging road on good grades. The logging road has become overgrown to the point that most visitors would not recognize it as a logging road. After another hour or so of hiking, the trail leaves any signs of the old road and becomes a hard to follow single-track trail that requires occasional clearing of forest vegetation. Several small streams are crossed by wading or by crossing slippery downed logs. The trail then generally follows the course of the Yah River to where it drops off the main escarpment of the Nimba Ridge at the Yah Waterfall. Trail grades in this area are also relatively flat (3-5%) with several short steeper portions that climb up to benches along the river. Several ranger camps are also crossed along the way that provide good resting places with built bamboo benches. As the trail crosses the stream, it provides some diversity of views as you can see up and down the river through the forest openings. Large, interesting, old growth trees of various species occur along the trail.

The last ¼ mile of trail is the most difficult portion as it winds around slippery boulders in and out of the stream course.

The waterfall itself is impressive and with a height of 100 feet or more. The area around the main falls has numerous smaller falls and seeps down a very vegetated rock face and provides a scenic ending destination for the trail.

From the waterfall it is possible to climb the ridge to the northeast and eventually connect with the Radio Tower Road high on the Mount Nimba ridgeline. This portion of the route was not inventoried but was discussed with ENNR rangers. The trail would need to be designed and constructed before it was usable for tourism.

# Blei Community Forest

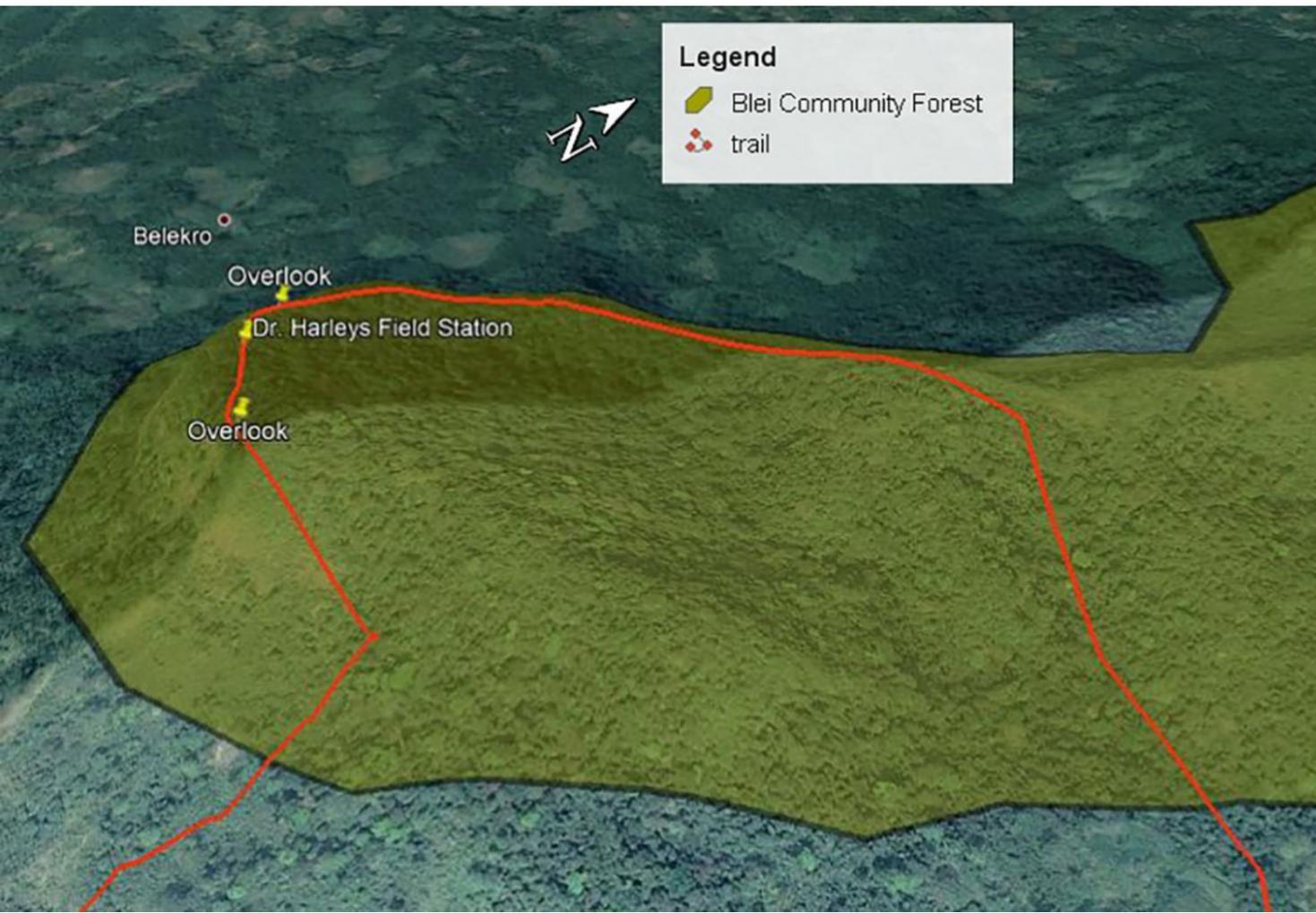
## TRAIL DISTANCE

Blei Ridge Trail- 7.7 miles hiking from the village of Gbobayee to Zortarpa on the trail/road.

## TRAIL ELEVATION GAIN

Blei Ridge Trail- 1500 feet

## BLEI COMMUNITY FOREST



## TRAIL DESCRIPTION

The Blei Ridge trail begins at the village of Gbobayee and traverses through farm fields for 2.4 miles to the boundary of the Blei Community Forest. Trail grades are relatively flat in this portion of trail, until it gets near the community forest boundary, where it starts to climb steeply.

After crossing into the community forest, the trail climbs very steeply through primary forest to the top of the ridgeline. The trail is more of a route in this area and is extremely steep (30-50%). The route is so steep in places that vines have been tied to trees by the rangers to assist in climbing up the ridge. During the rainy season this portion of trail is extremely slippery and difficult to ascend.

After arriving at the crest of the ridge, the trail traverses along the gradual ridgeline under huge old growth trees in primary forest. This portion of the trail is enjoyable as the walking is not difficult and the trees are impressively large. After following the ridge for 0.5 miles, the trail passes by an unexpected site in the dense rainforest, the ruins of a stone house. This structure was the field station of Dr. George Way Harley, a well-know missionary, botanist and anthropologist, who built a hospital in Ganta, Liberia. These ruins have interpretive value as they are associated with an important historical figure. The area around the ruins also contains several high points along the ridge that provide for excellent views of the surrounding villages and forests.

The trail continues along the ridge for another mile before it begins a steep descent back down the ridgeline. The descent contains several steep sections before it reaches the base of the ridge and the community forest boundary. After the boundary, the trail enters secondary forest and farmlands until it reaches the village of Konah after .5 miles. At the village of Konah the trail joins the road to Zortarpa, which leads 3 miles back to the damaged bridge and the village of Zortarpa.

# Southern ENNR Trails

## TRAIL DISTANCE

ENNR Patrol Trail - 8 miles round trip on the road and patrol trail

## TRAIL ELEVATION GAIN

ENNR Patrol Trail- 420 feet

## TRAIL DESCRIPTION

Several trails/routes are located in the far southern portion of the ENNR adjacent to the Blei CF. These trails are accessed from the village of Zortapa. The road leaves Zortapa and at mile 0.5 it reaches a river and old bridge. This bridge is not currently sound enough to drive a full-sized vehicle over, but motorcycles and hikers can easily get over. There is not another crossing of the river in the near vicinity and the river is large enough to preclude easily wading it. After the bridge crossing the road becomes much more overgrown with vegetation and has more of an appearance of a trail than a road. The grades are flat in this portion of the road/trail as it traverses through secondary forest and agricultural fields. At mile 3 a trail leaves and heads to the village of Konah. As the road/trail continues, highlands begin to rise on both sides of the trail. To the hikers' left (south) is the high ridgeline that is the primary geographic feature of the Blei Community Forest and to the hikers' right (north) is the beginning of the Mount Nimba ridgeline; both of these features are covered in primary forests that are visible from the road/trail. In the dry season many of the trees in the primary forest turn red, which provides a diversity of color in the views.

At mile 3.5 the road/trail crosses a small clear stream flowing out of the Community Forest, known locally as Cold Water stream. The road/trail becomes the boundary between the Blei Community Forest and the ENNR in this area. Shortly past Cold Water stream, a patrol trail leaves the road and heads north into the ENNR. The trail quickly passes a lowland swamp that is difficult to pass through without sinking deep in mud. The trail then begins climbing the main ridgeline at a steeper grade (20-25%). At mile 4.1 the trail passes a junction with another patrol trail that continues to climb the main ridge. The southern patrol trail contours around the ridge and drops into a canyon that has interesting rock outcrops and a small stream. The trail heads down this canyon, crossing the small stream several times, and eventually climbs out of the canyon and back to the main road/trail.

## BLEI COMMUNITY FOREST AND SOUTHERN ENNR TRAILS

