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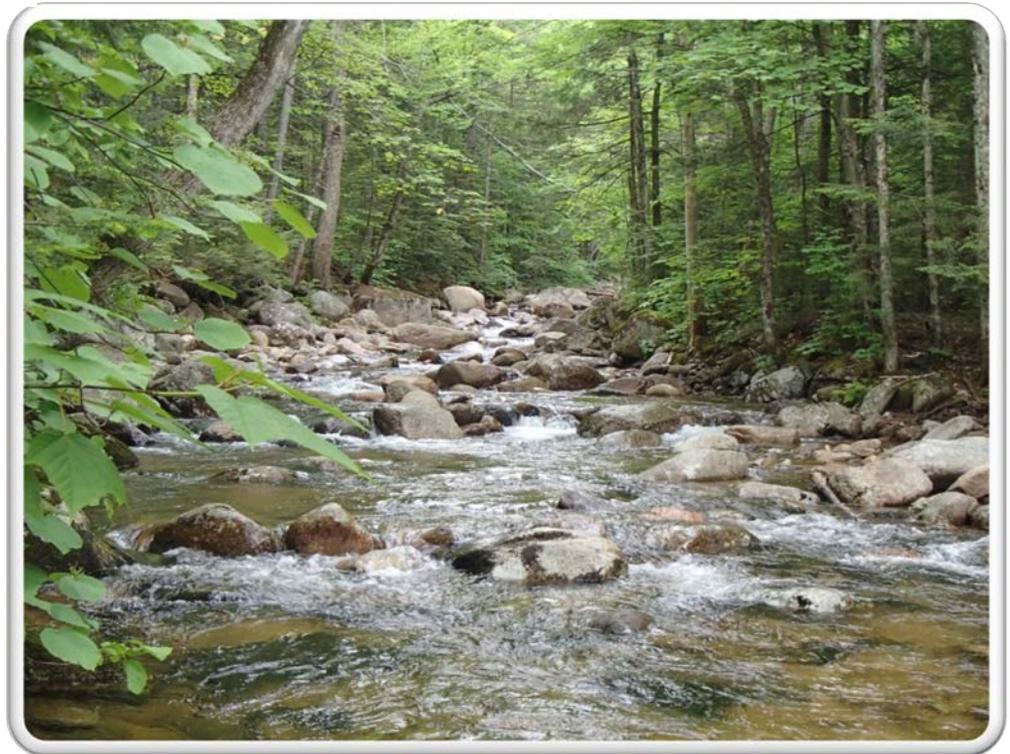


Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project

Towns of Thornton, Livermore, and
Waterville Valley, Grafton County, NH
Environmental Assessment

Pemigewasset Ranger District

April 2016



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Cover photo: Eastman Brook adjacent to Tripoli Road, White Mountain National Forest, New Hampshire (WMNF photo).

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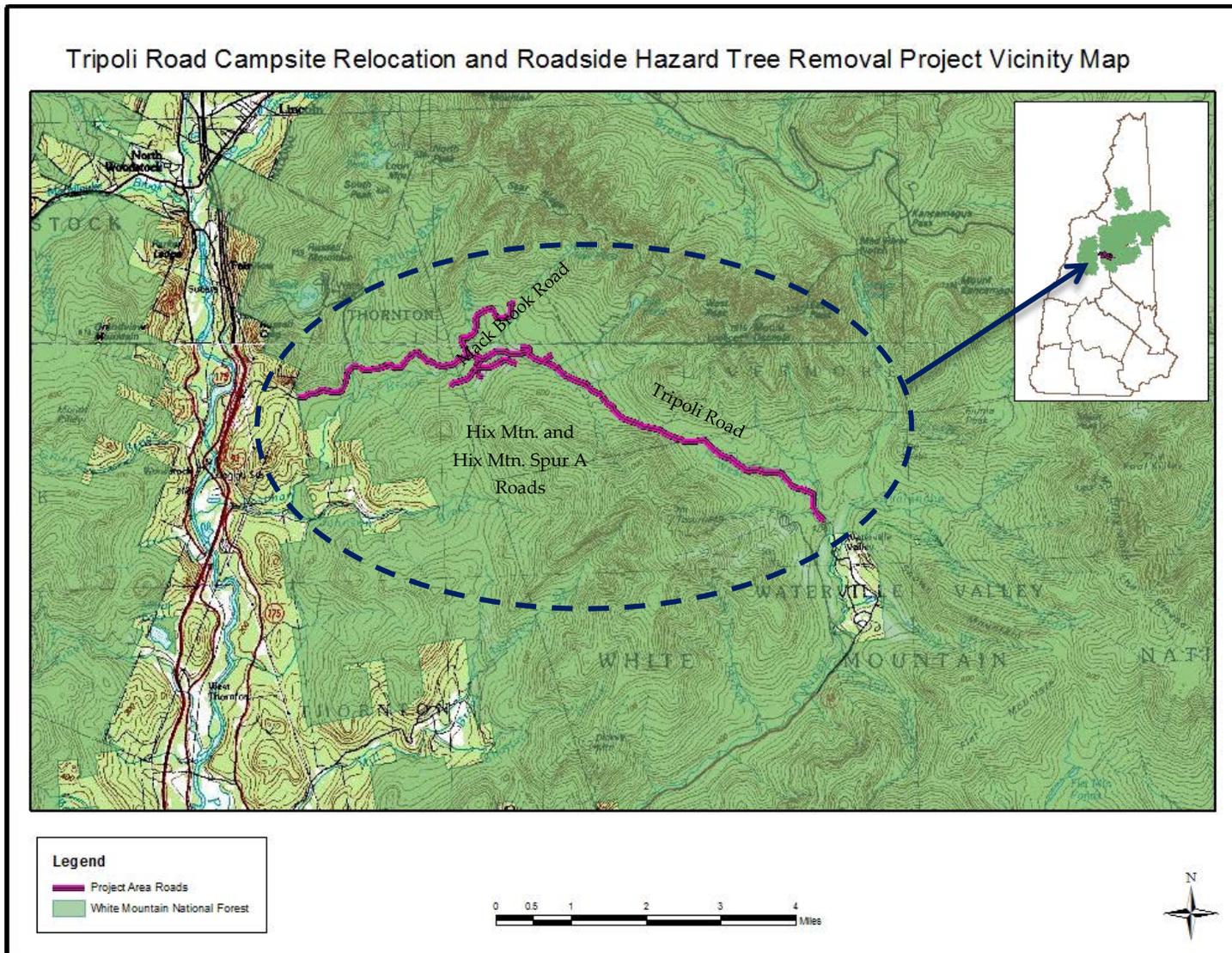


Figure 1. Tripoli Road Campground is located in the towns of Thornton, Livermore, and Waterville Valley, New Hampshire.

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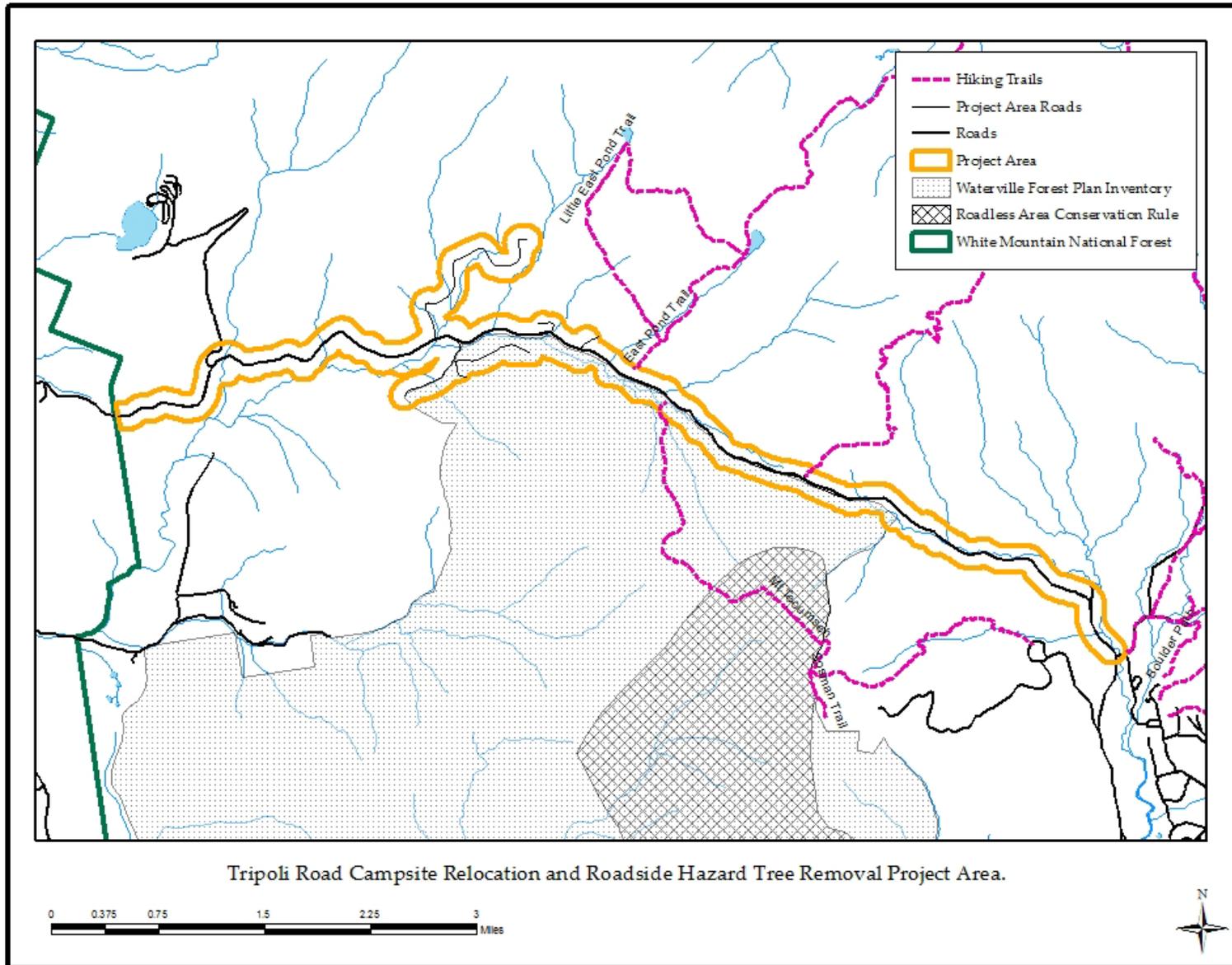


Figure 2. The Project Area includes Tripoli, Mack Brook, Hix Mountain, Hix Mountain Spur A Roads.

Disclaimer: The Forest Service uses the most current and complete data available. The accuracy of GIS and other data products (e.g., tables and figures) may vary. These data may be: developed from sources differing in accuracy, accurate only at certain scales, based on modeling, interpretation, or estimates, incomplete while being created or revised, etc. Using GIS or other products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification.

Chapter 1 – Proposed Action

Summary

The Pemigewasset Ranger District of the White Mountain National Forest (WMNF) is proposing a project that maintains overnight recreational opportunities in the Tripoli Road area while addressing natural and cultural resources concerns, enhancing public safety and improving management of the Tripoli Road Campground. Roadside camping on Tripoli Road and its spur roads is considered developed camping and is managed by a concessionaire as a campground under a Special Use Permit (SUP). This project would relocate campsites off Tripoli Road onto two of the spur roads.

The Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project (Tripoli Road Project) is located on the Tripoli (FR 30), Mack Brook (FR 609), Hix Mountain (FR 31) and Hix Mountain Spur A (FR 31A) Roads in the towns of Livermore, Thornton and Waterville Valley, Grafton County, New Hampshire (Figure 1). The Project Area was defined by placing a 500 foot buffer around these roads and existing and proposed campsites, and totals approximately 1,400 acres (Figure 2). This document provides the details of an environmental analysis of the Proposed Action as well as No Action, which were analyzed for this project.

This document, based on and tiered to the 2005 White Mountain National Forest Land and Resource Management Plan (Forest Plan) Final Environmental Impact Statement (FEIS), analyzes the effects from implementation of the proposed Tripoli Road Project to physical, biological, and social resources. Chapters 1 and 2 of this document provide background information, public involvement, issues, and a detailed description of the Proposed Action and other alternatives considered for the project. The effects of alternatives analyzed in detail, including the Proposed Action, on water, soils, recreation, heritage, and wildlife habitat, including Federal Threatened, Endangered, and Proposed (TEP) species (TEP), Regional Forester Sensitive Species (RFSS) resources are described in Chapter 3.

Forest Plan goals, objectives, standards and guidelines provide resource management direction for the White Mountain National Forest (USDA-FS 2005a). Applicable Forest Plan goals, objectives and standards and guidelines were used to design the Tripoli Road Project. The Project would be implemented over the next 10 years using an adaptive management approach to achieve the desired

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resource and visitor experience conditions. A detailed description of the proposed action is provided in Chapter 2. In general the project proposes to:

- close and naturalize all campsites along Tripoli and Hix Mountain Roads, three on Mack Brook Road and one on Hix Mountain Spur A Road;
- improve seven existing campsites and construct 12 new campsites on Mack Brook Road and improve one existing campsite and construct 18 new campsites on Hix Mountain Spur A Road;
- install up to ten vault toilets, including one at the welcome station if warranted;
- install wildlife-proof trash receptacles in up to nine locations;
- close and naturalize the existing welcome station site and relocate the facility to the former Civilian Conservation Corps (CCC) camp area to include a driveway, short-term parking, registration building, and an information kiosk;
- improve Mack Brook and Hix Mountain Spur A roads, and a portion of Hix Mountain Road to a Forest Service (FS) maintenance level 3, single-lane, gravel roads with turnouts;
- remove potentially hazardous trees approximately 75 feet on either side of Tripoli, Mack Brook, Hix Mountain, and Hix Mountain Spur A Roads, around campsites, toilets, and the welcome station;
- develop an access trail to Eastman Brook if needed;
- replace two undersized culverts.

Tripoli Road

Tripoli Road was partially constructed from the abandoned bed of the Woodstock and Thornton Gore Railroad in 1933-34 by workers of the Civilian Conservation Corps (CCC) who resided at the Tripoli and Campton CCC Camps. The construction of Tripoli Road created an important east/west passage for vehicles between Woodstock and Waterville Valley.

Today, Tripoli Road is an eleven-mile stretch of partly paved and mostly gravel road connecting Route 49 in Waterville Valley to Interstate 93 at exit 31 in Thornton, NH. Eight miles of the road pass through National Forest lands. From approximately mid-May through November, Tripoli Road is used as a through road providing a scenic drive, a shortcut for commuters, and access to recreation opportunities (Figure 3).

Recreational opportunities along Tripoli Road include hunting, roadside camping, hiking (three trailheads) and camping (two campgrounds). While

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weekdays can be relatively quiet along Tripoli Road, traffic on weekends and holidays can be very heavy and the road can become congested with traffic.



Figure 3. Tripoli Road on a quiet mid-week day in June.

Cultural Heritage

Historic archeological sites along Tripoli Road provide a glimpse into the settlement and use of the area during the mid-1800s to early 1900s. Thornton Gore was a dispersed farmstead community in northern Thornton, NH, located along the slopes and within the valley between Barron, Hix, Russell and Signal Ridge Mountains, surrounding the confluence of Eastman and Talford Brooks. The village of Thornton Gore was active between 1804 and 1900 and consisted of twenty-six residential farmsteads, a school, a church, a grist mill, and a cemetery. The history of this community is still evident in the many cellar holes, apple orchards, cemeteries, and other artifacts. A cultural resource inventory and report for Thornton Gore, including the project area, was recently completed. Based on the data presented in this report, thirty sites associated with the village of Thornton Gore were determined eligible for listing in the National Register of Historic Places as the Thornton Gore Historic Archaeological District.

The area transitioned from a farming community to logging in the late 1800s. Thornton Gore was intensively logged between 1909 and 1913. In 1909, the Woodstock and Thornton Gore Railroad spur was constructed to support logging operations. A portion of Tripoli Road is constructed on the old rail bed. Logging operations ceased in 1913 after a large sawmill and lumber yard in Woodstock, NH burned down.

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During the Great Depression of the 1930s, the Tripoli CCC workmen's camp was constructed over the site of the easternmost farmstead. The camp was used as a staging area for workers constructing the eastern portion of Tripoli Road.

History of Roadside Camping

Tripoli Road has been a popular destination for roadside camping for decades. Initially, camping was free to the public and there was very little management. During the 1960s and 1970s, the Forest Service (FS) encouraged camping along Tripoli Road to mitigate the social and resource impacts caused by people camping along the Kancamagus Highway and other busy thoroughfares. In the 1970s, roadside camping along many of these thoroughfares was closed, displacing many campers seeking a non-developed campground experience to Tripoli Road.

Since 1992, the FS has managed camping along Tripoli Road under a Special Use Permit (SUP) issued to a concessionaire to improve service, management, and public safety, and reduce impacts to resources along Tripoli Road. The area covered by the SUP includes Tripoli Road between the junction of Russell Pond Campground Road and Osceola Vista Campground Road. The concessionaire provides oversight, maintenance, portable toilets (in two locations), trash disposal (dumpsters in one location), and information to campers. The current SUP was issued in 2013 and expires at the end of 2017.

Current Use, Campsites and Amenities

The Forest Plan defines "roadside camping" as "developed" camping. The campsites currently available along Tripoli Road and its spur roads are somewhat unique in their development level when compared to other existing developed campgrounds found on the Forest. The sites are more primitive, user created, and lacking design. However, due to the way these campsites are managed – under a permitted concessionaire agreement with limited amenities – The campground is described in the WMNF database as having a lower development level compared to campgrounds such as Russell Pond. Camping permits are available from Memorial Day through Columbus Day. Campers pay the concessionaire a per-vehicle fee at a welcome station located in a trailer near the Russell Pond Campground Road. Fees vary depending on whether it is a weekday (Sunday – Thursday), weekend (Friday – Saturday), or three-day holiday weekend. A percentage of the revenue is returned to the WMNF and is used to maintain and improve recreational infrastructure associated with the permit under the authority of the Granger-Thye Act (16 U.S.C. 580(d)).

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Campers are required to use established sites along Tripoli Road or, on busier weekends, along Mack Brook Road or a small portion of Hix Mountain and its spur roads. Campers are prohibited from using some previously impacted areas that have been closed and restored. Campsites aren't formally designated or assigned, most campers park along Tripoli Road, and the area essentially absorbs as many campers as arrive on a given day.

The easy access from Interstate 93 and low-level of restrictions and development has resulted in Tripoli Road receiving high levels of use. Concessionaire data from the past few years indicates that on average 212 permits are sold on holiday weekends, 100 permits are sold on non-holiday weekends, and 14 permits are sold during weekdays. The highest use occurs during July and August when 150 or more permits are sold on weekends, depending on weather. During the busiest weekends 251 to 275 permits are sold. Assuming an average of 2.5 people per vehicle, there are approximately 530 people camping along Tripoli Road during holiday weekends and 250 people camping during non-holiday weekends. During the busiest weekends, approximately 625 to 687 people camp along Tripoli Road. Based on campground revenues, approximately 6300 campers stayed along Tripoli Road in 2014.

The concessioner, local and FS law enforcement officers and Forest Protection Officers patrol the area on a regular basis. They interact with the public to encourage proper food storage and garbage disposal for camping in bear country and behavior that contributes to a safe camping experience.

In the summer of 2011, WMNF staff completed a census of all campsites within the Tripoli Road camping area. They identified 135 user-created campsites open for use and accessible from Tripoli Road and its spur roads (primarily Hix Mountain, or Mack Brook Roads). At each campsite, staff recorded data including: the latitude and longitude of each fire ring using a handheld Global Position System (GPS), an estimate of the area compacted, whether the site was within 100 feet of water (perennial or intermittent), number of trees with human-caused damaged (excessively peeled birch bark, hatchet or axe damage, substantial carving or other damage), estimated distance between the campsite and parking, estimated the steepest slope on the trail accessing the site, approximate number of parking spaces (where possible), and whether there was off-road parking.

Seventy-one of the 135 campsites are within 100 feet of water and 54 are within 100 feet of a perennial streams. Many of the most popular sites are on the banks

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of Eastman Brook. The user created sites continue to expand and merge with one another, increasing the amount of soil compaction and other resource damage. Many of the trails accessing the sites are steep and eroding with slopes ranging from zero to 70 % with an average slope of 22%. Vegetation along Eastman Brook has been trampled and many areas are devoid of undergrowth and hardened from high use and long term soil compaction.

There is no reliable way to estimate the total capacity (how many campers can stay in one night) for the 135 sites. There is no set limit to the number of people who camp at each site, and, since most of these sites are accessed from roadside parking, it's impossible to base capacity on the number of parking spaces for each site.

Campground amenities include:

- portable toilets at the welcome station and the CCC camp for campers and at one trailhead primarily for hikers;
- wildlife-resistant dumpsters at one location; and
- campfire rings constructed of native materials.

Mack Brook Road is a single-lane, gravel road that is approximately 1.5 miles long that is categorized as a FS maintenance level 2 road. Maintenance level 2 is assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or specialized uses. Hix Mountain Road is a single-lane gravel road that is open to the public for roadside camping on busy summer weekends. The road maintenance level 2 and is only open to the public for the first 0.63 miles. Hix Mountain Spur A Road is a 0.6 mile long, single-lane, gravel road that is currently closed to the public and categorized as a FS maintenance level 1 road. Maintenance level 1 is assigned to intermittent service roads during the time they are closed to vehicular traffic.

Tripoli Road is one of the most problematic roads on the Pemigewasset Ranger District relative to clearing blowdowns and removing hazard trees. The Concessionaire and Forest staff are regularly called to clear the road of new blowdowns and they make an effort to remove hazard trees adjacent to the road corridor and near campsites. However, hazard tree removal is often piecemeal, rather than a concerted effort to address the issue in a broader, more pro-active manner.

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Multi-use in the Tripoli Road Area

The WMNF is a multiple use forest, and Tripoli Road is an important area for timber management. Most of the roads in the Tripoli area, including Tripoli Road, were originally constructed for timber management, and they are important components of the Forest transportation system for public and administrative use. For example, hunters use the area to hunt for moose, white-tailed deer, and black bear. The Tripoli East Vegetation Management Project was implemented over ten years ago, and used Mack Brook, Hix Mountain, Hix Mountain Spur A, and Tripoli Roads. Many of the log landings along these roads are also popular campsites. These roads and landings will continue to be used for future vegetation and wildlife management projects and other forest activities in addition to recreational use.

Purpose of and Need for this Project

The overarching purpose of this project is to meet WMNF Land and Resource Management Plan (Forest Plan; USDA-FS 2005a) goals and objectives and desired conditions for multiple resources and recreational use within the Tripoli Road area. Specifically, the purpose of this project is to: 1) restore and protect natural and cultural resources, 2) improve management of a high-use, overnight recreational area (including nuisance bear management), 3) provide a sustainable, quality recreational experience from a resource and management perspective, and 4) address public safety concerns. This project is needed because 1) user-created sites are having an unacceptable impact on natural and cultural resources, 2) management of the area including enforcement of laws and regulations is extremely difficult (including proper food storage in bear country), 3) management and resource protection under the current campground configuration is not sustainable, 4) two undersized culverts are impacting resources, and 5) there are a variety of public, partner, and staff safety concerns that detract from the recreational experience of area users.

Water and Soil Resources

The WMNF strives to protect, restore, or improve riparian and aquatic habitats to benefit riparian dependent resources and values. Since surface waters on the WMNF are considered “outstanding resource waters,” water quality must be maintained or improved to protect existing and designated instream water uses (Forest Plan, p. 1-17). The Forest Plan guides land managers to consider relocating existing facilities, including roads and campsites, if they are within 100 feet of perennial streams (Forest Plan, pp. 1-15 and 2-25). Forty percent of the

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user-created campsites are within this buffer, and the majority of these sites are compacted and causing erosion of the riparian area. Many of the campsites and access trails are negatively impacting Eastman Brook, and other streams and riparian areas and are not sustainable for the long-term. There is a need to close campsites and access trails that are negatively impacting Eastman Brook and other streams and riparian areas in the project area and to restore these areas.

There is also a need to address sanitation and waste disposal. Substantial evidence of human waste and litter associated with the campsites has been observed near and in the brooks (Figure 4). Human waste can affect water quality by introducing nutrients and fecal pathogens into nearby waterbodies and local groundwater. In particular, this project is needed to provide a sustainable solution from a management and resource perspective for addressing human waste disposal.



Figure 4. Many campsites are located in riparian areas and are compacted and with much of the understory vegetation removed. Improper human waste and trash disposal in and adjacent to the water is also evident.

The Forest Plan provides guidance to ensure that all permanent new, redesigned or reconstructed stream crossings and other instream structures are designed and constructed to pass bank full flows, withstand expected flood flows, provide for the passage of sediment, bedload and woody material, and allow free movement of resident aquatic life (Forest Plan, p. 2-31). Two culverts, one on Mack Brook Road and one on Hix Mountain Road, do not meet the current guidance for stream crossings and one is at risk of failure. There is a need to replace these two culverts with properly sized structures and in-stream alignment.

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Wildlife

The Forest Plan provides direction for managing recreational use to minimize negative impacts on wildlife, including minimizing the potential for human-wildlife conflicts (Forest Plan, p. 1-22). The Forest Plan also provides preventive measures and environmental education strategies regarding proper food storage and garbage disposal to alleviate potential conflicts (Forest Plan, p. 2-34). Food storage and waste disposal issues resulting in wildlife-human conflicts at campsites along Tripoli Road are due in part to the challenges posed by lack of easy site access. Many sites are accessed by steep terrain that poses a challenge for campers to get food back up to their vehicles for storage. There have also been issues with bears breaking into vehicles when campers have left their windows down with food stored inside. This project is needed to alleviate the potential for human-wildlife conflicts by addressing the food storage and garbage disposal issues.

Heritage Resources

It is a goal for the WMNF to identify and evaluate heritage resources at the project level and consider appropriate management of these resources, including preserving, protecting, interpreting, stabilizing, and when necessary, mitigating for the loss of these resources (Forest Plan, p. 1-6). An evaluation of the project area found that some campsites were located among the historic artifacts of the former Thornton Gore farming community, and the location of the historic CCC Camp is now a popular camping area with numerous large sites located within the remains of the CCC camp. The integrity of the historic artifacts are being impacted by campers removing stones to create fire rings, digging holes for waste disposal, vandalism, and compacting and disturbing the sites through foot and vehicle traffic. This project is needed to address the impacts campsites and visitors are having on these historic artifacts.

Recreational Opportunities

The WMNF strives to provide a range of quality recreational activities and opportunities and to manage these in a manner that protects the resources (Forest Plan, p. 1-10). Tripoli Road Campground is a high-use area and it continues to be recommended to visitors as an alternative camping experience. Many people feel a strong connection to this location, and some campers have been returning to the same sites along Tripoli Road for many years. Although the Forest Plan defines “roadside camping” as “developed” camping, the less-developed, less-managed nature of camping along Tripoli Road fills a

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recreational niche unique to the Forest. Forest managers recognize the value of this experience, and they see the Tripoli Road area as an important area for providing a recreational camping opportunity between the two ends of the development spectrum (Forest Plan, p. 3-3).

The Forest Plan guides managers to: 1) concentrate use at specific locations rather than dispersing it to other areas; 2) manage currently high use areas for high use to meet visitor needs while mitigating its effects so that it can be sustained for the long term; and 3) not allow use to increase indefinitely in high use areas (Forest Plan, p. 1-13). This project is needed to address management of this high use area so that visitors are afforded a quality recreational opportunity that is sustainable from a resource and management perspective.

Transportation and Public Safety



Figure 5. Poor conditions along Mack Brook Road, including deep gullies and protruding rocks, make it difficult for standard

The purpose of Forest Roads is to provide a safe, efficient, and seamless transportation and parking network that allows for current, continued, and projected management, use, and enjoyment of the Forest. The goal is to maintain classified roads to meet FS standards and the requirements of the Highway Transportation Safety Act (Forest Plan, pp. 1-16 and 1-17).

Neither Mack Brook Road nor Hix Mountain Road were designed or constructed for passenger cars and there are not sufficient turnouts to allow for safe passing (Figure 5). Yet during busy weekends, campers are permitted to access existing campsites on these roads. The congestion created by roadside camper parking and pedestrian traffic along this busy road is another safety

concern that also impacts the character of the area (**Error! Reference source not found.**). For example, during public scoping, one local resident stated that the congestion on Tripoli Road has turned what was once an enjoyable weekend family drive into a place to avoid.

A quick search of the internet makes it very apparent that Tripoli Road is considered an overnight “party destination”. The current configuration and

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access to the campsites makes it difficult for local and Forest Law Enforcement Officers, Forest Protection Officers, and the concessionaire to monitor site conditions, enforce laws and regulations, and address issues and complaints. It is difficult to patrol the sites for compliance with proper food storage in bear country, payment of fees, and other laws and regulations.

It is also very difficult to know what vehicles are associated with what sites and vehicles parked alongside the road often have no clear association with specific sites (**Error! Reference source not found.**). When issues or complaints arise, it is very difficult to locate individuals even when a vehicle description is provided. As a result, users are able to determine the type of camping experience they desire which in many cases includes underage drinking, illegal drug use and excessive noise. Consequences include damage to resources, and adverse impacts to wildlife and other campers who may not realize they have chosen an area that is well known for all night partying. For example, during public scoping one commenter stated:



Figure 6. A typical weekend on Tripoli Road with numerous vehicles parked along the road leaving only one lane open for travel. The vehicles are not associated with a particular site and could belong to campers staying at one of several sites in this area.

“We were very excited when we set up camp next to the beautiful brook but were very disappointed within a few hours by the loud music, bright lights run off generators and cars racing down the road all of which continued until 4am!”

Law enforcement officers have raised concern for the public, as well as concerns for the safety of law enforcement officers and other staff conducting routine patrols and responding to complaints and incidents.

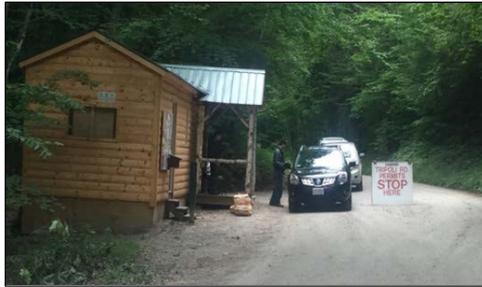


Figure 7. Vehicles stop in the road at the welcome station

The current welcome station is a roadside trailer used by the concessionaire to provide visitor information, collect fees, and interact with the public. It does not have adequate parking or room for vehicles to safely pull out of the travel way while interacting with Forest or concessionaire personnel (Figure 7).

Most campers enter Tripoli Road from the west. Campers stopped at the current welcome station generally block eastbound traffic, leaving the west bound lane open. At times, both lanes are blocked by camper's vehicles.

Trees fall across Tripoli Road and the spur roads on a regular basis and FS staff and the concessioner must regularly clear the road for safe passage by the public and Forest staff. Currently, the removal of potentially hazardous trees along the road and adjacent to campsites is done on a case-by-case basis. This project is needed to address transportation and safety concerns, encourage and enforce responsible stewardship of this area into the future, and improve the quality of the experience for visitors and local residents.

WMNF Land and Resource Management Plan

This assessment is tiered to the Final Environmental Impact Statement (FEIS; USDA-FS 2005b) and Record of Decision (ROD; USDA-FS 2005c) for the WMNF Land and Resource Management Plan (USDA-FS 2005a). The Forest Plan is the "principal tool for preserving, protecting, and managing the resources that comprise the WMNF, while at the same time making those resources available to the public for a variety of uses". This programmatic document sets the management direction for the WMNF through the establishment of short term

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(10–15 years) and long-range goals and objectives. It also prescribes the standards and practices used to achieve these goals and objectives, along with guidelines for monitoring and evaluating the effectiveness of our actions. All applicable Forest Plan Standards and Guidelines would be applied to the Proposed Action during implementation.

Guidance for management of resources and uses is provided in part through the allocation of land among 15 Management Area (MA) categories (Forest Plan, p. iv). Each category has a unique purpose, desired condition of the land, and Standards and Guidelines for management. The purpose and desired condition describes the role of the MA in moving the Forest toward the Forest-wide goals while the Standards and Guidelines are the specific, technical direction for managing resources. Most of the project area is within MA 2.1, General Forest Management. This MA allows for a range of uses and activities, including timber harvest, developed campgrounds, prescribed fire, roads, and snowmobiling (Forest Plan 3-3 to 3-8). Recreational purposes of MA 2.1 lands include providing a full mix of recreational opportunities and managing high-use recreation areas to acceptable social and ecological standards (Forest Plan, 3-3). A small portion of the project area is within MAs 6.1 (~8 acres) and 6.2 (~10 acres). The project area includes approximately 290 acres in the Waterville inventoried roadless area identified during Forest Plan revision (USDA FS 2005b, Appendix C) and a small portion of the project is within one-quarter mile of the Mad River which was determined eligible for designation as Wild and Scenic during Forest Plan revision (USDA FS 2005a, Appendix C). None of the project area is in lands included in the Roadless Area Conservation Rule (RACR) inventory so no activities are proposed within the RACR inventory.

Further guidance for managing recreation opportunities on the WMNF is provided by the allocation of lands to one or more of the six Recreational Opportunity Spectrums (ROS) classes (FEIS, pp. 3-307 to 3-309, H-2 to H-4). The majority of actions proposed by this project are in the “Roaded Natural” ROS class. Lands within this ROS are generally a half mile on either side of FS Maintenance Level three or higher roads. A small portion of the project area along Mack Brook Road is more than a half mile from Tripoli Road and is allocated to the “Semi-primitive Motorized” ROS class. Additional management direction for developed recreation sites is found in the FS Manual (FSM), FS Handbook (FSH), and supporting documents.

Decisions to be Made

The purpose of the Environmental Assessment (EA) is to provide the Pemigewasset District Ranger, the Responsible Official, with sufficient information and analysis to make an informed decision about the Tripoli Road Project. In addition to the information in the EA and project record, the Responsible Official will consider public comments to decide:

- if the analysis and project record adequately address the issues and the Forest Plan objectives,
- which of the alternatives best meets the project's purpose and needs and addresses the relevant issues raised by the public and the interdisciplinary team,
- to issue a Finding of No Significant Impact or to prepare an Environmental Impact Statement (EIS), and
- if the decision meets all applicable laws, regulations, and policies, and if it is consistent with the Forest Plan or if an amendment is needed.

Public Participation

This project has been listed in the WMNF Schedule of Proposed Actions (SOPA) since January 2010. On December 15, 2010, a scoping report was published to the WMNF website: <http://www.fs.usda.gov/project/?project=31039>. Notification of the availability of this report (via email or postcard) was sent to over 300 individuals including local town officials, police and fire departments, historical societies, the Tripoli Road campground concessionaire, the Forest-wide project notification mailing list, and individuals who requested information as a result of the SOPA posting. Additional outreach carried out by WMNF staff included spending considerable time talking with campers at Tripoli Road about this project during routine patrols. Information describing the Proposed Action has been posted in the area since May 2011. During summer 2011, staff solicited comments from campers. The FS offered a field trip to the public on November 15, 2013, but no members of the public choose to attend.

During the public scoping effort, the Forest received over twenty comments. The comments were primarily from people who were either offering their support for the proposed action or were concerned about losing campsites along the river. All comments received in response to scoping were analyzed and used to identify the issues and environmental effects analyzed in the EA for this project.

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On February 17, 2016, a legal notice initiating the 30-Day Comment period for the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project was published in the New Hampshire Union Leader, and the project 30 Day Comment Report was posted on the WMNF website. Notification of the comment period was sent to project commenters, as well as to the individuals who requested notification or otherwise indicated interest in the project. Adjacent land owners, Public Officials in the Towns of Thornton, Lincoln, Woodstock, and Waterville Valley, Historical Societies, the Grafton County Sheriff, NH Departments of Fish and Game and Transportation, local snowmobile clubs, ProSports (the concessioner), and the Central NH Chamber of Commerce were notified of the comment period. Five individuals submitted comments during the project's 30-day comment period. None of the comments resulted in changes to the alternatives or the analysis of effects. A summary of these comments and Forest Service responses are included in Appendix B of this EA and the project record. All of the original public comments received on this project are included in the project record.

Issues

An issue is a point of debate, dispute, or disagreement regarding anticipated effects of implementing the proposed action. An issue must be within the scope of the specific proposal, not already decided by law or policy, not conjectural, and relevant to the decision being made in order to be brought forward by the team for consideration in alternative development. Issues may be addressed in alternatives analyzed in detail and in alternatives that are not analyzed in detail due to reasons such as not meeting the project's purpose and need. The rationale for not analyzing alternatives is explained with each alternative in Chapter 2. Based on public comment and internal discussion, three issues were identified by the IDT for this project. These led to consideration of two alternatives to the proposed action, neither of which was analyzed in detail.

1. *There would be less overall expense and impact on the land if the existing campsites were left in place and the worst offending sites were closed.*

This comment came from the public and raises questions and concerns regarding the methods used in closing campsites, the impacts of constructing new campsites in new locations, and the tradeoffs of developing new sites versus leaving sites where they are.

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- 2. Sites along Tripoli Road with safe, off-road parking that are away from water resources should be kept open to provide more diverse camping opportunities that are valued by the public.*

This comment came from internal discussion regarding the need to close every site along Tripoli Road.

- 3. Closing and rehabilitating all of the campsites along Eastman Brook will take away a riverside recreation experience that is valued by many people who come to camp at Tripoli Road.*

This issue arose from our efforts at reaching out to campers along Tripoli Road during the 2011 summer season. Several campers expressed their love of the riverside sites, how they had been staying there for many years, and how they hoped to continue this experience with their families for years to come. Campsite proximity to Eastman Brook was clearly an important component to their camping experience.

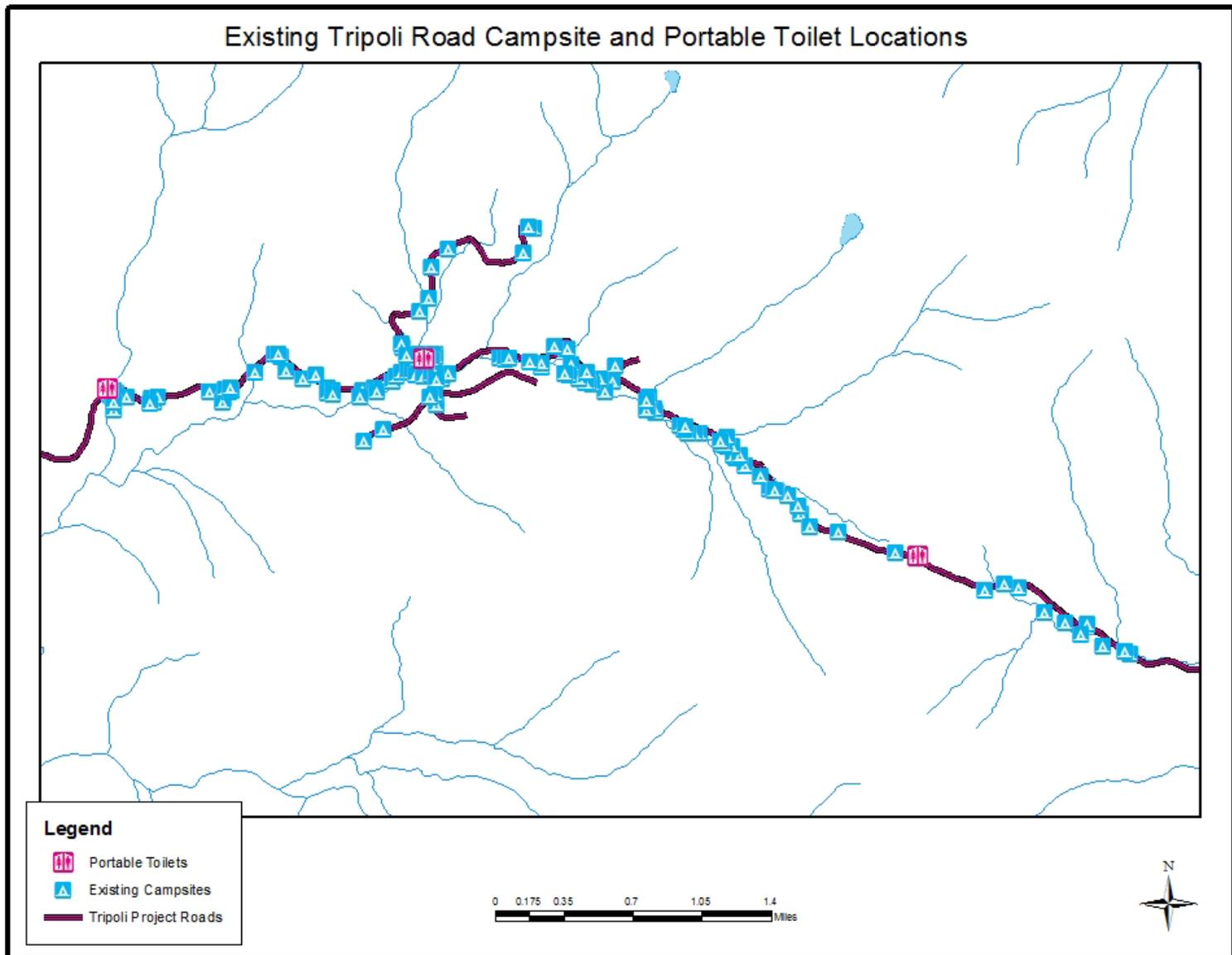


Figure 8. The current location of roadside campsites and portable toilets under the No Action Alternative.

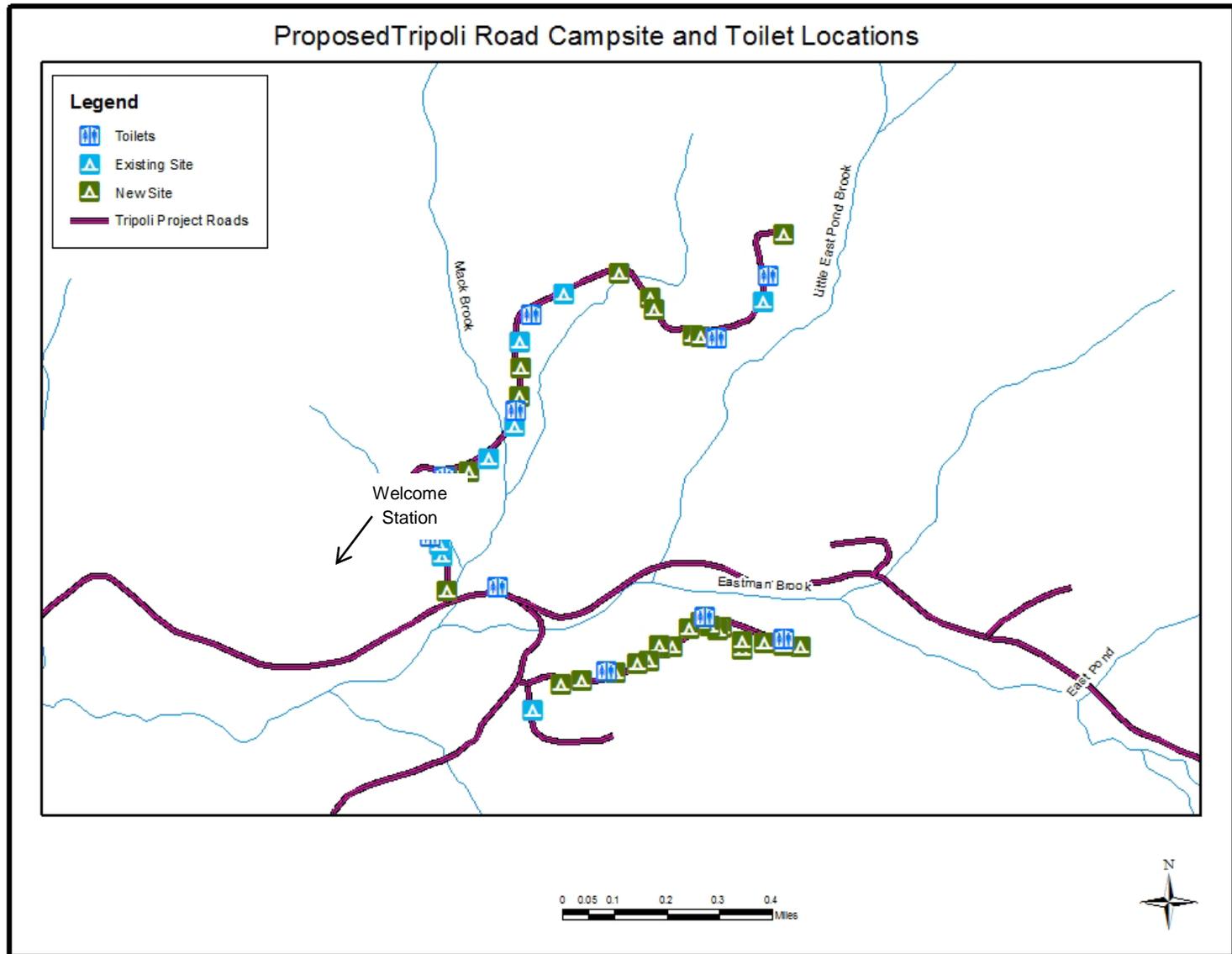


Figure 9. The proposed action includes 38 campsites and up to 10 toilets. Existing sites would be rehabilitated as necessary.

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Table 1. Summary of Proposed Action activities and current conditions (No Action). *ML = maintenance level

ROADS	Mack Brook Road	Hix Mountain Road Hix Mountain Spur A Road	
No Action	Single-lane, gravel, ML 2, 1.46 miles	Single-lane, gravel; 0.19 miles to Spur A ML 2; 0.6 miles to gate, ML 1	
Proposed Action	Remain single-lane gravel roads w/pullouts. No change in length. Hix Mountain, Mack Brook, and Hix Mountain Spur A roads upgrade to maintenance Level 3		
CAMPSITES	Mack Brook Road	Hix Mountain Spur A Road	
No Action	11 sites	1 site	
Proposed minimum level of development	19 sites (12 new, 7 existing redesigned), delineated parking, hardened/graveled sites, fire ring built from native material	19 sites (18 new, 1 existing redesigned), delineated parking, hardened/graveled sites, fire ring built from native material	
Proposed full development	In addition to the minimum level of development, additional site delineation, metal fire ring		
CAMPSITE DECOMMISSIONING	Tripoli Road	Mack Brook Road	Hix Mountain and Hix Mountain Spur A Road
No Action	0	0	0
Proposed Action	112	3	11 and 1
WELCOME STATION			
No Action	Portable toilets at 2 locations for campers, and 1 trailhead for hikers; temporary trailer on Tripoli Road, 8 wildlife-resistant dumpsters near welcome station.		
Proposed minimum level of development	Small permanent registration building, ML 3 gravel driveway with parking, wildlife-resistant food lockers, kiosk with interpretive information, food/trash storage regulations, other FS information		
Proposed full development	In addition to the minimum level of development, 1 two-sided vault toilet		

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CAMPSITE TOILETS	Mack Brook Road	Hix Mountain Spur A Road	
No Action	0	0	
Proposed minimum level of development	1 two-sided vault toilet at one location	1 two-sided vault toilet at one location	
Proposed intermediate level of development	1 two-sided vault toilet, portable toilets at 5 locations	1 two-sided vault toilet, portable toilets at 2 locations	
Proposed full development	6 two-sided vault toilets	3 two-sided vault toilets	
WILDLIFE RESISTANT TRASH RECEPTACLES	Tripoli Road	Mack Brook Road	Hix Mountain and Hix Mountain Spur A Road
No Action	6 garbage dumpsters and 2 recycling dumpsters	0	0
Proposed minimum level of development	0	One wildlife-resistant dumpster collocated with toilet, plus wildlife-resistant dumpsters at 2 additional locations	One wildlife-resistant dumpster collocated with toilet plus a wildlife-resistant dumpster at 1 additional location
Proposed Full Development	0	Wildlife-resistant dumpsters at all 6 locations	Wildlife-resistant dumpsters at all 3 locations

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EASTMAN BROOK ACCESS	
No Action	User created trails to brook with 40% of campsites within 100 feet of perennial streams (Eastman Brook)
Proposed Action	If conditions warrant, a trail would be constructed to provide safe, sustainable access from Hix Mountain Road to Eastman Brook at the bridge crossing.
HAZARD TREE REMOVAL	
No Action	Roadside and campsite hazard tree removal mostly on a case-by-case basis
Proposed action	Systematically identify and remove potentially hazardous trees within 75 feet of Tripoli, Mack Brook, Hix Mountain and Hix Mountain Spur A Roads, campsites, toilets, and the welcome station. This focused activity would occur in the fall and winter months (typically Oct 15 – March 15) as conditions allow, to reduce impacts to recreation. Hazard trees would be felled and tops and limbs would be left on site. Boles could be removed from site. Skid trails would not be necessary. Identification and management of hazard trees would follow guidance provided by FSH 7709.59 (USDA-FS 2009) and associated documents.

Chapter 2. Alternatives

This chapter provides a detailed description of the Proposed Action and Alternatives to the Proposed Action. Alternative 1, referred to as the “No Action” alternative, proposes no new management activities within the Tripoli Road Project Area at this time. Alternative 2, the Proposed Action, proposes campsite relocation and hazard tree removal the Project Area, which was designed to respond to the Need for Action, as well as public issues identified for this project. Forest Plan Standards and Guidelines are incorporated into the design of the Proposed Action alternative. Most of the proposed project activities in the Proposed Action alternative are expected to be implemented within the next ten years as funds become available. Six alternatives were considered for this project. Two were considered in detail and four were considered, but eliminated from detailed study. The rationale for eliminating the four alternatives is explained at the end of this chapter.

Alternatives Considered in Detail

Alternative 1—No Action

The term “No Action” means no new management actions at this time. Under the No Action Alternative, the FS would not initiate new activities associated with campsite relocation in the project area. Hazard tree removal would continue in an ad-hoc manner. Activities covered under previous decisions and administrative use related to the existing Tripoli Road Campground would continue including the continued use of the 135 campsites along Tripoli Road. Current conditions would persist (Figure 8). The No Action Alternative does not meet the Purpose of and Need for action, but the analysis provides a baseline to compare to the effects of the action alternatives.

Alternative 2—Proposed Action

The Proposed Action that was described during public scoping is presented here with additional details and minor changes that are explained below. The updated location of campsites, toilets, and the welcome center are illustrated in Figure 9. The proposed action would be implemented over the next ten years using both project phasing and an adaptive management approach explained below. All applicable WMNF Forest Plan Standards and Guidelines, and FS and NH Best Management Practices would be applied to the project during implementation. The project would be designed to facilitate future multiple-use of the area consistent with management of MA 2.1 lands including allowing

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future use of log landings and skid roads to be used for future timber management projects. If an unrecorded cultural feature or artifact are found during project implementation, all activity in the area would stop, and WMNF archaeologists would be notified so that such finds could be assessed and protected as appropriate.

Project Phasing

Project phasing refers to the implementation of the minimum development activities in the proposed action. Phasing is necessary due to budget constraints and funding cycles. Project implementation would be scheduled as funds become available. The phasing would generally involve the construction/reconstruction of campsites on the spur roads prior to the closure of existing sites along Tripoli Road. Five to fifteen existing campsites would be closed and decommissioned during Year One to address immediate resource concerns primarily related to water quality. The funding for project components comes from different sources and the timelines for when those funds may become available also varies. Therefore, the following is a general description of anticipated phasing; however, as funding becomes available for different project components, it may be necessary to modify how the project is phased. Contracting would also influence how the project is phased. For example, if it is most cost effective to have all of the campsites on Hix Mountain Spur A Road and Mack Brook Road constructed or improved at the same time, then the project would be phased accordingly.

During Phase 1, the campsites and toilet/dumpster locations on Mack Brook Road would be developed and the road would be improved to passenger car standards. Potentially hazardous trees along the spur, around the campsites and toilets/dumpsters, and along Tripoli Road would be addressed during phase 1. Once the campsites on this road were ready for occupancy, a number of sites on Tripoli Road would be closed and decommissioned.

During Phase 2, the campsites and toilet location on Hix Mountain Spur A Road would be developed, the road would be improved to passenger car standards, and potentially hazardous trees along the spur road, around the campsites, and toilets would be addressed. Once the campsites on this road were ready for occupancy, the remaining campsites on Tripoli Road would be closed and decommissioned. Phase 2 would also involve relocating the Welcome Station to the historic CCC camp area. A temporary building may be used at the Welcome Station initially, but ultimately a permanent building would be constructed.

Adaptive Management

Alternative 2 would use an adaptive management approach to meet the project's purpose and need and to achieve the desired conditions. This approach would be used to determine the final number (up to the defined maximum) and location of vault toilets and wildlife proof-dumpsters, the level of campsite delineation, and the type of fire ring,

Adaptive management is "a system of management practices based on clearly identified intended outcomes and monitoring to determine if management actions are meeting those outcomes; and, if not, to facilitate management changes that will best ensure that those outcomes are met or re-evaluated" (36 CFR 220.3). Adaptive management is used when managers are uncertain of an outcome, but fairly certain of the direction they would pursue if a change were necessary. Projects are designed with built-in continuous assessment (monitoring – "If X happens") and processes for improvement ("Then the next action will be taken"). It allows managers the latitude to treat successive portions of the project based on local conditions, and to assess and monitor the activities while staying within the range of anticipated impacts—the analysis of effects discloses the effect of the proposed action including the effects of the possible adjustments (36 CFR 220.5(e)(2)).

Alternative 2 requires that an adaptive management strategy be implemented and monitoring studies be conducted because the level of development necessary to meet desired conditions is somewhat uncertain. For example, it may not be necessary to build vault toilets in all ten locations identified in this proposal to address the sanitation issues. As portable toilets are placed, and the conditions are monitored and better understood, managers can use the information to determine where permanent facilities are needed to achieve the desired conditions while minimizing the level of permanent development.

The Adaptive Management Plan is included as part of the Proposed Action in this EA to clearly present the minimum development level for each component of the project, the desired condition, the metrics that will be monitored, and the thresholds that, if exceeded, would indicate the need to develop the component to the next specified level. The strategy outlined here is designed to detect impacts to resources of concern, visitor experience, and operational efficiency that are caused by changes to the infrastructure and management of the campground and to provide Forest managers with a method to adaptively manage the campground to address any negative effects. The goal of the adaptive management strategy for the Tripoli Road Campsite Relocation and

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Roadside Hazard Tree Removal Project is to meet the project's purpose and need and to achieve desired conditions for the campground.

The minimum level of development for each project component (roads, toilets, campsites, and welcome center) is the minimum level of development we believe would address the project's purpose and need and meet the desired resource, visitor experience, and management conditions. If the desired conditions are being met by the minimum level of development for a particular component, then no additional development of that component would occur under this decision.

The maximum level of development is the maximum level of development that we believe would address the project's purpose and need and meet the desired resource and visitor experience conditions. This is the maximum level of development that would be implemented as a result of this decision.

The analysis of effects for this alternative includes the full spectrum of proposed development. For example, the minimum level of development for toilets on Mack Brook Road is a two-sided vault toilet at one location and the maximum level of development is two-sided vault toilets at six locations. Therefore, this EA analyzes the potential effects of both levels of development.

Proposed Activities

New and Reconstructed Campsites: Improve seven existing campsites and construct twelve new campsites on Mack Brook Road, improve one campsite and construct 18 new campsites on Hix Mountain Spur A Road. Alternative 2 includes a total of 38 campsites with an estimated capacity of 132 cars equating to a maximum of approximately 330 campers at one time. The new campsites would be located to protect natural and cultural resources, including being at least 100 feet from perennial waters. The capacity of sites would vary, and would be limited by the amount of off-road parking at each site. Roadside parking would be prohibited. Parking areas would accommodate as few as two and as many as ten vehicles. Using an average of 2.5 people per vehicle, site capacity would range from approximately 5 up to 25 campers. Although parking would be limited, there would not be an upper limit on the number of campers per site. Some large capacity sites are located in close proximity to each other. Large groups could be accommodated if they were to secure adjacent sites.

At minimum, all campsites would have a site number, delineated parking area, fire ring built of native material, and a hardened area for camping. If monitoring

indicated the need (Table 2), sites would be further developed to include additional site delineation and/or a metal fire ring.

Once the minimum level of development had been completed, monitoring would be conducted to assist the FS in determining if that level of delineation and site hardening was adequate to protect resources and to meet desired visitor satisfaction. If monitoring showed that resources were being protected and campers were satisfied with site conditions, then no additional development would occur under this alternative. If monitoring showed that desired conditions were not being met, then some or all of the following could occur to improve conditions: delineate sites, harden sites, install tent platforms, and/or install metal campfire rings. Additional monitoring would be conducted following each step in development to determine if the actions were effective. The maximum level of development would include more clearly delineated sites using a variety of materials, and metal fire rings in place of the ones made of native material.

Campsite Closure and Rehabilitation: Close and decommission all campsites on



Figure 10. Riverside campsite before (top) and after (bottom) decommissioning.

Tripoli and Hix Mountain Roads, three sites on Mack Brook Road, and one site on Hix Spur Road. A site specific decommission plan would be developed for the project. Decommissioning would include: removal of the fire ring(s), implementation of erosion control measures, mulching, discouraging camping by placement of large rocks, dead/down wood, slash, and/or felling of trees, blocking site access, posting closure/restoration area signs, education, and enforcement of closures (Figure 10). If site conditions warrant, decommissioning would also involve: scarifying compacted areas, restoring vegetation, and/or stabilizing steep slopes with waterbars. Monitoring would take place within 3 years of campsite decommissioning and rehabilitation. Monitoring would be

focused on the effectiveness of the decommissioning activities and would determine if any further work or enforcement is needed to achieve complete site

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rehabilitation. Prior to naturalization activities at closed campsites, the Forest Archaeologist would be consulted about techniques appropriate near cultural sites or in areas with high potential for sites to minimize or eliminate ground disturbance or impacts to cultural features.

Toilets: Install up to ten vault toilets: Alternative 2 includes a minimum of one two-side vault toilet installed on Mack Brook Road and one two-side vault toilet installed on Hix Mountain Spur A Road. The maximum would be six two-side vault toilets installed on Mack Brook Road and three two-side vault toilets installed on Hix Mountain Spur A Road.

The minimum level of development for toilets on Mack Brook Road is a two-sided vault toilet at one location and the maximum level of development is two-sided vault toilets at six locations. Initially, all six sites identified as potential locations for toilets would be prepped for the installation of toilets. The areas would be cleared and leveled and access from the road to the parking areas/toilets/dumpsters would be established. A vault toilet would be installed at one location and portable toilets would be installed at the other five locations identified by the FS in Figure 9. The metrics identified in Table 2 would be monitored. If conditions exceeded the established threshold for the metric, then additional permanent toilets would be installed up to the maximum. The FS would use this method to assess conditions and determine if vault toilets were needed at each of the remaining five locations identified as possible toilet sites on Mack Brook Road. If monitoring showed that any of the sites were unnecessary, the portable toilets would be removed. Portable toilets would be used in locations identified for permanent toilet sites while construction funding was being secured.

The minimum level of development for toilets on Hix Mountain Spur A Road is a two-sided vault toilet at one location and the maximum level of development is two-sided vault toilets at three locations. Initially, all three sites identified as potential locations for toilets would be prepped for the installation of toilets. The areas would be cleared and leveled and access from the road to the parking areas/toilets/dumpsters would be established. A vault toilet would be installed at one location and portable toilets would be installed at the remaining two locations identified by the FS in Figure 9. The metrics identified in Table 2 would be monitored. If conditions exceeded the established threshold for the metric, then additional permanent toilets would be installed up to the maximum. The FS would use this method to assess conditions and determine if vault toilets were needed at each of the remaining two locations identified as possible toilet sites on

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Hix Mountain Spur A Road. If monitoring showed that any of the sites were unnecessary, the portable toilets would be removed. Portable toilets would be used in locations identified for permanent toilet sites while construction funding was being secured.

Wildlife-resistant Trash Receptacles: Install up to nine wildlife-resistant dumpsters. Alternative 2 includes a minimum of three wildlife-resistant dumpster on Mack Brook Road. One would be co-located with the vault toilet and there would be wildlife-resistant dumpsters at two additional locations along Mack Brook Road. Alternative 2 includes a minimum of two wildlife-resistant dumpster on Hix Mountain Spur A Road. One would be co-located with the vault toilet and there would be wildlife-resistant dumpsters at one additional location along Hix Mountain Spur A Road.

The minimum level of development for dumpsters on Mack Brook Road is one wildlife-resistant dumpster co-located with the two-sided vault toilet and wildlife-resistant dumpsters at two of the remaining five locations identified for toilets by the FS in Figure 9. The metrics identified in Table 2 would be monitored. If conditions exceeded the established threshold for the metric, then dumpsters would remain at the three initial locations and additional dumpsters would be installed at some or all of the remaining three locations. The FS would use this method to assess conditions and determine if dumpsters were needed at each of the six locations on Mack Brook Road. Dumpsters would not be installed at locations if monitoring showed that they were unnecessary.

The minimum level of development for dumpsters on Hix Mountain Spur A Road is a one wildlife-resistant dumpster co-located with the two-sided vault toilet and wildlife-resistant dumpsters at one of the remaining two locations identified for toilets by the FS in Figure 9. The metrics identified in Table 2 of this Adaptive Management Plan would be monitored. If conditions exceeded the established threshold for the metric, then dumpsters would remain at the two initial locations and an additional dumpster would be installed at the remaining location. The FS would use this method to assess conditions and determine if dumpsters were needed at each of the three locations on Hix Mountain Spur A Road. Dumpsters would not be installed at locations if monitoring showed that they were unnecessary. If neither toilets nor dumpsters were needed, then the sites would be naturalized.

Roads: Improve Mack Brook Road, Hix Mountain and Hix Mountain Spur A roads. These roads would be improved to FS maintenance level 3, single-lane

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gravel road with turnouts for passing. The improvements would enable visitors driving passenger vehicles to access the campsites safely. Crossing drains would be installed as necessary to provide access to campsite parking and toilet facilities and to protect the functioning of roadside drainages.

There are two perennial stream crossings, one each on Mack Brook and Hix Mountain Roads. The crossings would be redesigned to improve conditions for high flow events, protect the integrity of the stream channel and the road, and improve passage by aquatic organisms. Minor changes in road elevation or alignment near the crossings may also be necessary.

Concessionaire's welcome station: In order to provide a safe location for the permittee to operate and interact with the public, the welcome station would be relocated to the former CCC camp and the existing campsites at the CCC camp would be closed and decommissioned. Measures to protect the heritage resources would include avoiding intact archaeological features, confining vehicle access to a designated driveway, designing a permanent registration building in the general style of CCC buildings, and installing interpretive information about the Tripoli CCC camp and the Thornton Gore Historic Archaeological District to enhance visitor understanding of the site's history. At minimum, the new welcome station would include a FS maintenance level 3, one-way, gravel driveway with parking, wildlife-resistant food storage lockers, a small registration building, and a kiosk describing proper food storage and waste disposal techniques to use in bear country, and interpreting the historic aspects of the site and area. If conditions warranted, a two-sided vault toilet would be installed (as part of the 10 possible vault toilets for the campground). Dumpsters would not be installed at the Welcome Station. There would be signage at the welcome station indicating where dumpsters were located for campground use. The registration building at the Tripoli CCC camp site would be located and designed to account for its historic setting: construction would occur in previously disturbed areas as determined by archaeological survey and intact archaeological features would be avoided, and any new permanent building placed on the site would be designed in a simple style in keeping with the style of the former CCC buildings at the site. Interpretive information about the Tripoli CCC camp and Thornton Gore community would be provided at the welcome center to enhance visitor understanding and appreciation of area history.

Provide day use access to Eastman and Mack Brook if resource concerns develop: At minimum no new trails would be created to provide day use access

to Eastman and Mack Brooks and existing trails to campsites along the brook would be decommissioned. Monitoring would be conducted to assist the FS in determining if user-created trails from campsites or the spur roads were resulting in resource concerns (e.g., trails causing erosion, compaction, braiding, etc.). If monitoring showed that resources were being protected, then no additional trails would be developed under this alternative. If monitoring showed that desired conditions were not being met, then trails would be constructed or the areas of concern could be closed depending on the situation. Trail construction could include switchbacks, water bars, and side-hill bench construction to meet accessibility guidelines where possible and construction would follow all applicable Standards and Guidelines and Best Management Practices. Because it is not clear where issues may arise, the only potential trail location being proposed at this time is a trail from Hix Mountain Road to Eastman Brook at the bridge crossing. This trail would be constructed if it was needed to address resource concerns. If resource concerns developed that would not be addressed through the construction of an access trail at the bridge, then the issues would be evaluated, solutions would be proposed and additional public involvement and NEPA documentation would be required. Additional monitoring would be conducted following each step in development to determine if the actions were effective.

Remove hazard trees along Tripoli, Mack Brook, Hix Mountain and Hix

Mountain Spur A Roads: A “hazard tree” is a standing tree, either live or dead, having defects, singly or combined, in roots, butt, bole, or limb, which predispose it to mechanical failure in whole, or in part, and which is so located that such failure has a probability of injury and damage to persons and property. In an effort to more efficiently and effectively address public safety concerns, this project proposes to identify and address all potentially hazardous trees along Tripoli, Mack Brook, Hix Mountain (to the intersection of Hix Mountain Spur A Road) and Hix Mountain Spur A Roads at one time. This focused activity would occur in the fall and winter months (typically Oct 15 – March 15) as conditions allow, to reduce impacts to recreation. Following this concerted effort, case-by-case hazard tree removal would occur as needed, but the need for this approach would be substantially reduced. FS guidelines for the identification of hazard trees would be used to evaluate trees for defect and risk to travelers along the roadway (USDA-FS 2009, pp. 7-9). For public safety, potentially hazardous trees within approximately 75 feet of these roads, campsites, and toilets would be felled and tops and limbs would be left on site. The boles could be removed as

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part of a timber sale, or they could be made available for firewood. Existing standing dead and dead-and-down woody material not posing a public safety hazard would not be cut or removed (Forest Plan pp. G-3, 2-36). No cut buffers would be placed around butternut trees to protect them from hazard tree removal activities.

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Table 2. This table includes the metrics, thresholds, and management responses to monitoring to adaptively manage the Tripoli Road campground. Monitoring would be on-going during the ten-year implementation period.

TOILETS		
Metric	Trigger	Management Response
Frequency with which each portable toilet needs to be serviced (maintenance records from Memorial Day and Labor Day.)	Pumping required at least weekly between Memorial Day and Labor Day.	*If trigger exceeded then a permanent toilet would be installed, otherwise, the portable toilet would be removed.
Visitor Satisfaction (comment cards throughout the season)	Less than 85 % of visitors are satisfied with availability, proximity to campsite, and maintenance of toilets.	If trigger exceeded then a permanent toilet would be installed at that location.
Improperly disposed of human waste within 50 feet of campsite (visual surveys conducted at least monthly)	Site has more than 3 deposits of human waste adjacent to site on at least 3 observation dates.	If trigger exceeded then a permanent toilet would be installed at the nearest location to that site; if a permanent toilet is already present, education or servicing issues will be addressed
WILDLIFE RESISTANT TRASH RECEPTACLES		
Metric	Trigger	Management Response
Frequency with which each dumpster needs to be serviced (maintenance records from Memorial Day and Labor Day.)	At least weekly between Memorial Day and Labor Day.	If trigger exceeded then a dumpster would remain at location. If trigger not exceeded than the dumpster would be removed.
Improperly disposed of trash adjacent to campsites (visual surveys conducted at least monthly)	Reoccurring pattern of improper trash disposal	If trigger exceeded then a dumpster would remain at location. If trigger not exceeded than the dumpster would be removed.

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NEW CAMPSITES		
Metric	Trigger	Management Response
Vegetation: loss of understory vegetation adjacent to site (trampling/removal) (visual surveys conducted annually)	10% increase in the size of the designated site (initial gravel area).	If trigger exceeded then additional site delineation and hardening.
Soil disturbance: Increase of bare ground, compaction, (Site creep – camping outside graded/gravel area) (visual surveys conducted annually)	10% increase of gravel area (defined campsite) Measurable, annual monitoring (photo points from edge of road shooting into site at specific compass angle. with reference points in photo if problem do follow-up measurements.	If trigger exceeded then additional site delineation and hardening.
Enlargement of native material fire ring : designed for 3' diameter (visual surveys conducted annually)	Fire ring greater than or equal to 5 feet in diameter.	If trigger exceeded then replacement of native material fire ring with metal fire ring.
Number of fire rings (visual surveys conducted annually)	New fire rings being built by campers.	If trigger exceeded then replacement of native material fire ring with metal fire ring.

Changes to the proposed action since scoping

Some modifications to the proposed action have occurred since public scoping. These modifications were the result of additional field work and analysis, refinement of details, and response to public input. The locations for campsites and toilets have been refined. There is a more thorough illustration of the proposed campsite layout in Appendix A of this document. Conceptual designs help the Deciding Official, the interdisciplinary team and the public understand what is being discussed and analyzed and to ensure that the proposal is technically feasible. If a decision is made to implement this project, final designs would be developed based on more complete engineering surveys.

Implementation of the proposed action would be phased to address funding constraints, and an adaptive management approach would be used to reduce the level of development to the minimum required to meet the Purpose of and Need for the project and to meet desired conditions. An adaptive management plan is included as part of the Proposed Action in this EA to clearly present the minimum development level for each component of the project, the desired condition, the metrics that will be monitored, and the thresholds that, if exceeded, would indicate the need to develop the component to the next specified level.

The proposed action has been modified to increase the maximum number of vault toilets from five to ten. The modification occurred following review of a previous version of FS Manual 2300, Recreation, Wilderness and Related Resource Management (USDA-FS 2006) which included guidelines to locate toilets within 500 feet of campsites and to provide one toilet for every 35 people. An analysis of the original proposed action revealed that 19 of the sites would be in excess of 500 feet from a toilet. By adding up to six additional toilets to the proposed action, 31 of the 38 sites would be within 500 linear feet of a toilet and the average distance to a toilet was decreased to 339 feet. The proposed action that was scoped included the addition of portable toilets throughout the camping area as needed. The modified proposed action includes using portable toilets as a component of the adaptive management process.

Alternatives Considered But Eliminated from Detailed Study

Close the Tripoli Road area to roadside camping

One method of “solving” the resource concerns in the project area would be to simply close the entire area to overnight use and establish a Forest order listing it as one of the “no camping or fires within ¼ mile” roads in the WMNF

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Backcountry Rules publication. This would include closure of camping on the spur roads. Ironically, Tripoli Road developed into what it is today largely due to the implementation of this type of closure on numerous other roads within the WMNF. Managers recognize that this area provides a unique camping experience on the WMNF and they do not want to take that experience away from the many individuals and families that have been coming to the area for years. Doing so would also displace use to other areas, which is contrary to Forest Plan objectives for recreation. Therefore, this alternative was considered but eliminated from further study.

Keep a small number of sites on Tripoli Road that meet suitability criteria

This alternative addresses Issues #1 and #2. It would result in 7 campsites along Tripoli Road in addition to the 38 sites included in the action alternative. The WMNF interdisciplinary team identified sites along Tripoli Road that were at least 100 feet from water, had off-road parking, had stable site access, and were not causing substantial erosion. To try to address manageability, only sites that were one mile or less on either side of the junction of Tripoli Road and Hix Mountain Road were considered in this alternative.

The purpose of this project includes improving management of a high-use, overnight recreational area, providing a sustainable recreational experience from a resource and management perspective, and addressing public safety concerns. FS staff (resource specialists, law enforcement officers, managers) carefully considered the sustainability of managing a small number of sites dispersed along two miles of Tripoli Road. They determined that maintaining these sites would not improve the sustainability of managing the Tripoli Campground. In particular, the management challenges posed by the need to address human waste disposal for seven dispersed, high-use sites would be cost prohibitive and would not be sustainable. Additionally, some of the sites would be located down short, in some cases blind, drives posing a safety concern for staff and local law enforcement officers during routine patrols and when responding to complaints. Because this alternative would not meet key aspects of the purpose and need of the project, it was considered, but eliminated from further study.

Keep more campsites along Tripoli Road

This alternative addresses Issue #3. It was developed in response to comments from campers who are very connected to the campsites along Eastman Brook and feel that the loss of these sites would negatively affect their camping experience. While it is a wonderful experience to camp next to water, these sites are having

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an unacceptable impact on water quality and riparian health. The water resources report (summarized in Chapter 3) describes the measurable effects that streamside camping has had on Eastman Brook.

Over the years, numerous efforts have been made to address the human waste problem along Tripoli Road. Portable toilets were installed in two locations, camper education efforts were initiated (and continue), and for a time the concessionaire provided a capsule containing a biodegrading compound for campers to bury with their waste that would help with sanitation and decomposition. During the 2011 campsite inventory, the amount of human waste deposited throughout the riparian area was truly appalling. Most of the campsites sites are down such a steep embankment and so far from the road—or anywhere a toilet facility could be reasonably be located and maintained—that it is not possible to effectively manage for the negative effects of such high use at these locations in a sustainable manner.

This alternative would not address any of the needs outlined in this project's purpose and need for action. Eastman Brook would continue to be impacted by high levels of use in the riparian area, human waste and trash disposal would continue to be a problem, the sites would not lead to improvements in management and sustainability of the campground, and public safety concerns would continue to go unaddressed. Therefore, this alternative was considered but eliminated from further study.

Reconstruct Tripoli Road

Early on in project development, the interdisciplinary team discussed incorporating the reconstruction and paving of Tripoli Road along the entire length of the road within the Forest. This alternative was considered but eliminated from further study because the low-speed, gravel road serves the purpose of providing visitor and administrative access to the area and it was not financially feasible at a cost of approximately \$1 million per mile for paving and reconstruction.

Chapter 3—Affected Environment and Environmental Consequences

The following resources were considered, but the effects on these resources were not analyzed in detail: Air Quality, Climate Change, Non-native and Invasive Species, Scenery, Timber, Wilderness, Wild and Scenic Rivers. The Action Alternative would have a negligible or immeasurable effect on Air Quality, Non-native and Invasive Species, Scenery, and Timber. With no direct effects, and limited, temporary indirect effects, the project will neither reduce nor increase the potential effects of climate change on resources within the scope of this analysis. There would be no effect on designated Wilderness or Wild and Scenic Rivers, or lands designated under the 2001 Roadless Areas Conservation Act since these resources are not present in the project area.

The effects of the project on the Waterville inventoried roadless area is documented in the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project Inventoried Roadless Area Report (see McKenny 2015 in the project record for a detailed analysis). The proposed action would result in a net reduction in development within the inventoried roadless area as a result of campsite decommissioning, but would result in the development of as many as three permanent structures (toilets). Less than one acre of harvest is proposed to clear the new campsites, and the project would result in approximately 0.6 miles of existing road being opened to the public and reclassified from maintenance level one to maintenance level three to provide vehicle access to the proposed campsites on Hix Mountain Spur A Road. The effects of the proposed action would not compromise the ability of the area to meet FS inventory criteria under either of the alternatives. Roadless values and recreation management have coexisted in this area previously, evidenced by the areas recreational history and its inclusion in the most recent roadless inventory. Additionally, the decommissioning of existing sites located within the riparian area and addressing improper human waste disposal would have a positive effect on the natural condition of the area.

Water and Soil Resources

This section contains a summary of the analysis of the effects contained in the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project Watershed Resources Report (Roberts 2015, see project record for additional information). Effects on water quantity and water quality as well as soil

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conditions (with respect to issue indicators that affect long-term soil productivity including soil erosion and soil compaction) were analyzed and the results are presented here.

Affected Environment

The Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project is located in the towns of Thornton, Livermore, and Waterville Valley in Grafton County, New Hampshire (Figure 11). The project area is approximately 1,400 acres, located in the Eastman Brook (of the Pemigewasset River) Watershed (HUC 010700010204) and the Mad River (of the Pemigewasset River) Watershed (HUC 010700010401) (Figure 12). Perennial streams in the project area include Eastman Brook, the West Branch of the Mad River (West Branch), Mack Brook, and the outlets of Talford Brook, Little East Pond Brook, and East Pond Brook.

The State of New Hampshire designated these reaches as Class B. Class B is the second highest quality, considered acceptable for fishing, swimming and other recreational purposes and, after adequate treatment, for use as water supplies. Under New Hampshire anti-degradation provisions, all waters of the National Forest are designated as “Outstanding Resource Waters” (ORW). Water quality shall be maintained and protected in surface waters that constitute ORW (NHDES 1999). Some limited point and nonpoint source discharges may be allowed, provided that they are of limited activity that results in no more than temporary and short-term changes in water quality. Activities may not result at any time in water quality lower than that necessary to protect the existing and designated uses in the ORW. Such temporary and short-term degradation shall only be allowed after all practical means of minimizing such degradation are implemented (USDA- FS 2005a, p. 2-30).

Both Eastman Brook and the Mad River are listed as impaired on New Hampshire’s 303(d) list due to pH levels. All freshwaters in New Hampshire have an impaired Fish Consumption Use due to mercury from atmospheric deposition; these waters are listed in Category 4A due to development of a Regional Mercury Total Maximum Daily Load for New England states in 2007 (NHDES 2010). Otherwise, these waters meet State Water Quality Standards related to the use of aquatic life, such as fish and macroinvertebrates.

The project area consists of watersheds that drain into the surface water intake of the Pennichuck Water Works of Nashua, NH. The project area is very small percentage of this nearly 2.2 million acre drainage area. The Forest Plan states forest-wide management directions for various resources areas. For water

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resources, “existing and designated instream water uses, and the level of water quality necessary to protect those uses, must be maintained or improved and protected (Forest Plan, p. 2-32).”

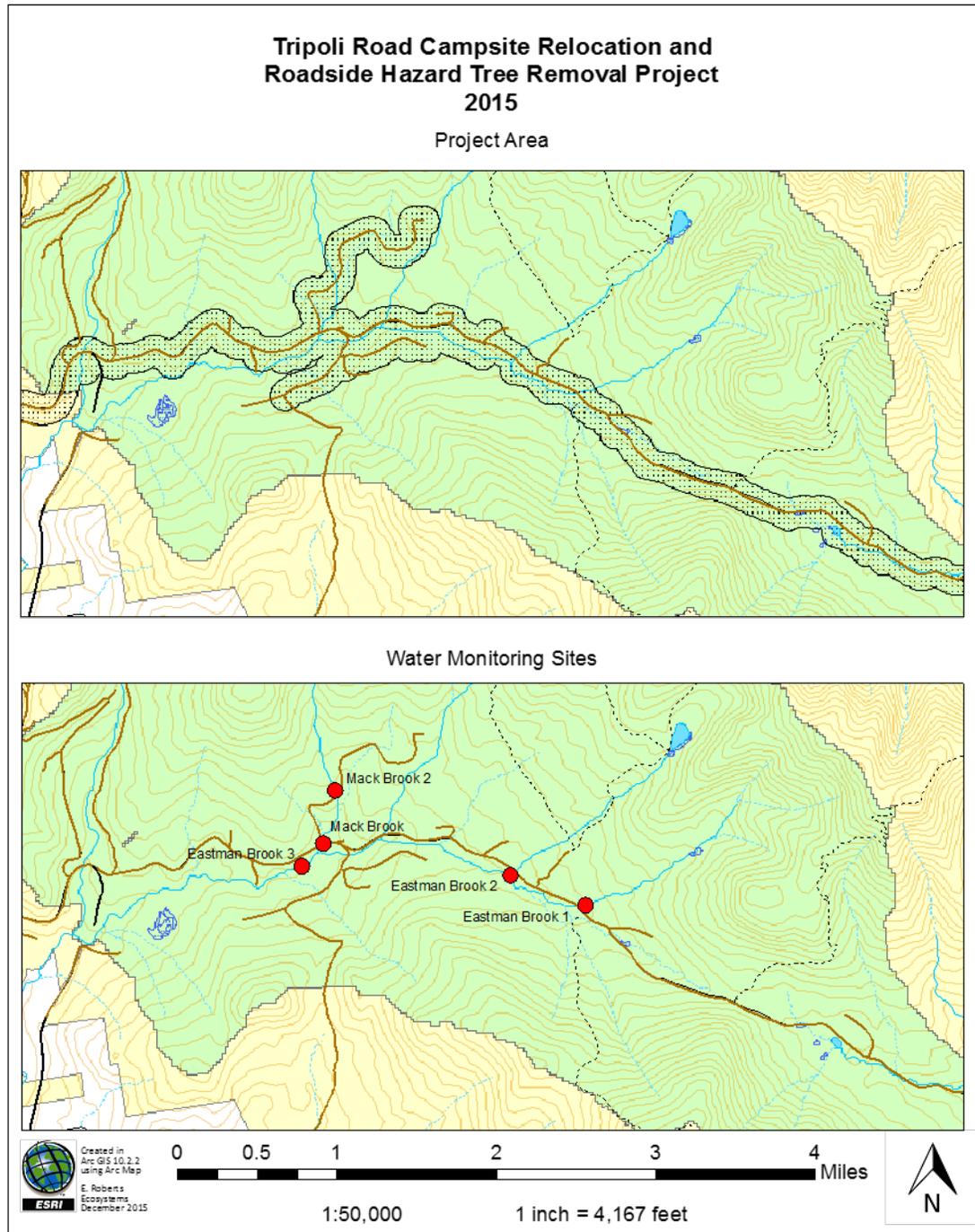


Figure 11. The project area was used to define the subwatersheds used in the analysis of effects of the alternatives on water and soil. Water quality was monitored at four sites on Eastman Brook and one site on Mack Brook.

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The project area is made up of several Ecological Land Types (ELTs). The two main types are 115A: Softwood-Hardwood Lower Slopes and Depressions with Thick Compacted Sediments and 111: Softwood Floors and Lower Slopes of Major Valleys with Deep Cobbly and Sandy Outwash. ELT 115A consists of fine sandy loam to silt loam and are moderately well to poorly drained. ELT 111 consists of loamy sands and are generally moderate to well-drained. The project area also includes some areas that have more sandy to fine sandy loams with well to moderate drainage.

The Forest Plan desired soil resource condition is to protect the long-term sustainability of the soil resource with an emphasis on maintaining appropriate soil nutrients and to ensure soils are stabilized around management activities. The FEIS states soil productivity, as defined by the FS, is the inherent capacity of the soil to support the growth of specified plants, plant communities, or sequences of plant communities (USDA-FS 2005b, p. 3-7). Soil productivity may be expressed in a number of ways, including volume, weight/unit/area/year, percent plant cover, or other measures of biomass accumulation (USDA-FS 2012c). A productive soil is able to help support a healthy and growing forest. Soil may also play a role in buffering the impacts of other environmental concerns, such as changes in stream chemistry, which may originate from acid deposition.

Desired soil conditions are considered here with respect to issue indicators that affect long-term soil productivity including soil erosion and soil compaction. Based on the literature, these are the two indicators that could have the potential to create detrimental effects from this project; the amount of ground disturbance and impervious surface.

The desired soil conditions are established in the Forest Plan and maintained or improved through the implementation of Forest Plan Standards and Guidelines and the FS Soil Quality Standards (SQS) (USDA-FS 2005a, USDA-FS 2012c). Implementation of SQS and relevant Best Management Practices in all phases of the project will ensure that long-term soil productivity is maintained and/or improved in this area. Soil erosion can affect soil productivity by loss of organic matter that harbors nutrients and helps maintain soil aeration, it can also lead to stream sedimentation. The 2005 FEIS notes that, “research findings and on-the-ground experience for all [soil] hazard classes confirm that accelerated soil erosion due to roads and trails can be reduced – and its effects on streams largely eliminated – by timely application of well-known Best Management Practices (USDA-FS 2005b, p. 3-29).” The State of Maine recently published monitoring

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data supporting the conclusion that properly applied Best Management Practices will mitigate effects from soil erosion (MDOC 2009; MDOC 2005). While the results of a similar study in New Hampshire have not yet been published, Maine and New Hampshire soils and Best Management Practices are similar. It is therefore assumed that the effectiveness of these Best Management Practices is also similar.

Many of the most popular campsites on Tripoli Road are along the banks of Eastman Brook, the main drainage along the road. Streamside camping can alter the morphology of streambanks and riparian areas. Many of these sites continue to expand and merge with one another. The trails accessing many of these sites are steep and eroding. Vegetation along the brook has been trampled and many areas are devoid of undergrowth and hardened from high use and long term soil compaction. Substantial evidence of human waste and litter associated with the campsites has been observed in close proximity to Eastman Brook. Human waste has the potential to affect water quality by introducing nutrients and fecal pathogens into nearby waterbodies and local groundwater.

The steep access trails have the potential to impact water quality through the transportation of sediment from disturbed or eroding areas to water bodies. Tripoli Road closely follows Eastman Brook through a large section of the project area. In many cases, steep slopes lead from the road to the floodplain where campsites now exist. Compacted surfaces can affect water quantity by increasing and channelizing runoff in a watershed. Increased runoff can negatively affect water quality. Based on studies in Maine, watersheds with greater than ten percent impervious area may experience increased runoff and decreased water quality (Morse and Kahl 2003). Sediment from the erosion of the steep access trails is likely to enter waterbodies through runoff over the compacted site. This is exacerbated by the trampled vegetation. Vegetation can act as a natural buffer from sedimentation. Any sedimentation would lead to an increase in turbidity of the water and a change in stream bed materials. Other changes in water quality, such as phosphorus loading, may be tied to sedimentation. Thus, potential for sedimentation is a general indicator of potential impacts to water quality. Evaluation of sedimentation potential involves both the expected level of soil disturbance and the likelihood that disturbed soil will reach water bodies.

There are currently 135 campsites in the project area comprising of approximately 183,000 square feet of compacted area. Seventy-one (71) of the sites are within 100 feet of a stream (perennial and intermittent), these make up approximately 57% of the total compacted area. Access routes to the sites vary in

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length with slopes that range anywhere from zero to 70 percent. Many of these access routes are actively eroding, with some eroding directly into adjacent waterbodies.

Water quality data (Figure 11) collected in July 2010 through August 2011 indicate that average coliform bacteria, E.coli (indicator of fecal contamination), counts increase downstream of camping areas along Eastman Brook. The New Hampshire Class B water quality standard for E. coli is 126 counts per 100 milliliters; the standard for Class A is 47 counts/100ml. The observed geometric mean of E.coli counts did not exceed the New Hampshire Class A standard, though some individual samples exceeded the standard for both Class A and B (Table 3).

Table 3. Water quality monitoring data summary for Eastman Brook and Mack Brook.

Site	Average E. coli (counts/100ml)	Geometric mean of E. coli* (7/6/10-8/22/11)	Average turbidity (NTU)	Average NO3 (ppm)	Average P (ppm)
Eastman Brook 1	55	0	0	1.11	0.02
Eastman Brook 2	25	2	0	0.63	0.00
Eastman Brook 3	166	5	0	0.73	0.00
Mack Brook	60	5	0	0.64	0.00
Mack Brook 2	49	19	0		
Water Quality Standards and Guidance					
Class B Standard (single sample/ geo mean)	406	126	no more than 10 NTU over natural levels	NA	
Other guidance**			NA	<10 in drinking water	<0.026 is good

*Values of 0 were converted to 0.000001 to allow calculation of geometric mean

**Guidance from the NHDES Volunteer River Assessment Program (NHDES 2011)

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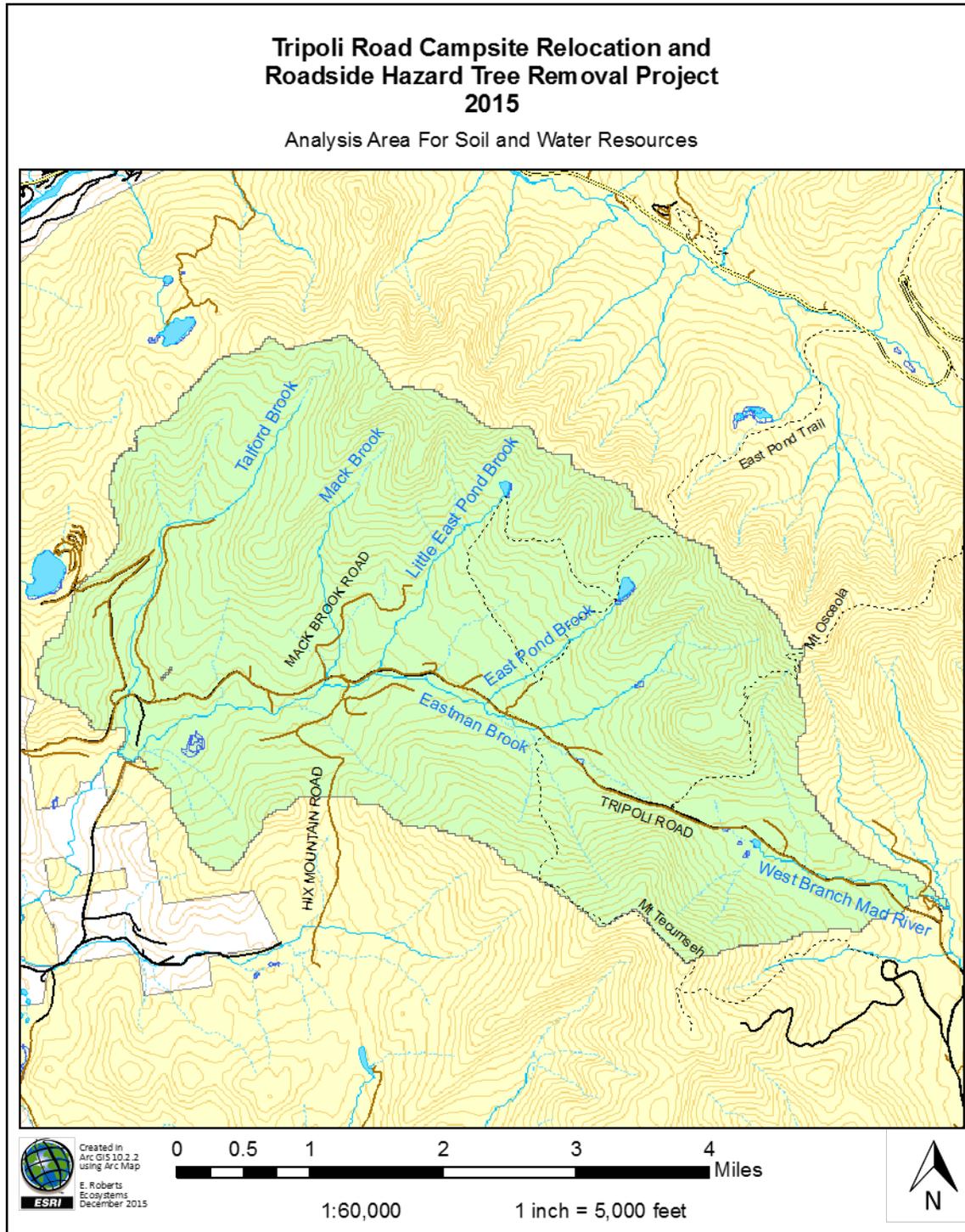


Figure 12. Subwatersheds were used to analyze the direct, indirect, and cumulative effects of the project on soil and water resources.

Direct and Indirect Effects

The analysis area for direct and indirect effects on soil and water resources is approximately 11,140 acres. It consists of the subwatersheds which contain any part of the project area (Figure 12). This area was chosen because effects from the project would be expected to occur in the immediate vicinity of the proposed activities. The time frame for analysis of direct and indirect effects is ten years. Most changes related to proposed activities are expected to take effect during and soon after implementation.

Indicators used to measure effects for soil and water resources include the area of total ground disturbance by type (site construction, active decommissioning, road maintenance, etc.), permanent ground disturbance within 100 feet of streams (campsites), and all ground disturbance within 100 feet of streams. Both perennial and intermittent streams were included in this analysis, as both types of streams transport sediment and nutrients downstream from compacted campsites. All reported values are approximate.

Alternative 1: No Action

Under Alternative 1 (No Action) effects to water and soil resources would be expected to continue on current trends into the future. Effects to soil productivity could extend beyond those that occur in nature. Current and ongoing management activities would continue, consistent with the Forest Plan, but no new management activities would be initiated as a result of this proposal.

With the continued current use of the project area, there would be additional impacts to soil and water quality. Erosion of access trails and streambanks, soil compaction, loss of riparian vegetation, and stream sedimentation would continue to degrade the area under Alternative 1. Loss of vegetation and compacted surfaces cause concentrated runoff and erosion, allowing sediment and other pollutants to enter the water. Human waste associated with the campsites along Eastman Brook would continue to negatively impact water quality.

Currently, there is 183,000 ft² of soil compacted from the campsites in the project area. Under Alternative 1, the campsites would continue to expand and merge, leading to ongoing degradation of proper floodplain function and persistent negative impacts to soil and water resources. Because it does not address existing resource concerns, this alternative has more impact to soil and water resources than the other Alternative.

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Alternative 2: Proposed Action

Under Alternative 2, all campsites on Tripoli Road and Hix Mountain Road, one site on Hix Mountain Spur A Road, and three sites (plus a portion of one additional site) on Mack Brook Road, totaling approximately 169,000 ft², as well as all associated parking areas and access trails, would be closed and rehabilitated. Thirty (30) new sites with designated parking areas, totaling 56,000 ft² of compacted area, would be constructed along Mack Brook and Hix Mountain Spur A Roads. Seven existing sites on Mack Brook Road would be maintained and redesigned, equaling 6,000 ft² of compacted area, and one existing site on Hix Mountain Spur A Roads would be maintained and redesigned, equaling 8,000 ft² of compacted area. These actions would ultimately reduce the total area of compacted soil from campsites by 113,000 ft², plus additional area as a result of closing and rehabilitating access trails and roadside parking.

As a guideline, the Forest Plan states that existing campsites within 100 feet of a perennial stream should be considered for relocation as part of project planning (USDA 2005a, 2-25). Many of the campsites in the project area are well within this buffer and are causing negative effects to soil and water resources. Since surface waters on the WMNF are considered “outstanding resource waters,” water quality must be maintained or improved to protect existing and designated instream water uses (USDA 2005a, 1-17). Seventy-one (71) sites are currently within 100 feet of a stream, 54 of which are within 100 feet of a perennial stream, contributing approximately 95,000 ft² of compacted soil within this zone. Under Alternative 2, that number would be reduced to zero.

During implementation, areas where activities take place could have soil compacted, graded, or sloped, or vegetation could be removed. This could expose previously protected soil to rainfall, and the top, organic-rich layer of soil could more easily erode away from the site versus before soil disturbing activities, decreasing soil productivity. Following Forest Plan direction and Best Management Practices related to surface erosion control, appropriate timing of activities, and control of drainage, any temporarily disturbed areas should be effectively rehabilitated, preventing soil erosion and protecting soil outside of the intended area of compaction. The permanent loss of soil productivity from the construction of the new sites would be offset by the closure and rehabilitation of the old sites. A “decommission plan” for all sites would be developed to reasonably ensure that the closed sites are no longer used. Scarifying sites, removing fire rings, barricading entrances, restoring vegetation, stabilizing steep

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slopes (with waterbars), posting closure/restoration area signs, performing erosion control and revegetation in riparian areas, felling trees across sites, and enforcing closures, are all potential decommissioning activities that would be considered during implementation. Activities will vary based on specific site conditions.

Roads are a concern for soil erosion because they may expose mineral soil which can cause detrimental soil disturbance (Patric 1976). All classified system roads are maintained to FS standards that help prevent the concentration of water on the road surface which could lead to erosion and stream sedimentation. Under Alternative 2, approximately 2.4 miles of existing road (Mack Brook, Hix Mountain Spur A Road, and a section of Hix Mountain Road) are proposed for improvement and maintenance activities to accommodate new campsite use and parking areas. These activities may include extensive reshaping and resurfacing, widening, filling holes, and improving drainage. This work may involve clearing or replacing drainage culverts, blading the road surface, and clearing/building waterbars. According to the Forest Plan, any new perennial stream crossings would be upgraded to provide aquatic organism passage and maintain stream hydrologic function (USDA 2005a, 2-31). There are two perennial stream crossings, one each on Mack Brook and Hix Mountain Roads. These crossings would be redesigned to improve conditions for high flow events, protect the integrity of the stream channel and the road, and improve passage by aquatic organisms.

The proposed road improvement activities would result in a change in the total impervious area of the roads. The current width of the roads, on average, is approximately 9 feet. Improvements to the road would increase this width to 14 feet (for the proposed one lane road with turnouts). At 2.4 miles long, this would change the total road impervious area from the existing approximately 2.6 acres to approximately 6.5 acres¹ (an increase of approximately 3.9 acres). This increase represents a permanent detrimental effect from soil erosion and compaction related to the proposed road widening. The soil that sits directly under the new areas of road bed would be compacted and would not produce plants and other microorganisms that allow the soil to continue to develop until the road is decommissioned. Soil productivity would be lost as long as the road is maintained; however, even with the addition of these miles of road

¹ Assuming a width of 14 feet and the additional impervious area from turnouts (i.e., approximately 300 square feet for every 500 feet of road length [Mary Brown, landscape architect])

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improvements, the Forest is still within the estimated miles of road construction / reconstruction analyzed in the Forest Plan as likely to occur during the first decade of plan implementation (USDA 2005a, B-4).

Increased use and road maintenance may mobilize sediment on a short-term basis, though activities such as resurfacing and improving drainage reduce sediment loss (NCASI 2000). In addition to widening the road, the road would be resurfaced and drainage features would be improved helping to maintain the road and protect the road from future damage due to high rain events, and thus helping to prevent soil erosion problems into the future (Moll et al. 1997).

Up to ten vault toilets, nine of which may be sited with wildlife-proof trash receptacles, are proposed for installation in convenient locations to the new campsites and the Welcome Station under Alternative 2. Nine of the potential locations would need to be hardened and taken out of productivity (the remaining location, at the proposed Welcome Station site, is already in a compacted state). These sites would contribute to another approximately 5,580 ft² of disturbance and permanent impervious acreage. The concrete vault toilets have the potential to affect water quality by introducing nutrients and fecal pathogens into nearby waterbodies and local groundwater. These potential impacts would be minimized by locating the vault toilets at least 100 feet away from perennial waterbodies, by maintaining the integrity of the concrete vault to ensure there is no leakage into groundwater, and by following Forest Plan Standards and Guidelines. Decreasing the total number of campsites and moving the sites away from waterbodies, as well as installing reasonably accessible vault toilets, would minimize the risk of fecal contamination and harmful levels of *E. coli*. Therefore, the proposed concrete vault toilets would have no negative effect on water quality. In addition, Alternative 2 proposes the construction of a new Welcome Station that would be centrally located along Tripoli Road within the area of the former CCC camp. The footprint of the Station area would be approximately 36,200 ft². The majority of this site is currently in a compacted state, so any changes to the total compacted area from this activity would be minimal although temporary ground disturbance would be expected. The trailer currently used as the welcome station would be removed from its current location and that site would be decommissioned.

This project also includes the proposal to remove potentially hazardous trees in the project area within approximately 75 feet of the road, campsites, and toilets. Alternative 2 would remove hazard trees along Tripoli, Mack Brook, Hix Mountain to Hix Mountain Spur A, and Hix Mountain Spur A Roads. All trees,

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including standing dead, not posing a public safety hazard would be left in place. Tree cutting would only occur where necessary and would be kept to a minimum during construction of the new campsites. All cutting would occur from existing roads or felled by hand and timing of cutting would be planned to mitigate any negative impacts to soil and water resources. All tops and limbs would be left on site.

Campsite construction and the installation of amenities would result in new areas with permanent impervious surfaces. Active decommissioning of campsites is considered a ground disturbing activity, although the result would be a decrease in total impervious surface in the project area. Road improvements and maintenance cause ground disturbance as well, and the widening of the road will contribute to an increase in the total impervious area within the watershed.

The proposed action would lead to 13 acres of ground disturbance throughout the implementation of the project. Ground disturbing activities would include new campsite construction, existing campsite redesign, active decommissioning of campsites, road improvement and maintenance, and new amenities construction (Table 4 **Error! Reference source not found.**). Of the total ground disturbance, approximately 2.5 acres would occur within 100 ft of streams. Currently, the compacted soil of the existing campsites equates to approximately 4.2 acres of impervious surfaces in the project area. The proposed action would rehabilitate, and put back into productivity, approximately 3.9 acres of existing impervious surfaces and create approximately 2.3 acres of new impervious surfaces, from the construction of new campsites and amenities, resulting in a net decrease in total impervious surfaces (not including roads) from approximately 4.2 acres to approximately 2.6 acres, zero of which would be within 100 ft of perennial streams (Table 5).

In addition to the impervious surface area from the campsites and amenities, approximately 3.9 acres of impervious surface from the proposed road widening would be added to the total amount of impervious surface in the analysis area. Adding the total increase in impervious area (that which would result from implementing this project) to the known impervious areas in the remainder of the analysis area (other existing roads, trails) would result in less than 1% total impervious cover. Watersheds with less than 10% disturbed area are unlikely to have water quality impaired by impervious surfaces (Morse and Kahl 2003). The limited trailhead parking, small log landings from past timber harvests, permanent wildlife openings, and naturally occurring impervious areas account for additional impervious cover, but based on aerial photography, the analysis

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area is still far below the 10% threshold. Therefore, no significant increase in runoff is expected to result from activities in this area.

Table 4. Ground Disturbance by Alternatives¹.

Activity	Alternative 1	Alternative 2
New Campsite Construction (acres)	0	1.3
Existing Campsite Redesign (acres)	0	0.3
Active Decommissioning of Campsites (acres)	0	3.9
Road Improvement and Maintenance (miles/acres)	0	2.4 / 6.5
New Amenities (acres)	0	1.0
Total Disturbed Acres	0	13
Total % of Affected Environment Disturbed (11,140 acres)	0	0.12
All Ground Disturbance within 100' of Streams ² (acres)	0	2.5

¹ All values are approximate; ² Road improvement and maintenance contributes an additional 0.06 acres of ground disturbance for each perennial stream crossing

Alternative 2 would result in a net watershed benefit. All campsites within 100 feet of perennial streams would be moved out of this area and rehabilitated to restore proper floodplain function. This action would also improve water quality in the area by improving human waste management that has been documented as having an effect on water quality (Table 3). Ongoing erosion and sedimentation from steep access trails and riparian campsites would cease to exist as these areas are rehabilitated. All new and reconstructed campsites would be located at least 100 ft away from perennial streams and new vault toilets would be installed to mitigate potential impacts to water quality from waste management issues. Mack Brook and Hix Mountain Spur A Roads, and a small section of Hix Mountain Road would be improved to accommodate the new intended level of use. Although the roads would be widened, taking additional soil out of productivity and increasing the amount of impervious surfaces in the area, proper design and maintenance of the roads would help to address ongoing erosion problems and prevent future soil erosion problems and sediment losses. Any effects of the implementation of the proposed activities to soil and water resources would be minimized by following Forest Plan Standards and

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Guidelines, Best Management Practices and Soil and Water Conservation Practices. In summary, Alternatives 2 has less detrimental impacts to soil and water resources than the no action alternative. The level of disturbance from this alternative would result in no significant negative impact to soil and water resources within the analysis area.

Table 5. Impervious Surfaces by Alternatives¹.

Impervious Surfaces	Alternative 1	Alternative 2
Existing Campsites Retained (acres)	4.2	0.3
New Campsites Constructed (acres)	0	1.3
Amenities Constructed (acres)	0	1.0
Total Impervious Surfaces Area (not including roads) (acres)	4.2	2.6
Permanent Impervious Surface (campsites) within 100' of Streams (acres)	2.4	0

¹ All values are approximate

Under Alternatives 2, monitoring would take place within 3 years of campsite decommissioning and rehabilitation. Monitoring would be focused on the effectiveness of the decommissioning activities and would determine if any further work or enforcement is needed to achieve complete site rehabilitation.

Cumulative Effects

Land management activities, such as campsite construction and rehabilitation, typically result in site-specific soil erosion that is generally limited to the area of direct impact. However, since the effects of soil erosion are often of greatest concern in streams and rivers, this analysis of cumulative effects considers cumulative incremental impacts on watersheds.

The area for the Cumulative Effects Analysis (CEA) is the same as the analysis area for direct and indirect effects being approximately 11,140 acres and consisting of the subwatersheds which contain any part of the project area (Figure 12). This scale is not so large that it spatially dilutes the cumulative sum of effects on resources, nor is it so small that it fails to identify and consider use and potential use on National Forest System lands relative to the proposed project. The entire CEA area is National Forest System land, with the exception of a small ROW that makes up less than 0.1% of the CEA area. This area was chosen because any effects from the project area would be expected to be diluted beyond the point where Eastman Brook converges with Talford Brook and where

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the West Branch of the Mad River converges with Osceola Brook. The CEA area encompasses the headwaters of all subwatersheds containing any part of the project area; therefore, there are no additional inputs from management outside of this area that could have an effect on the condition of resources within the analysis area.

The time frame for analysis of cumulative effects is ten years in the past and ten years after project implementation. This allows for consideration of effects on resources resulting from any past actions, to allow time for the proposed activities to occur and be completed, and to consider any other foreseeable activities that could have an effect on soil and water resources while the short-term effects of the project are still evident.

Past actions within the CEA area that had effects on soil and water resources include the closure of several campsites along Eastman Brook (in these sites, some trees were dropped and areas were revegetated to discourage camping and encourage soil stabilization), limited waste management (through installing portable toilets and visitor education), the repair of small washouts (involving ditching and culvert maintenance), and repaving a portion of Tripoli Road. Ongoing activities within the area include the maintenance and repair of roads, the ad hoc removal of hazard trees along the campsites and roads, and the general maintenance of trails (which has included filling potholes and fixing drainage). Proposed future actions include maintenance of Tripoli Road that will likely involve culvert replacement and repaving portions of the road (it is uncertain how many culverts or miles of road will be repaired) and the continuation of the ongoing actions listed above.

Alternative 1: No Action

There would be no cumulative effects on soil and water resources from implementation of Alternative 1. Current and on-going management activities would continue, consistent with the Forest Plan; but no new management activities would be initiated as a result of this proposal. Streams, soils, and riparian areas would continue to function much in the same way as present.

Floodplain function would continue to degrade around the campsites that exist along perennial streams in the analysis area. With continued use of the area, erosion of access trails, loss of riparian vegetation, and expanding areas of soil compaction would continue to cause concentrated runoff and erosion, allowing sediment and other pollutants to enter the water. In addition, human waste

associated with the campsites would continue to negatively impact water quality.

Alternative 2: Proposed Action

Past actions have had effects on soil and water resources in the CEA area. Runoff and sediment transport has been found to increase with disturbed area in a watershed. Several campsites that were causing negative impacts to soil and water resources were closed and rehabilitated within the past 10 years contributing to the net reduction of erosion, runoff, and sedimentation, and improvement of floodplain function and water quality. Table 4 indicates that 13 acres would be disturbed under Alternative 2. This comprises only 0.12 percent of the 11,140-acre cumulative effects area. This indicates that additional disturbance under the Action Alternative would include a small portion of the watershed. In addition, the disturbance resulting from the closure and rehabilitation of campsites is expected to return to a natural state within 2 to 3 years due as vegetation is restored the sites revegetation, leading to increased restoration of infiltration capacity and prevention of lasting effects.

Runoff and sedimentation are also related to the amount of impervious surface in a watershed. Watersheds with less than 10% disturbed area are unlikely to have water quality impaired by impervious surfaces (Morse and Kahl 2003). There is far less than 10% impervious area at present in the CEA area. The change to total impervious surface of the analysis area from Alternative 2 in combination with past, present, and reasonable foreseeable future actions would still result in less than 1% total impervious cover.

Proposed future actions include maintenance to Tripoli Road that will likely involve culvert replacement and repaving portions of the road (it is uncertain how many culverts or miles of road would be repaired). Total impervious area is not expected to considerably change. In addition, road and trail maintenance has been ongoing and is expected to continue into the future. Road maintenance may mobilize sediment on a short-term basis, but activities such as resurfacing and improving drainage ultimately reduce sediment loss (NCASI 2000). Past repairs of small washouts have helped to prevent larger scale erosion and sedimentation problems. Therefore, no significant increase in runoff or sedimentation is expected to result from future activities in this area.

Other past actions involving waste management, including the addition of portable toilets, dumpsters and visitor education, were aimed to reduce improper waste disposal issues in the analysis area. Decreasing the number of

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campsites and moving the sites at least 100' away from perennial streams, as well as installing reasonably accessible vault toilets, would further reduce negative effects to water quality from human waste inputs.

In summary, no significant, negative cumulative effects are expected under Alternative 2.

Heritage

This section contains a summary of the analysis of effects contained in the Tripoli Road Campsite Relocation and Hazard Tree Removal Heritage Report (Jordan 2015). For more detailed information and analysis concerning heritage resources, see this report in the project record.

Affected Environment

Historic archaeological sites along and near the Tripoli Road corridor have been previously documented as a result of Cultural Resource Reconnaissance Reports conducted prior to timber sales and as a result of the preparation of a National Register of Historic Places nomination form for Thornton Gore Historic Archaeological District. The vast majority of the documented archaeological sites adjacent to Tripoli Road relate to the 1800s dispersed farmstead community of Thornton Gore, and all of the documented archaeological sites are near the western end of Tripoli Road. There are a few early 20th century sites related to commercial logging as well as Civilian Conservation Corps development in this area of the WMNF. There are no documented Native American archaeological sites in the project area, and there are no archaeological sites on the western two-thirds of Tripoli Road, though certain features of the road itself, such as bridges, are historic (Jordan 2015).

Environmental Consequences

After review of WMNF cultural site files and reports and historic maps and documents, previously recorded historic sites in the project area were visited and documentation for Thornton Gore historic sites was updated for an NRHP historic district nomination (Valimont 2012). Areas proposed for new campsites and toilets identified as sensitive for prehistoric cultural sites were shovel tested; forty shovel test pits (STPs) were placed along Hix Mountain Spur A Road (Valimont 2010). The entire length of Tripoli Rd was covered by pedestrian survey for cultural sites within a 100ft right of way (Valimont 2011). Ten STPs were placed at the Tripoli CCC camp site by WMNF archaeologists to determine whether placement of a new registration building would impact cultural features at the site.

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The analysis area for direct and indirect effects for cultural resources is limited to the project area, a zone extending 75 feet from the margins along the length of Tripoli, Mack Brook, and Hix Mountain Spur A roads. The analysis area for cumulative effects includes the same analysis area, with the addition of the 3154-acre Thornton Gore Historic Archaeological District to account for effects to the archaeological district as a unit. Cultural sites beyond this would not be affected. The timeframe for effects is the duration of the project. Potential direct effects include the loss of information due to the physical disturbance of archaeological deposits, or the destruction of cultural features on the ground surface during project activities. Indirect effects include degradation of the integrity of the archaeological district through individual site disturbance or the introduction of incompatible new construction.

Alternative 1 (No Action):

Under the No Action alternative, direct effects of allowing existing campsites to remain co-located with historic archaeological sites include foot trampling and disturbance by camper foot traffic, vandalism, and disturbance of surface features and artifacts. Indirect effects include gradual degradation of the integrity of the historic archaeological sites by continued exposure to the effects of camper use. The cumulative effect of No Action would be to degrade the integrity of the Thornton Gore Historic Archaeological District as a whole by allowing individual sites within the district to continue to be negatively impacted by camping activity.

Alternative 2 (Proposed Action):

The Proposed Action would close campsites along Tripoli Road that are impacting cultural sites, reducing or eliminating the direct and indirect effects to the sites from recreational camper use. The naturalization of existing campsites through ground disturbance under this alternative poses a direct effect to archaeological sites. The construction of the camper welcome station registration building, driveway, and parking area at the Tripoli CCC camp site is a direct effect with potential to disturb archaeological features associated with the site, and an indirect effect to the feeling and setting of the site through potential introduction of an incompatible structure. The closure of the area to camping and a defined driveway, however, will confine use of the site to designated roadways and eliminate unrestricted vehicle use within the site. The construction of new campsites and toilet buildings is proposed for areas that have been tested for cultural sites but where no sites were identified, or areas that have been determined to have no potential for cultural sites, so no effects to cultural sites

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are expected. The removal of hazard trees within 75 feet of Tripoli Road would not impact cultural sites, as survey indicated there are no sites located within this zone. The overall cumulative effect of the proposed action, with the design features and mitigation measures described below, would be to preserve the historical integrity of the Thornton Gore Historic Archaeological District.

Recreation

This section summarizes the analysis presented in the Tripoli Road Redesign Recreation Report (Giles 2015). Much of this analysis entails a comparative analysis between the current condition or No Action (Alternative 1) and the Proposed Action (Alternative 2). The framework for the analysis of effects of this project on recreation is based on the Forest Plan's Standards and Guidelines and includes the following:

- Conformity with Recreation Opportunity Spectrum
- Campground development levels
- Number, size and capacity of sites
- Campsite density
- Site accessibility
- Proximity to toilet facilities
- Proximity to refuse containers
- Campsite and campground management controls
- Effect on range of opportunities provided by roadside camping
- Comparative distance of campsites to perennial streams

Affected Environment

The overall goal for managing recreation opportunities, as identified in the Forest Plan, is to provide a range of quality recreation activities and opportunities. The campsites currently available along Tripoli Road and its spur roads are somewhat unique in their development level when compared to other existing developed campgrounds found on the Forest. The sites are more primitive, user created, and lacking design. However, due to the way these campsites are managed – under a permitted concessionaire agreement with limited amenities – Tripoli Road is technically considered a developed campground. The niche this campground fills, as well as its development level, will be examined further in this document for the current condition and the proposed action.

The analysis area used to assess the effects of this project on recreational resources was defined by placing an 800 foot buffer around Tripoli, Mack Brook,

Hix Mountain and Hix Mountain Spur A Road. The original concessioner permit to operate the campground defined the permit area as the existing campsites within 800 feet of Tripoli Road and the Osceola Vista Campground. This area was subsequently expanded to allow for additional or overflow camping along Mack Brook Road and Hix Mountain Road.

Recreational Setting and Recreational Opportunity Spectrum (ROS)

One tool used to examine this development level is the Recreation Opportunity Spectrum (ROS) framework, which provides guidance as to the level of development for the area under analysis while considering the Plan's objective to maintain the ROS objective for the area while maintaining or improving the quality of the recreation opportunity provided.

The recreational setting is described by the ROS class. ROS defines a range of recreation settings which, when combined with visitor activities, help shape a visitor experience. By managing for certain setting characteristics managers can provide specific recreation experience opportunities and beneficial outcomes. The six main ROS classes, in order of increasing development are Primitive, Semi-Primitive Non-motorized, Semi-Primitive Motorized, Roded Natural, and Rural/Urban (Forest Plan, 2005, p.1-10 and Map 1-11). The analysis area is predominantly in Roded Natural ROS class (approximately 1,405 acres), except for a the northernmost sections of Mack Brook Road which is Semi Primitive Motorized (approximately 111 acres) and a small area approximately one half mile long on the south side of Tripoli Road across from Mount Osceola Trailhead (approximately 23 acres) which is Semi Primitive Non-motorized ROS class. FS Manual 2330 provides guidance on the scale of development and the levels of site modification that are appropriate for each ROS class. The level to which the recreational setting conforms to the prescribed ROS class will be evaluated for each of the alternatives.

Recreation and Access

Primary recreation in the area includes: roadside camping, hunting, snowmobiling, hiking, cross country skiing, fishing, mountain biking, and driving for pleasure. There are three recreation trailheads in the analysis area, East Pond, Mount Osceola, and Mount Tecumseh. Most hikers use the trails in the summer and fall. Mountain bikers, campers, pleasure drivers, hunters, fisherman and locals use the Tripoli Road in the summer and fall also. In the winter, the road is gated closed and the western six miles of the road is groomed for snowmobiling and East Pond Trail becomes an ungroomed snowmobile trail.

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This western six miles, from the height of land where a gate is closed to the gate at the base of the road near I-93 in Thornton has also seen mushers training their dog sled teams and occasional use for cross country on the snowmobile trail. Hix Mountain Road is also groomed for snowmobiling in the winter and serves as another spur trail connecting to the Tripoli Road Snowmobile Trail.

Tripoli Road is a FS Road which also provides motorized access into Waterville Valley while the road is open during the non-winter months. For residents and commercial vehicles traveling to or from points north from Waterville Valley, Tripoli Road is a shortcut compared to traveling out the primary access on Route 49 to I-93. Consequently the road does receive local and commercial traffic passing through, often competing for space on the road with roadside campers and visitors walking the road or getting in and out of their vehicles. On Friday evenings in the summer in particular vehicle densities can become high and safety concerns result from the volume of traffic in proximity to the roadside parking which can get upwards of 300 cars on a busy weekend.

Developed Recreation

Developed recreation in the affected environment consists of the roadside camping opportunities provided by Tripoli Road Campground which consists of 112 user defined campsites located along a 8 mile stretch of Tripoli Road, another 10 sites on Mack Brook Road, 11 sites on Hix Mountain Road and 2 sites on Hix Spur A Road. The campsites initially located alongside Tripoli Road came into existence in the early 1970s as a result of the displacement of many groups of people engaged in unmanaged roadside camping occurring along the Kancamagus Highway (Route 112) and other thoroughfares of the Forest. The Kancamagus Highway and other roadside areas on the Forest became popular destinations for groups to camp and experience nature and communal living. Social and environmental concerns from this activity resulted in the establishment of ¼ mile camping and fire restrictions along the Kancamagus which displaced many groups who then turned to Tripoli Road, where the restrictions didn't exist and where many of the issues associated with these groups were effectively considered out of sight and therefore out of mind. Current Use, Campsites and Amenities are described in Chapter One of this EA.

Social Environment

The contribution Tripoli Road provides as a social resource is also somewhat unique when considered across the Forest. The frequency of returning visitors, often in the context of families and extended families spanning several

generations, many of which are ethnically diverse, combined with users that seek a less restrictive management approach in terms of the absence of quiet hours has resulted in a user experience which is unique on the Forest. Anecdotal evidence points to an increasing trend toward more users being repeat users with extended families and ethnically diverse groups using favored sites as a refuge from the suburban and urban environments they come from, typically from cities in northern and eastern Massachusetts. While there have been no formal surveys to confirm these assumptions, observations by FS staff who have patrolled the campsites have been used to help describe the social aspects of the affected environment.

While there are some group camping opportunities at other group campgrounds such as Osceola Vista or roadside camping options such as at Gale River Road, Haystack Road and Cherry Mountain Road, none of these options compare to the number and concentration of sites found on Tripoli Road. On busy weekends in the summer, upwards of 300 cars arrive on Tripoli Road by Friday evening and the weekend experience turns into somewhat of an urbanized social environment transplanted into a forested setting. In some areas, familial groups claim their sites, often occupying multiple adjacent sites, which are within the sights and sounds of several other groups located in close proximity. In other areas there are sites that are somewhat isolated by sight and sound, often next to a brook such as Eastman Brook where the noise of the water helps drown out the noise of other campers and the screening is sufficient to mask them from other campsites. It is not uncommon for the experience for many campers to turn into a party that includes a significant amount of alcohol and music playing late into the early morning hours with the absence of quiet hours. One person documented their experience on a Memorial Day weekend camping at one of the "Hill" sites on an internet blog as follows:

"Ok, I know it's a holiday and I know we went there to hang out with some peeps, drink some beers, play some guitar, see some nature and relax, but let me tell you – this place was FULL of party-heavy people. From the second we got there, the hills echoed with screams, music, megaphones (yes, megaphones), cars beeping, and about every other college party sound you could dream up. At one point, around midnight Saturday, there was even a parade of drunken people cheering, beeping, and kicking up an enormous dust cloud as they drove back from another set of sites up the road. It should be noted that the "other" set of sites had a live band... yes, a live band at the campsite.

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We were rowdy, but the overall noise and party level around us shocked me. If you are looking for a tear-it-up night wearing togas and playing beer pong, this is the place. If you want to get out with the family – don't bother."

On the other hand, during the weekdays and on some non-holiday weekends the social environment changes considerably to a much lower use, less noisy experience that many people would expect to find at FS roadside campsites.

Another part of the social environment on a weekend includes the typical experience where campers are visited at least once by a sheriff or other law enforcement officer and a FS Forest Protection Officer who explains the rules and provide information on how to properly camp in the area using Leave No Trace principles and how to store their food properly in bear country. Over the years the visits by the sheriff have become somewhat legendary in arresting campers for underage drinking or possessing illegal drugs, to the point where the campers remember the sheriff's name and expect to see him every year they visit.

Dispersed Recreation

The area is popular for bear and deer hunting and also receives a light amount of mountain biking and some road biking. Occasionally mountain bikers or cyclo-cross bikers will pass through on Tripoli Road as part of an individual or group ride. The three trailheads, Mount Osceola, East Pond and Mount Tecumseh, in the analysis area receive the most use of any of the dispersed recreation opportunities in the area. In the winter, dispersed recreation consists on snowmobiling on Tripoli Road and Hix Mountain Road which also see some concurrent use from cross country skiers, snowshoers and some mushers.

Hiking

Summer and fall are the primary use seasons in the analysis area, and hiking trails in the area receive very limited winter use due to their relative inaccessibility by vehicle. During the summer and fall, the Mount Osceola Trailhead receives a high amount of use; vehicle traffic often overflows onto Tripoli Road on fair weather weekends and holidays. When the overflow occurs, it sets up a safety concern for other motorized users of the road due to a lack of wide shoulders to accommodate the overflow vehicles. Two other moderately popular trailheads, East Pond Trail and Mt Tecumseh Trail, rarely impact traffic safety along Tripoli Road due to their trailhead parking capacity seldom being exceeded.

Hunting

The project area is a popular hunting area due to its accessibility by vehicle and the typical presence of bears in the area. The season for hunting bears typically starts September 1st and overlaps with the later part of the camping season. The area sees around 4-6 bear baiting stations which aren't usually located in close proximity to the campsites. Archery season for white tail deer typically starts around the middle of September and extends into the middle of November overlapping with the later part of the camping season as well, although hunting pressure for deer has been lighter than for bear.

Snowmobiling

There are three snowmobile trails in the project area. The primary trail, located on the western half of Tripoli Road, starts at the FS gate on the western end of Tripoli Road and extends up to the height of land in the vicinity of the Mount Osceola Trailhead. One spur trail uses Hix Mountain Road and ends at a former landing approximately 1.7 miles from its junction with Tripoli Road. Another snowmobile spur trail uses the East Pond Trail and the Little East Pond Trail to form an out and back loop opportunity to both Little East Pond and East Pond. Because this trail is ungroomed and not maintained to the same standard as groomed trails, the conditions can be difficult and require more skill and perseverance to negotiate.

Direct and Indirect Effects

Analysis Area and Temporal Scope

The analysis area for direct and indirect effects on recreation resource is an 800 foot buffer on sections of Tripoli, Mack Brook, Hix Mountain, and Hix Mountain Spur A Roads where campsites are currently located and are proposed to be located under each alternative. This buffer was selected because it was written into the original concessionaire permit to define the permit area. The analysis area focuses on the area where the changes proposed by the alternatives would occur. The time frame for considering the direct effects will extend from project implementation, expected to commence in fiscal year 2016, to five years following project completion in 2026. This will consider the effects during implementation and probable effects following project completion given that it will likely take a few years for the newly designed campsites and layout to be experienced and realized by campers.

Alternative 1 (No Action)

Alternative 1 would not alter current recreational opportunities. Existing recreational opportunities would continue and the roadside campground would continue to be managed under a concessionaire agreement. It is assumed for the purposes of this analysis that the existing concessionaire permit would be extended and the current management approach would continue with the same amenities being offered into the future. The number and types of campsites offered would continue unchanged, as would the effects of the camping activity on the resources. This alternative also assumes the levels of use would continue, with some yearly variation as is currently the case.

Conformity with Recreation Opportunity Spectrum (ROS)

As described previously, the ROS can be used as a tool to describe how an area conforms to the classes which were assigned during the Forest planning process. The ROS can also be used to compare how proposals for changes in amenities or infrastructure conform to what was intended in the Plan. With the exception of the welcome station trailer and portable toilets, the campsites in the analysis area conform well to the Roded Natural ROS Class and, due to the lack of amenities, could also conform well to a less developed class. The only improvements or facilities available at each campsite is a rock fire ring which is consistent with this class, albeit on the less developed end of the spectrum of what is allowable in this class.

Table 6 identifies the approximate acreage of the analysis area by ROS Class. The predominance of the Tripoli Road Campground area is classified as Roded Natural and the following characteristics describe the normal conditions found in this setting.

Naturalness: partial retention visual quality objective.

Visitor Impacts: subtle site hardening.

Facilities and Site Management: rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident.

Visitor Management: on-site regimentation and controls are noticeable but harmonize with the natural environment. Simple information, facilities.

Social Encounters: moderate to high contact on roads. Moderate to low on trails and developed sites.

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Remoteness: of little relevance. Within ½ mile of better than primitive roads.

With the exception of the welcome station trailer and portable toilets, the campsites in the analysis area conform well to the Roded Natural ROS Class and, due to the lack of amenities, could also conform well to a less developed class. The only improvements or facilities available at each campsite is a rock fire ring which is consistent with this class, albeit on the less developed end of the spectrum of what is allowable in this class.

Table 6. Summary of Analysis Area by Recreation Opportunity Spectrum (ROS).

Recreation Opportunity Spectrum (ROS)	Area (Acres)	Percent (%)
Roded Natural (RN)	1,405	91%
Semi Primitive Motorized (SPM)	111	7%
Semi Primitive Non-Motorized (SPNM)	23	2%
*Total:	1,539	

* Acres are approximate.

Semi-Primitive Motorized (SPM) is found in the northern most section of Mack Brook Road (approximately 111 acres) which ostensibly received this classification due to the presence of snowmobile trails in the area north and east of Mack Brook Road. Per the definition of SPM, the area should be characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentrated use is generally uncommon, but there is evidence of human uses. The area is managed with minimum on-site controls and restrictions. Currently there are 3 primitive campsites in this area which were created from landings used during previous timber harvest operations and the road itself. Consequently there are no noted inconsistencies with the area's ROS class.

The small area of ROS class Semi-Primitive Non-Motorized (approximately 23 acres) is located across from the Mount Osceola trailhead and extends for approximately 2,200 feet along the south side of Tripoli Road within 200 feet of the road at its closest point. There is one primitive campsite along the road in this area (outside of the SPNM area) and the only inconsistency is the proximity of Tripoli Road in that it should be at least ½ mile from this area.

Campground Development Levels

Tripoli Road holds a somewhat unique position in the range of developed campgrounds across the Forest. It is the only roadside campground that is operated under a concessionaire agreement with minimal infrastructure and caretaking. Based on the FS Manual and Handbook and the Forest Plan direction, the Tripoli Road is considered a developed campground, albeit on a low development scale, due to the level of amenities provided and its accessibility by roads. The FS's Infrastructure (INFRA) database records Tripoli Road Campground at a development scale of 2 on a 0-5 scale, with 0 having no site modification and 2 having minimal site modification. Development Scale 2 sites have rustic or rudimentary improvements with minimal controls and little obvious regimentation.

Number, Size, and Capacity of Sites

In May 2011, FS recreation staff field inventoried all of the campsites on Tripoli Road and recorded several attributes at each campsite. The principle indicator of whether or not a site was considered a campsite was the presence of a user created campfire ring. Sites that had satellite campfire rings were counted as one site. A satellite camp fire ring was in close enough proximity to the main campfire ring where it was obvious it would be used by people from the same group and was typically small in size compared to the main ring. The No Action Alternative would not change the number of sites.

Capacity for the Tripoli Rd campsites are undefined as the area was never designed and is the result of user created sites. There are no current limits on the number of vehicles that can register for camping on any given day. Use records vary, however on very busy weekends up to 300 vehicles have registered to camp which, applying the assumption of 2.5 persons/vehicle, would have resulted in approximately 750 users, which doesn't relate to the true capacity of the area but does indicate for the 135 inventoried sites, on average 5.6 people would have been at each site.

One technique to measure the size of the campsites is to consider the area of compacted soil, typically centered on the campfire ring and areas where tents are commonly set up. As part of the 2011 inventory, the compacted area was estimated for each site and tabulated (Figure 13).

There were 16 sites that didn't appear to receive much use and the area didn't appear to be compacted. For those sites the compacted area was zero. There were some sites on Mack Brook, Hix Mountain, and Hix Mountain Spur A Roads

where the compacted area was estimated using the new site’s conceptual designs and the parking capacity rather than field estimates. The average compacted area was approximately 1,349 sq. ft. per site.

Campsite Density

The layout of where the campsites are currently located is a result of where users created them over time. Field reviews of these sites revealed that many of the locations were initially established in relatively flat areas on the banks of streams. As the access trails to these sites became worn, other sites were located on paths branching from these access trails and also on extensions from the sites, often further along the stream banks. Other sites were created on or near closed or abandoned Forest roads and skid roads. For analysis purposes, the density of campsites was estimated using two different methods. The first method considered each campsite’s proximity to the next closest campsite (Figure 14). The average distance between campsites is currently 210 feet and a considerable number (35) are within 100 feet of each other.

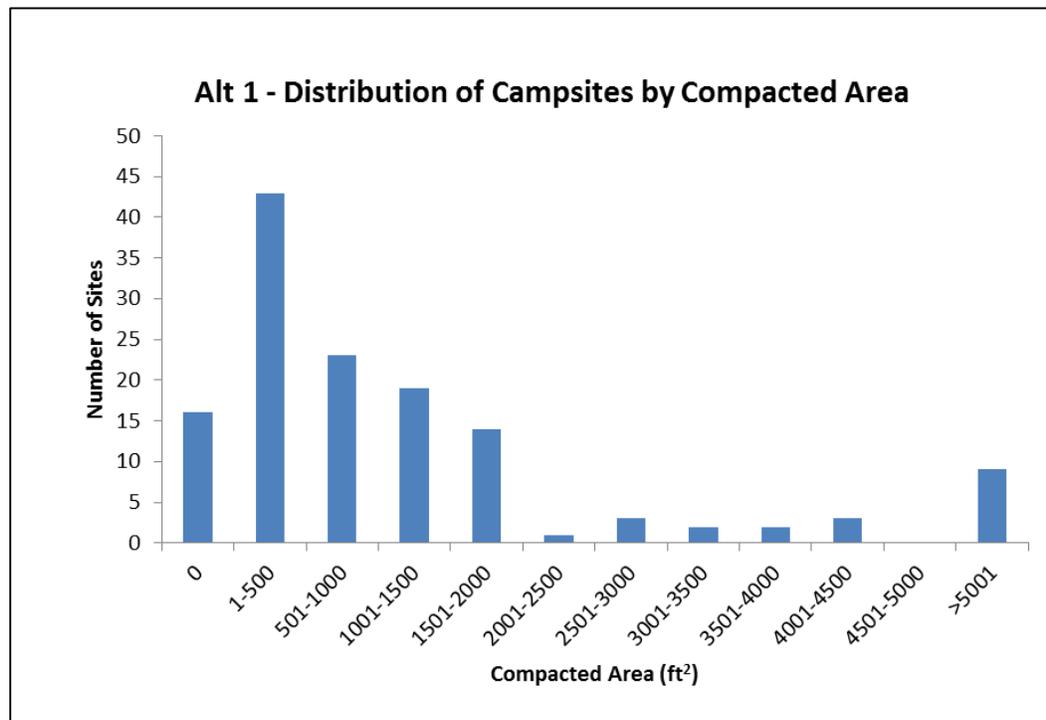


Figure 13. The current distribution of campsites by size (estimated compacted area).

Another way to assess campsite density is to calculate the number of campsites per acre. Roaded Natural is the predominant ROS classification for the Project

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Area. FSM 2330 (USDA-FS 2006) identifies a development density of about 3 family units per acre for the Roaded Natural ROS classification.

Using GIS, one acre circular buffers were created around each campsite. The boundaries of overlapping campsites were dissolved. The total acres was calculated from the dissolved polygons to represent the total acres with campsites (**Error! Reference source not found.**):

The average number of campsites per acre was calculated by dividing the total number of campsites by the acres within the one acre buffers.

$$135 \text{ campsites} / 105.8 \text{ acres} = 1.28 \text{ campsites/acre}$$

Therefore, if one assumes that one family unit occupies one campsite, the current site density is well within the guidelines for a Roaded Natural setting in total however there are many cases where the sites are in fairly close proximity to each other (i.e. 100 feet or less).

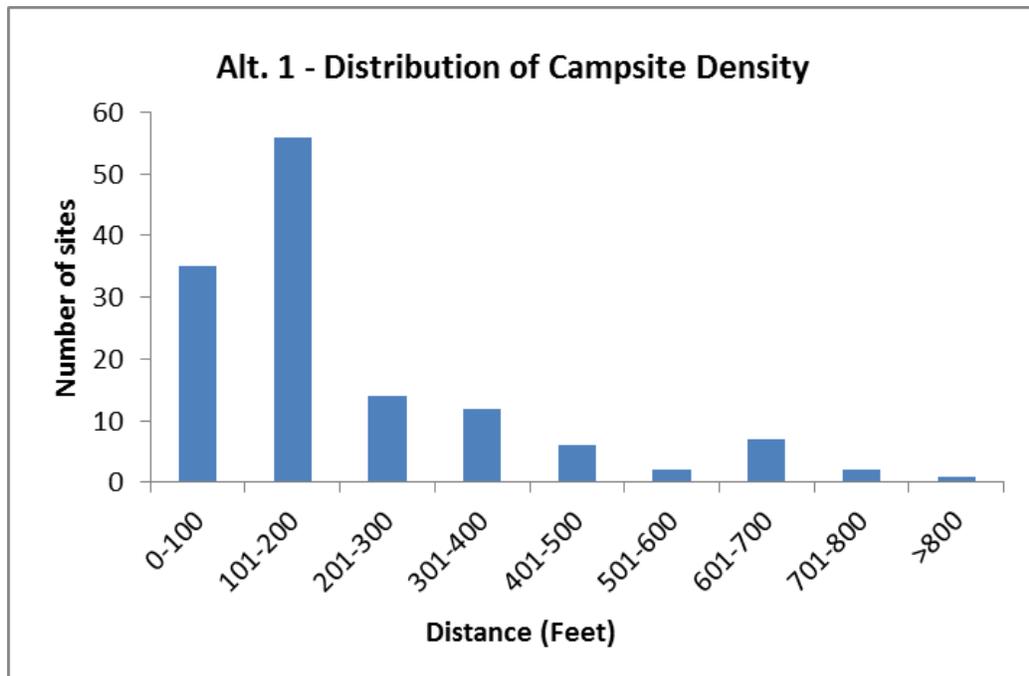


Figure 14. The current proximity of campsites to the next closest campsite.

Site Accessibility

The topography of Tripoli Road, which in many sections of the road is bench cut into a south aspect slope leading into drainages such as Eastman Brook, does not lend itself to a desirable location to create accessible campsites. In order to meet FS Outdoor Recreation Accessibility Guidelines (FSORAG), the access routes or

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foot paths to the sites should be designed to have a running slope or grade of 5 percent or less.

The 2011 field review of the existing campsites recorded the maximum grade of the slopes along access trails for most of the campsites (Figure 15). Only 51 of the 135 campsites meet the FSORAG guideline for less than 5% slope to the campsites. The average maximum slope that a camper would have to transit to access campsites is 19.2%. There are provisions in the FSORAG for providing rest intervals and exceeding this 5% guideline up to a maximum of 10% for 30 feet however, the presence of rest intervals was not recorded. Assuming best case the presence of adequate rest intervals and using the maximum of 10% slope includes another 14 sites for a total possible of 65 sites meeting the guidelines out of 135 total sites. In other words, over half of the current sites fail to meet accessibility guidelines.

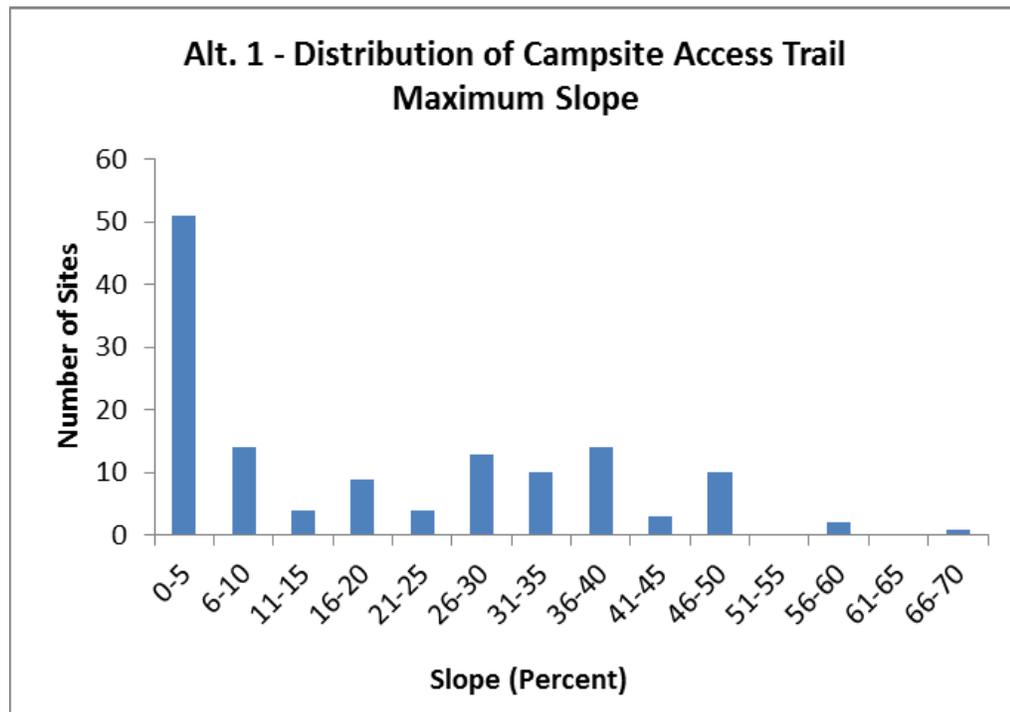


Figure 15. The accessibility of existing campsites illustrated by the maximum slope encountered along the site's access trail.

Proximity to Toilet Facilities

One of the challenges that currently exist for campers on Tripoli Road is the lack of reasonably accessible toilet facilities. FSM 2330 recommends that a toilet be located within 500 feet of campsites and that there be one toilet for every 35 people. Under Alternative 1, the current condition would continue with campers having the choice of using a primitive backcountry approach to managing their

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human waste by digging a hole and burying it or leaving their campsite, by foot or vehicle, and traveling to a portable toilet on Tripoli Road or driving further to a restroom such as is available at Russell Pond Campground or possibly off-Forest to a public or private toilet in a town at a business or municipal facility. There are two locations where the campground concessionaire contracts for portable toilets: 1) the CCC Camp and 2) across the road from their welcome station on the northwest end of Tripoli Road Campground. The proximity to toilets was assessed by calculating the straight-line distance from each campsite to the nearest portable toilets.

Given that the average distance to a toilet is 2,999 feet and only 20 of the sites are within the prescribed distance (per FSM 2330) of 500 feet or less, the current situation fails to provide adequate toilet facilities both in the number of toilets and the maximum distance required to walk or drive to a toilet.

Proximity to Refuse Containers

FSM 2330 provides the following guidance on Refuse and Garbage Disposal: Provide adequate numbers of receptacles, and position them to facilitate litter control. Large, centralized containers or clusters of containers are usually more cost-effective than scattered small containers; use large or clustered containers where practical. Since there are no refuse containers located at the campsites on Tripoli Road, campers are advised to use Leave No Trace principles and pack-it-in and pack-it-out. Six trash dumpsters and two recycling dumpsters for campers are provided at one centralized location near from the welcome station. Due to the geographic dispersion of the sites along Tripoli Road the distance to a dumpster is quite far for the vast majority of sites with the average (10,512 feet) approaching two miles (Figure 17).

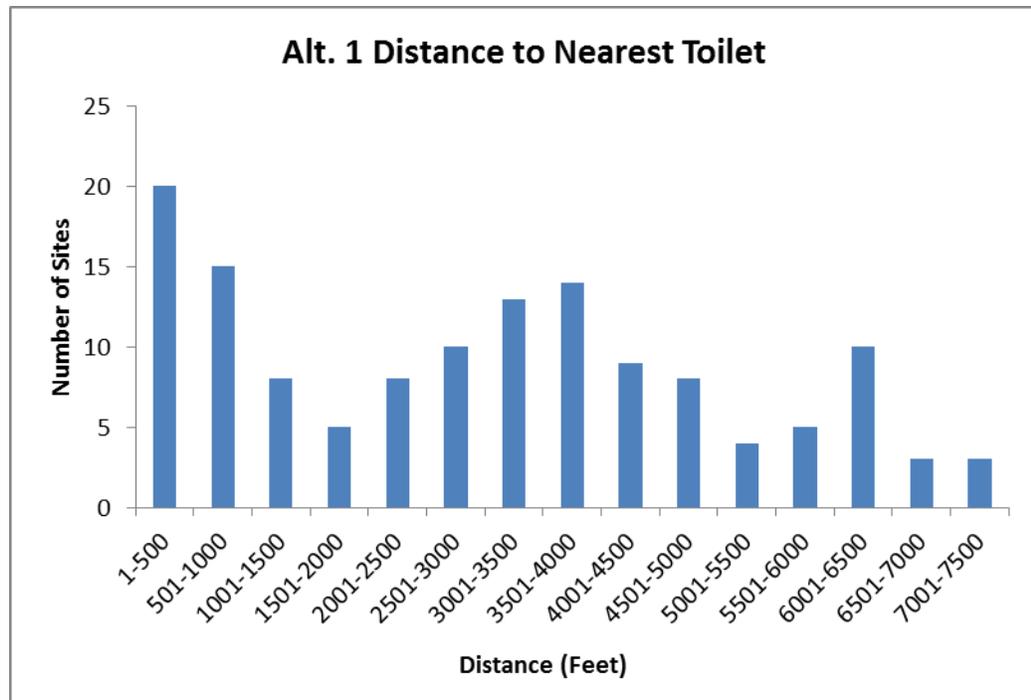


Figure 16. The current distance from campsites to the nearest portable toilet.

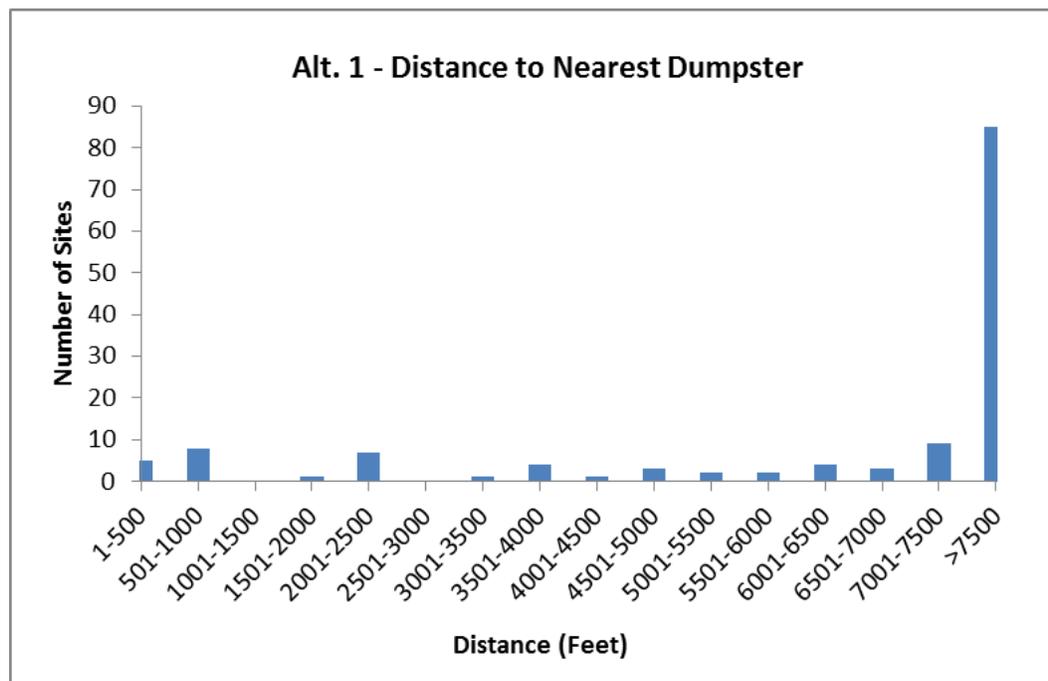


Figure 17. The current distance from campsites to the nearest dumpster.

Campsite and Campground Management Controls

Presently campers show up on Tripoli Road in a vehicle and, in most cases, pull over on the side of the road to park where either they can look for a campsite or go to a campsite they are already familiar with from a previous visit. The

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camping fee is paid at the reception station which is staffed during limited hours. Depending on which day of the week and the time the vehicle arrives, the visitors may or may not stop at the reception station while it was staffed with a concessionaire employee who collects the camping fee and provides information concerning where to camp, proper food storage, and issues the vehicle a tag indicating they have paid with the period of time covered.

Concessioner staff patrol the road, often by vehicle to perform compliance checks and ensure that vehicles have paid their camping fee. The control and management of the camping experience transitions to a combination of FS rangers, who patrol by vehicle and on foot to visit all of the occupied sites to educate visitors on the importance of proper food storage and leave no trace principles, and law enforcement personnel.

Through cooperative law enforcement agreements, both with the FS and the concessionaire, local police departments including Thornton, Woodstock and Waterville Valley and the Grafton County Sheriff provide law enforcement officers to assist in patrolling the area. These patrols assist with compliance and law enforcement. Following the weekend, the concessionaire is responsible for going through the campsites and picking up trash and cleaning the fire rings as necessary.

The absence of quiet hours and tolerance of large groups, often in a party type atmosphere, has contributed to adverse impacts on the resources, particularly evident at sites that are in close proximity to perennial streams which get the most use. During the 2011 campsite inventory, evidence of cutting and carving on live trees, trash and a lack of proper burying human waste was evident. These conditions are difficult to manage or actively control given that many of the sites are not easily observed unless hosts and patrols are on foot walking to each individual site.

Effect on Range of Opportunities Provided by Roadside Camping

Designated roadside campsites are found at various locations across the Forest. These include primitive sites, typically with some form of access for a vehicle space to park a vehicle and a campfire ring in a relatively flat, cleared area to set up a tent and campsite. The areas vary in their proximity to the parking area and their size. Alternative 1 would maintain the current range of opportunities provided by roadside camping. The contribution Tripoli Road makes in the range of opportunities is notable given the number and types of sites provided, much higher than other roadside camping locations. Also of note are the types of

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sites and the experience provided: a large number of Tripoli's sites are located on the banks of streams which are not commonly found at other roadside camping opportunities. Also of note is the size and capacity of some of the sites given the experience of many users having parties in the woods with their friends and families, sometimes growing in group sizes of large numbers concentrated at one area, such as when live bands have come in and set up to provide entertainment. Due to the number, types and sizes of the campsites on Tripoli Road, it would fall at the very upper range of development of roadside camping opportunities found across the Forest.

Comparative Distance of Campsites to Perennial Streams

As mentioned previously, there is a Forest Plan guideline that campsites should be located no closer than 100 feet from a perennial stream or pond. Using GIS, the distances were calculated and reveal that 54 of the 135 campsites, or 40%, are within this 100 foot guideline (Figure 18).

The average distance from campsites to perennial streams is 267 feet. Since these sites were user created, there are no designed erosion controls to prevent direct runoff into surface waters and to minimize sedimentation. Therefore these sites do not conform to Forest Plan guidance. In addition, the access trails to the campsites are often within 100 feet of streams and have no designed erosion controls or consideration for slope, which contributes to the potential for surface erosion depositing sediment into the streams.

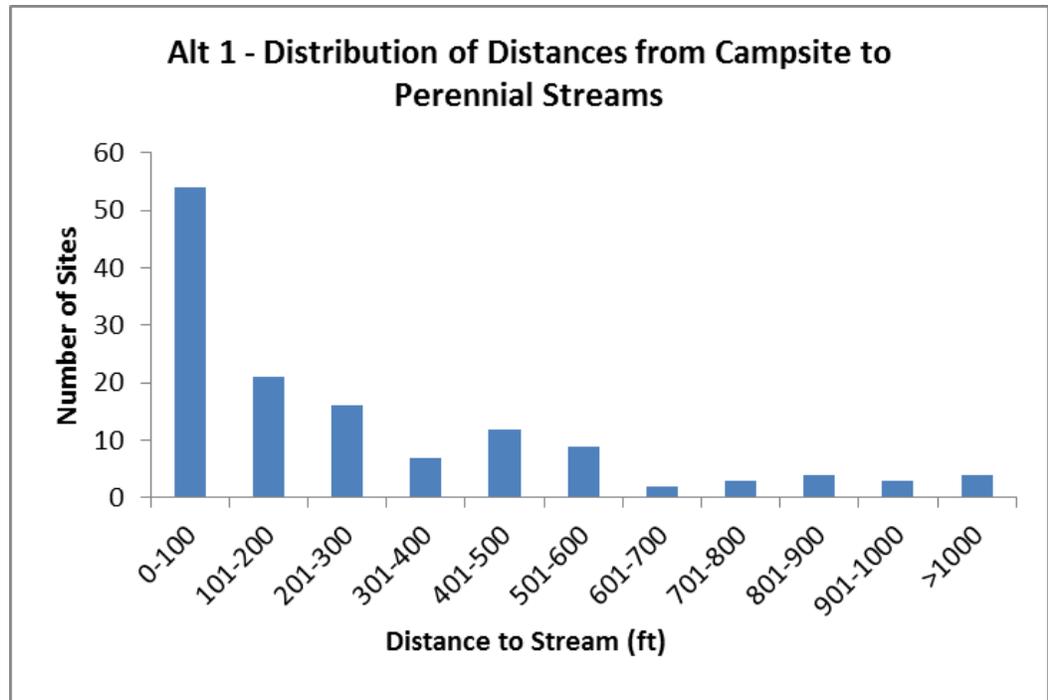


Figure 18. The number of existing campsites as a function of the distances to the nearest perennial stream.

Alternative 2 (Proposed Action)

Developed Recreation

Conformity with Recreation Opportunity Spectrum (ROS)

In Alternative 2, most of the campsites and infrastructure improvements would continue to be in a Roaded Natural setting with no change from Alternative 1. Four campsites would be located in Semi Primitive Motorized (SPM) setting at the end of Mack Brook Road. SPM areas are designated within 1/2-mile of primitive roads or trails used by motor vehicles; but not closer than 1/2-mile from better primitive roads. The primitive road in this case is Mack Brook Road and the better primitive road is Tripoli Road. Another criterion for the SPM Class is except for facilities necessary to protect fragile resources facilities should be limited to trail shelters, sanitary and safety need. All should be of simple design in native rustic-like materials. Site modification for facilities should be very minimal. This area of SPM has also been identified in Alternative 2 to have up to two new toilet facilities and wildlife-resistant garbage receptacles. Given these facilities have been identified as necessary for sanitation purposes; they also conform to the guidance for the SPM ROS Class.

Campground Development Levels

Alternative 2 proposes to increase the number and quality of the campground amenities when compared to Alternative 1. In the Proposed Action, the new campsites would be designed and constructed with consideration to providing dedicated off road parking, level, well drained areas for tents and a campfire ring, adequate toilet and refuse facilities, and management controls including a registration station. These improvements are notable in that they should raise the development level of the campground from 2 to 3, where facilities are available that about equally balance protection of the natural site and comfort of the users.

Number, Size, and Capacity of Sites

The Proposed Action includes the development of 38 campsites. The capacity of sites would range from two to ten vehicles. Capacity of the sites would be regulated by the amount of parking. Applying the assumption of 2.5 persons/vehicle, the capacity of those 38 sites is approximately 330 people, although more people could be present (Table 7).

Table 7. Number, size and capacity of campsites by Alternative.

		Alt 1 No Action	Alt 2 Proposed Action
Number of campsites (total/existing/new)	On Tripoli Road	112/112/0	0/0/0
	On Mack Brook Road	10/10/0	19/7/12
	On Hix Mountain Road	11/11/0	0/0/0
	On Hix Mtn. Spur A Road	2/2/0	19/2/17
	Totals:	135/135/0	38/9/29
Number of sites decommissioned		0	112
Capacity (people at all sites)*		Undefined	330
*Assumes an average of 2.5 people per vehicle and 100% capacity of available parking spaces.			

The capacity of the Proposed Action would result in a reduction in capacity of approximately 440 campers. This capacity is much less than the No Action Alternative which, based on concessionaire data, the 135 campsites could have had upwards of 750 campers on holiday weekends. Based on the conceptual designs, the compacted area per site of the Proposed Action would range from approximately 440 to 9948 ft² (Figure 19). The average compacted area would be 1,797 ft².

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The transition from Tripoli Road camping to the spur roads and the associated reduction in total campsites and camping opportunities would occur in phases. Closure of sites and the reduction in camping opportunities would result in displacement of some individuals and groups. Displaced campers could find other roadside camping opportunities on the Forest or they could be displaced to more developed private or on-Forest campgrounds. Forest staff would have to monitor the effects of displacement on other locations to ensure that resource impacts aren't resulting from the displaced campers.

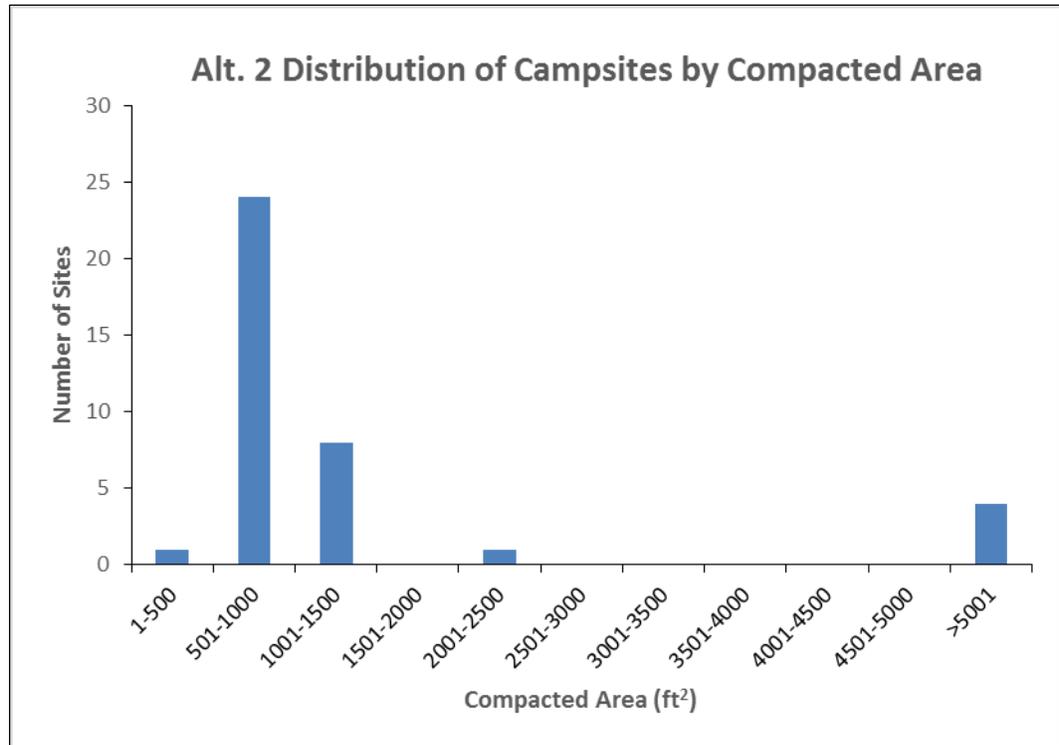


Figure 19. The distribution of campsites by size under the Proposed Action (Alternative 2).

Campsite Density

The average distance between sites in Alternative 2 of 213 feet did not change much from Alternative 1 where it was 210 feet (Figure 20). On closer inspection, the new sites that were less than 100 feet from each other in Alternative 2 were located across the road from each other on Hix Mountain Spur A and, when designed, would be laid out to provide adequate site screening. The campsite density of 1.20 campsites per acre proposed in Alternative 2 is well within the guidelines for a Roaded Natural setting of 3 family units per acre on average and is similar to the density of campsites under Alternative 1 (1.28 campsites per acre).

38 campsites / 31.7 acres = 1.20 campsites/acre

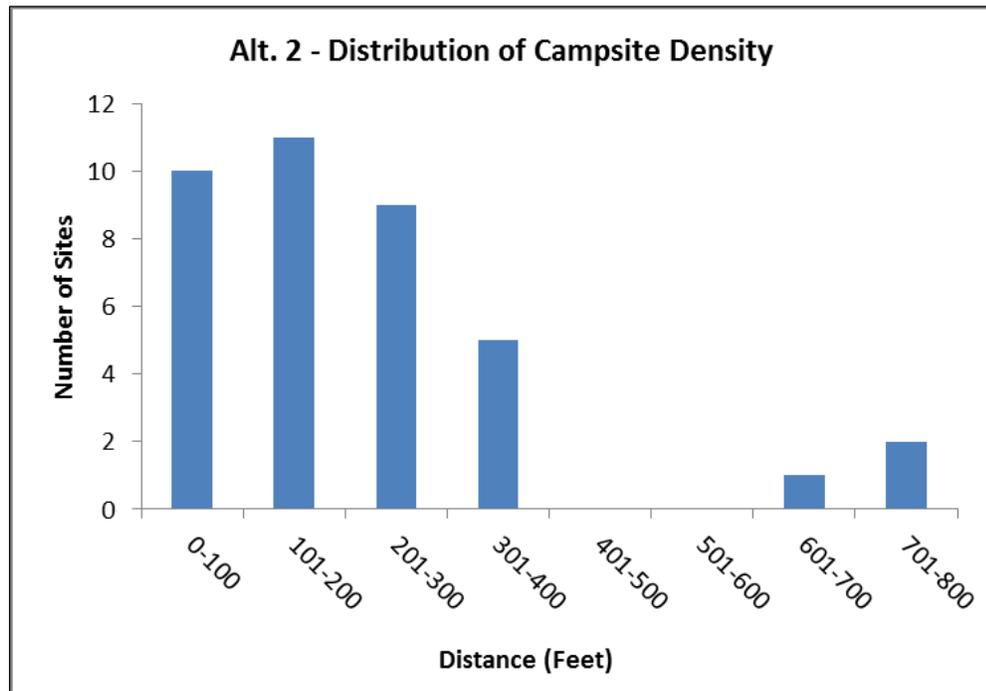


Figure 20. The proximity of each campsite to the next closest campsite under the Proposed Action.

Accessibility

During the interdisciplinary effort to identify the proposed new sites, slope and accessibility were considered and it is expected that most, if not all of the sites, would meet slope and surface accessibility guidelines. Similarly, the plans for accessible toilets facilities are proposed to ensure the facilities are compliant with the guidelines in the FSORAG wherever possible. Currently the Proposed Action only has conceptual designs for the proposed campsites which are not site specific. The goal for each of the new sites proposed for construction would be to meet FSORAG guidelines for accessibility wherever possible.

Proximity to Toilet Facilities

The maximum development level proposed by Alternative 2 includes 10 vault toilets with three toilets located on Hix Mountain Spur A Road, one at the welcome station, and six on Mack Brook Road. The number and locations of the toilets has gone through some changes in the refinement of Alternative 2 with the most recent evolution resulting from guidance found in FSM 2330 that campsites should be located within 500 feet of a toilet facility. The linear nature of the layout of campsites along two roads in Alternative 2 required adding toilets to the Proposed Action in order to better conform to this manual direction. As a

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result, the average distance to a toilet is 339 feet in the Proposed Action compared to 2,999 feet in Alternative 1, and 31 of the 38 campsites in Alternative 2 are within 500 feet of a toilet (Figure 21).

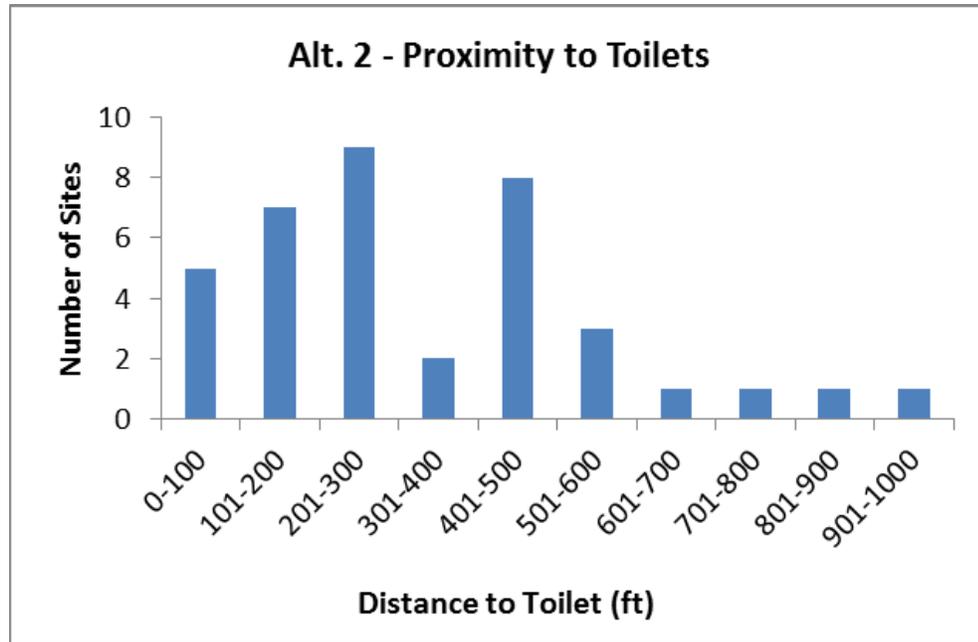


Figure 21. The distance from campsites to the nearest toilet under the Proposed Action.

Proximity to Refuse Containers

The maximum development level proposed by Alternative 2 includes nine wildlife-resistant dumpsters co-located at the sites identified for toilet facilities on Mack Brook Road and Hix Mountain Spur A Road. The exact number of trash receptacles would be determined using the adaptive management strategy outlined in Chapter 2 which responds to where specifically the needs develop as use patterns develop. The pads for each toilet location would be large enough to accommodate a dumpster if needed. Consequently the distance campers would have to travel to a trash receptacle is undetermined currently however it is safe to assume the distance would be greatly reduced and the convenience level of having one in relatively close proximity would be greatly improved compared to Alternative 1.

Campsite and Campground Management Controls

Alternative 2 would incorporate the following management controls through the design of the campsites and the campground:

- Camping and fires would be restricted to designated sites.

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- Campsite parking areas delineated with barricades to limit the number of vehicles that park at each site.
- Campsites would be laid out in such a way as to be visible from the road.
- Campsites would be numbered and easily identifiable for users and campground hosts and education and enforcement officials. Campers would be required to register for a specific site.
- Toilet facilities and trash receptacles would be located in close enough proximity to walk to or drive a short distance to, generally 500 feet or less.
- A centrally located camper information and registration station.
- Parking restrictions (no roadside parking) would be in effect on Tripoli Road, Mack Brook Road and Hix Mountain and Hix Mountain Spur A Roads in order to improve safety and discourage overflow parking from designated campsite parking areas.
- Campsites would be laid out in a more centralized and smaller geographic area which would reduce the area to manage, monitor and patrol.

Through these design features, it is expected that the camping experience for users would change in that campers would assume more personal responsibility and accountability for their actions. Moving the sites away from streams would change the experience for many who find that opportunity very pleasant and have shared their feelings during the scoping period and through a camper survey that was conducted in 2011. By making the campers more accountable for the condition of the site they occupy users may feel more compelled to follow the rules, keep their sites clean, properly store their food and garbage, and in some cases modify their behavior to tone down the extreme party environment which has been many users Tripoli Road camping experience. The decision whether or not to introduce quiet hours is outside the scope of the decision for this project. Establishment of quiet hours is a management decision which can be implemented in response to management concerns if and when they materialize. As stated in the Scoping Report, it is not the intent of this project to change the “no quiet hours” environment at Tripoli Road. Therefore in evaluating the changes to the social environment, it would be assumed that there would continue to be no quiet hours. Some campsites would host large groups which may continue being an avenue for a party environment for some groups. Enhanced visibility of the sites from the road could serve as a deterrent for

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extreme behavior which would be more easily and safely patrolled by law enforcement personnel.

Another critical aspect of the controls would include limiting group size based on the parking capacity for each campsite. This would require users to coordinate and plan their group's size and would inhibit open ended invitations which can over fill a site beyond its designed capacity. This control is complemented by the requirement for someone to register for the site and therefore be responsible for the condition of the site and increase accountability.

Effect on Range of Opportunities Provided by Roadside Camping

The increase in development level in Alternative 2 would move Tripoli Road closer to a more developed campground, distancing it from the more primitive level of development and lack of features and amenities associated with other roadside camping opportunities. Improving and delineating the tent pad surfaces, registering for sites at a reception station, restricting parking to designed parking areas, increasing the number of toilets and trash receptacles all contribute to a higher level of development which is much closer to a more fully developed campground. Tripoli Road Campground is currently a developed campground with roadside camping features. Alternative 2 retains the roadside nature of the campsites in part due to the lack of a well-defined campground entrance which is found at other more fully developed campgrounds.

Comparative Distance of Campsites to Perennial Streams

By design, the campsites in Alternative 2 would be located 100 feet or more from perennial streams. The GIS analysis of the campsites proximity to streams revealed that the average distance went from 267 feet to 390 feet (Figure 22). There are three campsites in the GIS analysis which were mapped in within the 100 foot minimum distance from streams guideline. The final location of these campsites would be adjusted so that they would be at least 100 feet from a perennial stream.

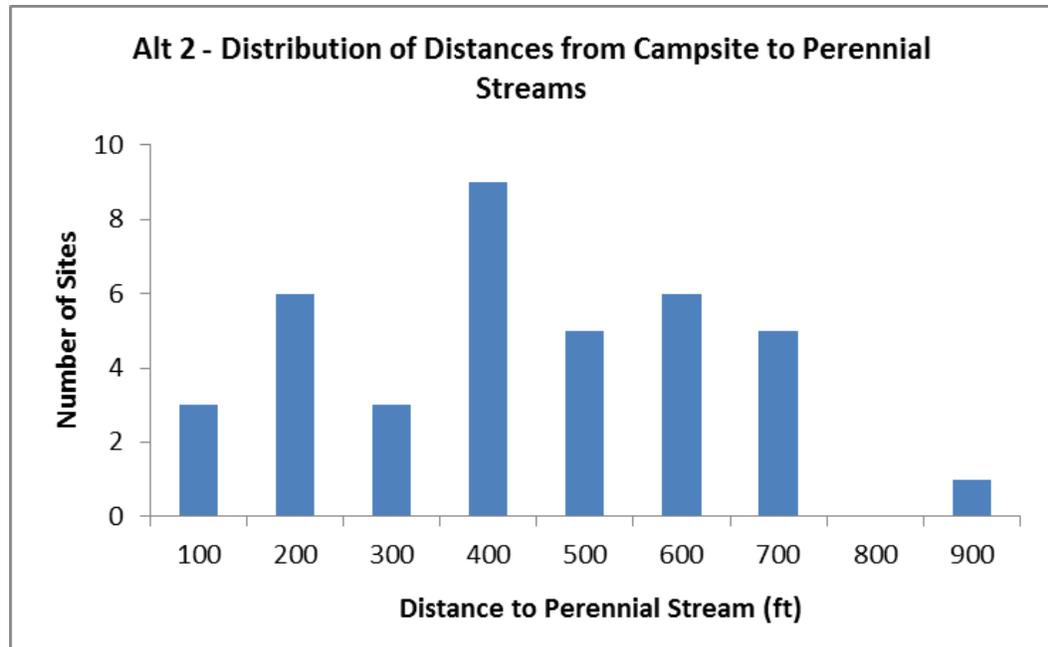


Figure 22. The number of proposed campsites as a function of the distances to the nearest perennial stream.

Dispersed Recreation

The effects to dispersed recreation within the Project Area resulting from the Proposed Action are expected to be minor and limited to the duration of project implementation. The primary dispersed recreation activities in the area are hiking, hunting and snowmobiling.

Hunting

Due to the regeneration and favorable habitat resulting from several of the vegetation management prescriptions that would be necessary to clear campsites and remove potentially hazardous trees under this alternative, the project area would experience an improvement in forage and support more game species including white tail deer, black bear and moose. Openings created by vegetation management would also improve the habitat available for more game birds such as ruffed grouse and woodcock. The immediate effects while active harvesting is taking place in regards to noise and the presence of logging equipment could deter these species from occupying the area until operations shut down or are removed from the area. For more detailed information on the direct and indirect effects of vegetation management on hunting please refer to the Wildlife section of this chapter.

Hiking

Under Alternative 2, the three hiking trails (Mt Osceola Trail, Mount Tecumseh and East Pond Trail) in the project area could be affected to some degree by effects related to the construction activity taking place further to the east on Hix Mountain Spur A and Mack Brook Roads in the form of construction vehicles passing the trailheads on Tripoli Road. The disturbances would be temporary and last only during project implementation with no noticeable residual effects to hiking.

Snowmobiling, Cross Country Skiing, and Mushing

Winter dispersed recreation activities occur primarily on the snowmobile trails in the area and may be interrupted during project implementation due to temporary road closures while campground construction is underway. Additionally, the removal of potentially hazardous trees within 75 feet of Tripoli Road may cause some noise disturbance and possibly some congestion or road closures along Tripoli Road and the Spur Roads while tree cutting and removal is taking place. These closures would be temporary and would only be in effect when necessary for public safety.

Climate Change and Recreation

In considering climate change and its potential effects on recreation activities in the project area, the activities that could be most impacted are over the snow travel in the form of snowmobiling, cross country skiing, snowshoeing and mushing. All of these activities are highly dependent on natural snow conditions and the most substantial research that has been completed concerning snowmobiling and climate change was done on data gathered from 13 sites across Canada (McBoyle, et al. 2007). By calculating against the base period (1961 – 1990) the authors estimate that the number of days with reliable snow cover for snowmobiling in the 2020's would be reduced from an average 68 days in Sherbrooke, Quebec, Canada by 42% (to 39 days) under a low emission scenario and as much as 58 % (to 29 days) under a high emission scenario. By 2050 the estimates were 47% and 95% reductions (to 37 and 3 days) respectively. The authors concluded that by 2050 the effect of climate change on snowmobiling would be devastating under the high emission scenario.

The effect of these changes in the overall precipitation regime would expose the built environment to rainfall and runoff that exceeds its current design specifications in most cases. Crossings on streams would see water levels now associated with the 100 year flood (1% return frequency) more often. The gravel

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and native materials that surface most roads and trails in the area would be subject to extreme events more frequently resulting in greater erosion requiring additional maintenance.

The changes to the winter recreation snow dependent roads or trails would include the upgrades to Hix Mountain Spur A Road and Mack Brook Road to make them passable to highway vehicles in Alternative 2. These upgrades should improve the drainage features and road surfacing which would make them more resilient to rain events.

Cumulative Effects

The cumulative effects analysis area extends the direct effects analysis area to include Russell Pond Campground and Osceola Vista Campground. This area would allow for a more comprehensive review of the effects in the area based on observed use of these campgrounds in times of peak demand or when campers seek to use the additional amenities offered, such as the showers, available at Russell Pond Campground. The temporal scope of the cumulative effects analysis would extend from 10 years before project implementation to 10 years beyond implementation in order to look at this project more holistically in terms of the use that has occurred in the past and would be expected following project implementation.

Table 8 includes projects that have occurred in the cumulative effects analysis area in the past 10 years, beyond routine maintenance to recreation sites, facilities, and trails. The cumulative effects of those actions combined with what is proposed in Alternative 2 would increase the level of recreation infrastructure development in the area. Tripoli Road would become more important as a recreation access road with the increase in development and the past and planned improvements to the road system, fixing many of the access issues that have plagued this area in the past. Repeat campground users of the area would witness a transformation from a very rustic and primitive experience to one much more closely aligned with what they would find in a higher developed campground except that many of the campsites would be able to accommodate groups and they would be spaced further apart. These users would also notice the absence of a brook or stream to camp next to and would instead have a more wooded setting surrounded by managed forest. Many of sites currently perceived by the public as “the good sites” due to their close proximity to Eastman Brook would be rehabilitated and closed to camping and campers

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would have to try new sites and evaluate them as part of a new camping experience.

Table 8. Past, Present, and Reasonably Foreseeable Future FS Activities in the Analysis Area.

Project	Year	Actions	Cumulative Effects
Tripoli Road Paving Project	Implemented summer season 2014.	Pave the existing road from the gate on I-93 side of Tripoli Road to its turn off with Russell Pond Road.	Improved the drivability of the primary access road into Tripoli Road Campsites.
Russell Pond Road Paving Project	Implementation planned summer 2016.	Repave the existing road with no widening or straightening.	Improves the drivability of the access road into Russell Pond Campground.
Mt Osceola Trailhead Toilet	Possible 2017 project.	Add a vault toilet building at the trailhead.	Increases the overall development level along Tripoli Road.

Wildlife

This section contains a summary of the analysis of effects contained in the Wildlife Resources Report for the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project (Weloth 2015a) and the Biological Evaluation of Potential Effects of the Proposed Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project (Weloth 2015b). For more detailed information and analysis concerning wildlife resources, see these reports in the project record.

This section describes the existing condition of wildlife resources within the affected environment and analyzes the potential direct, indirect, and cumulative effects on these resources from Alternative 1 (No Action) and Alternative 2 (Proposed Action) of the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project.

Affected Environment

The Project Area is dominated by low elevation northern hardwood, followed by scattered spruce-fir, oak-pine, and aspen-paper birch habitat types with few hemlocks. The mature age class dominates all the habitat types. Perennial streams Eastman Brook, West Branch Mad River, Mack Brook and portions of Talford, Little East Pond, East Pond, and Clear Brooks are located within the Project Area. There are no stands specifically identified as old growth forest and no outstanding natural communities within the Project Area. There are no alpine ravines, bog or wet sedge meadows. There are no caves, mines, tunnels, cliffs, talus, or prominent rock outcrops that would provide suitable woodland bat habitat in the Project Area. There are several permanent wildlife openings that provide important wildlife habitat.

Currently, there is a high level of human presence within the project area during the summer as a result of the 135 dispersed campsites. The current location and ongoing use of these campsites impacts water quality and the wildlife flyway-travel corridors along Eastman and Mack Brook in the Project Area. Human use has resulted in the trampling of riparian vegetation up to the stream banks and campers have cut down riparian trees and limbs over the years for firewood. Also, due to improper food storage by campers, the FS receives and responds to numerous human-nuisance black bear conflicts annually.

The nearest abutting private land to the west is located in the town of Thornton, and to the east in the town of Waterville Valley. Private land was considered when addressing habitat diversity, connectivity, and cumulative effects to wildlife resources. The abutting private land contains a mix of habitat types and age classes, paved and dirt roads, developments, and year-round residences. The private land contributes to habitat diversity, but not substantially to the 0 to 9 year-old regeneration age class by habitat type, especially northern hardwood. Future activities on private land are not expected to create substantial amounts of regeneration age class or early successional habitat such as aspen and paper birch and nor are any new campgrounds expected to be built. There is likelihood that some of the forested habitat or openings on private land could be converted into non-habitat including residential homes and other developments.

Common wildlife detected in the Project Area including moose, deer, bear, turkey, songbirds, red squirrels. There have been no documented presence of Canada lynx and habitat is currently considered unsuitable. There is no habitat for wood turtle, peregrine falcon, osprey, grebe, White Mountain fritillary

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butterfly, Appalachian tiger beetle, or incurvate emerald. There are relatively moderate amounts of potential suitable bat roost trees and foraging habitat, and water sources are present within portions of the Project Area.

Important Wildlife Habitats

White-tailed Deer and Moose Wintering Areas: Relatively minor amounts of deer and moose use has been documented in portions of the Project Area. Surveys indicate white-tailed deer and moose occupy and travel through portions of the Project Area throughout the year. There are no documented deer or moose wintering areas (yard) in the Project Area.

Black Bear-clawed Beech Trees: The Project Area contains American beech (*Fagus grandifolia*) that produces beechnuts, a hard mast food source for black bears and other wildlife. No beech trees clawed by foraging black bear were observed where campsites, toilets, or the welcome center would be relocated.

Water Sources, Riparian Areas, Woody Material: There are no known vernal pools in the Project Area. Russell Pond is located outside of the Project Area. The streams & riparian areas in the Project Area are important habitat and water sources for wildlife.

Ecological Indicators

Peregrine Falcon and Cliff Nesting Habitat: Breeding peregrine falcons (*Falco peregrinus anatum*) do not occupy the Project Area, nor are they expected to in the future because there is no cliff nesting habitat. Therefore, peregrine falcon as an indicator for cliff nesting habitat was not used for analysis for the Tripoli Road Project.

American Marten: The marten is suspected as potentially occurring in the Project Area (likely in winter when human presence is low), but no marten or their sign were documented in the Project Area during recent field reviews. The red squirrel (*Tamiascurus hudsonicus*) was noted in portions of the Project Area. The red squirrel is one of the prey-base for the American marten.

Management Indicator Species (MIS)

Table 9 shows the WMNF MIS and their representative habitat in the Project Area. MIS probability of occurrence was based on known documented occurrence, site-specific field reviews, and on suitable habitat present in the Project Area (suitable habitat was assumed occupied, unless surveys documented no occurrence).

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Direct and Indirect Effects

Table 10 shows the analysis area, temporal scope, and indicators used with rationale to measure the direct and indirect effects to wildlife resources (i.e. important habitats, ecological indicators (EI), and management indicator species (MIS)). The analysis area used for direct and indirect effects to wildlife resources is the Project Area. The temporal scope for analyzing direct and indirect effects is approximately ten years into the future from when the proposed Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project activities would begin because this is when wildlife resources would most likely be affected. Although not used as an indicator to measure effects to wildlife resources (human-wildlife conflicts), the amount of garbage occurring outside of dumpsters under the minimal level of development (i.e. reoccurring pattern of garbage scattered away from the dumpsters) would be used as a “trigger” indicating a need for adaptive management (i.e. need to install additional dumpsters at the full development level) in order to reduce potential human-wildlife conflicts (i.e. garbage attracting wildlife including nuisance bears).

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Table 9. WMNF MIS Probability of Occurrence within the Project Area.

MIS and Representative Habitat Condition	MIS and / or Habitat Occurrence Within the Project Area	MIS Population Trends
<p>Chestnut-sided Warbler Regeneration age class northern hardwoods (seedling/sapling stages, but includes some scattered regen softwoods).</p>	<p>There is a lack of regeneration age hardwood habitat in the Project Area. A chestnut-sided warbler was heard during field reviews of the Project Area.</p>	<p>WMNF bird monitoring and BBS (Sauer et al. 2014) data shows a significant decline. Hunt et al. (2011) shows a declining population in NH. The amount of regeneration age habitat on the WMNF and in New England has declined in recent decades.</p>
<p>Scarlet Tanager Mature hardwoods (northern hardwood, could include mixedwood).</p>	<p>Mature hardwood habitat present in the Project Area. Scarlet tanager not heard during field reviews or grouse surveys.</p>	<p>WMNF bird monitoring and BBS (Sauer et al. 2014) data shows a significant decline. Hunt et al. (2011) shows a declining population in NH.</p>
<p>Magnolia Warbler Regeneration age softwoods (spruce-fir, but could include some scattered regen age hardwoods).</p>	<p>Lack of regeneration age spruce-fir habitat in the Project Area. Magnolia warbler heard during field reviews and grouse surveys in the Project Area.</p>	<p>WMNF bird monitoring data shows a stable trend. Hunt et al. (2011) shows a stable population in NH. BBS (Sauer et al. 2014) data shows stable population in NH.</p>
<p>Blackburnian Warbler Mature softwoods (spruce-fir, scattered hardwoods).</p>	<p>Mature spruce-fir habitat in the Project Area. Blackburnian warbler heard during several field reviews of the Project Area.</p>	<p>WMNF bird monitoring shows no statistical trend, as well as stable visual data. Hunt (2011) shows a stable population in NH. BBS (Sauer et al. 2014) data shows declining population in NH.</p>
<p>Ruffed Grouse All ages of aspen / paper birch.</p>	<p>Aspen/birch in the Project Area. Ruffed grouse heard and seen during field reviews and annual grouse drumming surveys within the Project Area.</p>	<p>WMNF bird data shows a declining trend. Hunt et al. (2011) shows a declining population in NH. BBS (Sauer et al. 2014) data shows declining population in NH.</p>

BBS* = Breeding Bird Surveys

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Table 10. Analysis Area, Temporal Scope, and Indicators Used to Measures the Direct and Indirect Effects to Wildlife Resources.

Resource Indicators and Measure of Change	Indicator Rationale	Analysis Area with Rationale	Temporal Scope with Rationale
<p>Important Wildlife Habitats Changes in riparian area and water quality, bear clawed beech trees, and deer wintering areas. (Forest Plan Standards and Guidelines, Chap. 2, pp 24-36).</p>	<ul style="list-style-type: none"> • Addresses the Purpose and Need for the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project. • Addresses public comments related to the Purpose and Need of the Proposed Action. • Addresses public comments received related to the perceived loss of wildlife and habitat. 	<p><u>The Tripoli Road Project Area:</u></p> <ul style="list-style-type: none"> • The Project Area includes all the habitat types and home ranges of an array of wildlife species including EI, MIS, and TEPS species. Includes the area proposed for campsite relocation and hazard tree removal activities. • Project Area scale provides a measurable assessment of how the No Action and the Proposed Action contribute to Forest-wide objectives defined in the 2005 Forest Plan. 	<p><u>The future 10 years after Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project activities would begin because:</u></p> <ul style="list-style-type: none"> • The future ten years (2025) because this is when project activities would most likely affect wildlife resources. • Timeframe includes Forest Plan Standards and Guidelines that have and would protect soil, water, riparian, and wildlife and their habitats including snags for woodland bats.
<p>Ecological Indicators (EI) Changes in habitat connectivity (fragmentation). American marten (<i>Martes americana</i>) (Forest Plan FEIS, Chap. 3, p. 187-201).</p> <p>There are no breeding peregrine falcon territories (EI for cliff habitat) in the Project Area and none are expected in the future. Therefore peregrine falcon not used as an indicator.</p>			
<p>Management Indicator Species (MIS) Changes in amount and quality of habitat for 5 MIS birds (Forest Plan FEIS, Chap 3, pp 166-187).</p>			

Alternative 1 – No Action

Direct Effects

There would be no tree or vegetation removal, soil compaction, or increased human presence and construction noise associated with campsite relocation or existing campsite decommissioning, or welcome station, dumpster, and toilet installation, road improvements (ditching, grading, pull-outs), and/or hazard tree removal. Alternative 1 would not cause any direct effects of mortality, disturbance, displacement, or interruptions of wildlife travel to, from, or within the Project Area due to no associated campsite relocation or hazard tree activities at this time. Alternative 1 would not cause any direct effects on important wildlife habitats, EI American marten, or MIS birds in the Project Area. Annual maintenance of fallen and hazard trees along Tripoli Road and the spur roads would continue on a case-by-case basis independent of Alternative 1.

Indirect Effects

Under Alternative 1, the forest would continue to grow and mature and small openings in the forest canopy would likely result from trees dying or from pockets of blow down. Changes in the existing habitat types or age classes would occur through the natural processes of forest succession or through larger scale natural disturbances such as wind throw, ice storm, hurricane, fire, or infestation, which tend to be infrequent and sporadic occurrences in the New England Region (Lorimer and White 2003). The mature age class is dominant in the Project Area and Forest-wide, and is available habitat for EI American marten, MIS scarlet tanager and blackburnian warbler, and other wildlife like fisher that use mature habitat. Over time, Alternative 1 has a greater potential to develop large diameter cavity trees, snags, and accumulate downed woody material in the Project Area for wildlife habitat compared to the areas proposed for relocated campsites, dumpsters, toilets, the welcome center, and within the hazard tree removal zone proposed under Alternative 2.

However, there would be lost opportunities to relocate existing dispersed campsites out of the Eastman Brook riparian area to improve water quality and the riparian area (wildlife flyway-travel corridor). Opportunities to concentrate human use that would help facilitate better management of proper food storage and garbage disposal in bear country (hence less nuisance bear conflicts) would be lost. Thus, Alternative 1 does not meet the wildlife resources Purpose and Need (specifically water quality improvement and reducing human-wildlife

conflicts), and would not move the forest towards the Desired Future Condition identified in the Forest Plan (Forest Plan, pp. I-10, I-20-22).

Alternative 2

Direct Effects

The Proposed Action would cause the direct effects of increased human presence, noise, ground vibration, soil, rock, and vegetation disturbance during campsite relocation and existing campsite decommissioning, during welcome station, dumpster, and toilet (vault or temporary) installation, during road improvements (grading and pull outs) and hazard tree removal. There would be varying levels of increased human presence, construction noise and ground vibration from mechanized heavy equipment for the duration of these activities within localized portions of the Project Area. The activities under Alternative 2 would not occur in the entire Project Area all at the same time. No rock blasting and/or drilling are anticipated. No road paving is proposed under the minimal development level, but a paved road is proposed at the Welcome Center under the full development level. This minor amount of paving under the full development level would not cause substantial effects (travel barriers) to wildlife (i.e. amphibians and reptiles with smaller home ranges) (DeMaynadier and Hunter 1998; Gibbs 1998).

Direct negative effects during project implementation could include disturbance and / or displacement of amphibians, reptiles, insects, nesting birds, roosting bats, and denning mammals (or mortality if they could not move away during tree felling or ground disturbance activities). Activities could also alter wildlife travel patterns (including amphibians and reptiles and small and large mammals).

Season of Activity: The season when activities occur may directly affect wildlife and their habitat, especially during critical times in their life cycle such as breeding, rearing young, feeding, and winter survival. Individuals could be disturbed, displaced or killed during any season of implementation.

- Summer activities could affect species that use trees for roosting, nesting, cover, and foraging (including woodland bats and breeding birds MIS scarlet tanager, MIS Blackburnian warbler, and MIS ruffed grouse that use mature habitat), and ground disturbance could affect ground dwelling species (amphibians, reptiles, and insects).

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- Fall activities would affect fewer nesting species but could potentially affect autumn breeding species, including some amphibians, species that feed on fall mast (beechnuts) such as black bear, and small ground-dwelling mammals.
- Winter activities would not directly affect roosting bats because they would be hibernating elsewhere off the WMNF. Other species could be affected by winter activities, such as owls that breed in the winter. White-tailed deer gather (yard) in areas of lowland conifers where cover and warmer temperatures provide protection from the elements, and where they would be vulnerable to disturbance during this time of year. The Project Area contains minor amounts of softwood habitat used by deer but there are no yards within the Project Area. Species that use cavities in winter, such as chickadees and nuthatches, or species that den, such as squirrels and raccoons, could be affected if cavity trees were felled such as during hazard tree removal.
- Raptors start to breed in February with young fledging in June and July so they could be affected by both winter and summer activities should nest trees be removed. Fall and winter activities occur when ground conditions are dry or frozen to protect soil and water resources or to minimize bark damage on residual trees.

Under Alternative 2, hazard tree removal would occur during the fall and winter (typically Oct 15-March 15), which would avoid direct effects to summer roosting woodland bats.

No raptor nests were found at the sites proposed for campsite relocation, welcome center, dumpster, and toilet installation during site-specific surveys of the Project Area. If raptors such as the Northern goshawk (*Accipiter gentilis*) nested in these areas, they are often vocal and aggressive and would be detected during project layout or prior to implementation. Any active raptor nest that was detected would be protected under Forest Plan Standards and Guidelines.

Important Wildlife Habitats

White-tailed Deer and Moose Wintering Areas: There are no deer or moose overwintering areas in the Project Area. Few signs of deer and moose were noted during field reviews (fecal pellets and light browsing pressure). Campsite relocation activities and hazard tree removal would affect only a portion of a deer's home range, but would not prevent deer or moose from foraging, traveling to, from, or within the Project Area, the watershed, or private land.

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Relocating campsites out of the riparian would concentrate human use and would improve water quality and wildlife flyway-travel corridor along Eastman Brook. These large mammals have large home ranges, and appear to adjust quickly to disturbance or displacement from human presence (including noise) and may adjust their foraging behavior to avoid human activity. The Proposed Action would follow WMNF Forest Plan Standards and Guidelines that would avoid impacts to softwood habitat necessary to support wintering populations of white-tailed deer.

Black Bear-clawed Beech Trees: The Wildlife Habitat Project Design Feature that retains bear clawed beech trees would minimize the effect of a slight reduction of fall foraging habitat within the area proposed for campsite relocation under the Proposed Action. Project implementation in the fall could temporarily displace bears feeding in beech trees, but bears would likely move to adjacent habitat.

Riparian Areas and Water Sources: There are no vernal pools in the Project Area, therefore no effects would occur. There would be beneficial effects to water quality and riparian areas from campsite relocation out of Eastman Brook riparian area.

Ecological Indicators

American Marten: No marten or their sign were documented in softwood or hardwood habitats in the Project Area. The activities proposed under the action alternatives would not reduce the stand basal area beyond a suitable habitat condition for EI American marten (FEIS, p. 3-196). Mature habitat used by marten and red squirrel would remain within the Project Area and within the watershed. Campsite relocation under the Proposed Action would improve and protect riparian habitat (wildlife travel corridor for EI American marten and a foraging and flyway for woodland bats along Eastman Brook). Campsite relocation and hazard tree removal would affect only a portion of a marten's large home range, but would not prevent marten from foraging, traveling to, from, or within the Project Area or the watershed.

Alternative 2 would have potential for minor negative direct effects but greater beneficial effects to wildlife and their habitats compared to Alternative 1. The proposed campsite relocation, welcome center, dumpster, and toilet installation and road improvements would require varying amounts of vegetation and / or tree removal and earth disturbance under the minimal development level versus the full development level described under the Adaptive Management Plan for

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this proposed project. However, the magnitude of direct effects to wildlife resources between the development levels would not be substantially different.

Indirect Effects

Tree and vegetation removal and soil disturbance during campsite relocation, welcome center, dumpster, and toilet installation, and during road improvements and hazard tree removal activities would cause an indirect effect of a reduced amount of habitat for roosting, nesting, and denning wildlife within the affected areas. Indirect effects also include potential decreases in the amount of large woody material recruitment onto the forest floor, used by birds, small mammals, amphibians, and reptiles and insects in these areas and within the relatively narrow hazard tree removal zone (approximately 75 feet either side of the roads). However, the indirect effects of hazard tree removal would be localized and minor in magnitude. The same amount of hazard tree removal would occur independent of the development levels described for campsite relocation activities. Furthermore, the difference in magnitude of indirect effects on wildlife resources between the campsite development levels would not be substantial.

Wildlife Reserve Trees (live and dead standing cavity, snags, and down wood recruitment): Within the hazard tree removal zone (75 ft. from the edge of Tripoli, Hix Mountain, Hix Mountain Spur A, and Mack Brook Roads) there would be less dead and down wood on the forest floor compared to Alternative 1. Trees remaining outside of the hazard tree removal zone would continue to supply a component of standing cavity and snag trees and down woody material as trees die, branches break, and annual litter builds up. Forest Plan Standards and Guidelines (Forest Plan pp. 2-35 to 2-36) effectively retain wildlife reserve trees in untreated portions of the Project Area. WMNF Forest Plan Standards and Guidelines and design features ensure an adequate amount of cavity trees, snags, and dead and down wood is available for wildlife that use these habitat features including some amphibians, birds, mammals, and woodland bats. Riparian and Aquatic Standards and Guidelines (Forest Plan, pp. 2-24 to 26) would also maintain a 25 foot no cut riparian buffer around perennial streams, and retain dead and down logs. A beneficial indirect effect of the action alternative is improved water quality and riparian conditions as a result of relocating campsites out of the Eastman Brook riparian area.

Management Indicator Species

Table 11 shows the effects on the amount and quality of habitat for MIS within the Project Area. The mature age class (81 percent) is abundant across the WMNF (FEIS, p. 3-84) available as habitat to MIS scarlet tanager, blackburnian warbler, and ruffed grouse. Alternative 1 would not change the amount of mature age class MIS habitat. Mature trees would be removed for construction of the relocated campsites, installation of the welcome center and toilets, and in the hazard tree removal zones. However, mature forest would be maintained at the stand scale with some small canopy gaps. Alternative 2 would cause a relatively unmeasurable decrease in the existing high amount of mature age class habitat within the Project Area compared to Alternative 1.

Table 11. Effects of Alternatives on the Amount & Quality of MIS Habitat.

Management Indicator Species	Alternative 1	Alternative 2
Chestnut-sided Warbler Regeneration age N. hardwood.	No change in the lack of northern hardwood 0 to 9 yr. old regeneration age class habitat in the analysis area.	Minor increase in open canopy habitat and minor decrease in amount of mature age class habitat.
Scarlet Tanager Mature Northern hardwood	No change in existing high amount of mature hardwood age class habitat that dominates the analysis area.	Minor decrease in amount of mature hardwood age class habitat at the relocated campsites and within the hazard tree removal zone.
Magnolia Warbler Regeneration age Softwoods	No change in amount of softwood regeneration age class habitat in the analysis area.	Minor decrease in amount of mature softwood age class habitat at the relocated campsites and within the hazard tree removal zone.
Blackburnian Warbler Mature Softwoods	No change in the amount of mature age class habitat that is already dominating the analysis area.	Minor decrease in amount of mature softwood age class habitat at the relocated campsites and within the hazard tree removal zone.
Ruffed Grouse All age classes Aspen / Birch.	No change in the amount of aspen-birch habitat.	Minor decrease in the amount of aspen-birch habitat at new campsite relocations.

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Alternative 2 meets the Purpose and Need related to wildlife resources by relocating human use out of the Eastman Brook riparian area thus improving water quality and riparian habitat (wildlife flyway-travel corridor), and reducing potential human-wildlife conflicts with better located campsites and dumpsters.

Cumulative Effects - Wildlife Resources

The analysis area for cumulative effects on wildlife and their habitat is the Eastman Brook and Upper Mad River Watershed (also includes nearest abutting private land). This analysis area boundary was used because it:

- Includes the landscape scale designed with logical watershed boundaries with habitat of MIS, TEPS, and common wildlife species.
- Large enough to address habitat connectivity, wildlife travel, & migration corridors to and from private land and the Project Area.
- Addresses habitat diversity at the landscape level (includes rivers, streams, lake, paved and dirt roads, developed areas, manicured lawns, and a mix of open and forested habitat on private land).

The temporal scope for cumulative effects on wildlife and their habitat is the past and future ten years (2005-2025) because this timeframe includes Forest Plan Standards and Guidelines that would protect wildlife and their habitat. Table 12 shows the past and future FS activities in the cumulative effects analysis area that includes the temporal scope.

Table 12. Past, Present, and Reasonably Foreseeable Future FS Activities in the Cumulative Effects Analysis Area.

Project	Year	Actions	Cumulative Effects
Wildlife Opening Maintenance	Ongoing implementation.	Mowing permanent openings to maintain grass/forb habitat for wildlife value.	These projects did not add any cumulative effects to wildlife resources.
Russell Pond Road Paving Project.	Implementation planned summer 2014.	Pave the existing road with no widening or straightening.	

Alternative 1 - No Action

Alternative 1 would not cause negative direct or indirect effects to EIs American marten, MIS, deer or moose habitat, bear clawed beech trees, or TEPS. Therefore,

Environmental Assessment

Alternative 1 would not add any cumulative effects to these wildlife resources from past, present, or future FS actions in the analysis area and temporal scope.

However, Alternative 1 would not concentrate human use, nor improve water quality or riparian habitat (wildlife flyway-travel corridor) along Eastman Brook. Alternative 1 would perpetuate the already impacted water quality and riparian habitat, and perpetuate the existing high levels of nuisance bear encounters due to improper food storage in the analysis area. Alternative 1 would not move the Forest toward the wildlife objectives outlined in the Forest Plan in the reasonably foreseeable future (Forest Plan, pp. 1-10, and 1-20 to 1-22).

Alternative 2

The activities under the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project have or would use a similar mix of Standards and Guidelines that protected riparian and wildlife habitat described in the Forest Plan. Therefore, Alternative 2 would not add any cumulative effects to wildlife resources from past, present, or foreseeable future FS actions in the analysis area and temporal scope.

Important Wildlife Habitats

White-tailed Deer and Moose Wintering Areas: The Forest Plan Standards and Guidelines that ensure deer wintering habitat is maintained Forest-wide (Forest Plan pp. 2-34, G-6) would be implemented. The Proposed Action would not add any adverse cumulative effects to deer or moose wintering habitat.

Black Bear-clawed Beech Trees: Past, present, and future timber harvesting may have or could result in a minor reduction of bear-clawed beech trees surrounding the analysis area. The Forest surrounding the Project Area contains substantial amounts of mature hardwood, which provides habitat for wildlife including black bears. The Project would not add adverse cumulative effects to bear-clawed beech trees in the analysis area. Harvesting and residential development on private lands abutting the Project Area has most likely affected bear-clawed beech trees, and minor reduction is likely to occur with future development on private land.

Riparian Areas and Water Sources: The presence of fresh water year-round is essential to various insects, amphibians, turtles, waterfowl, mammals, and numerous aerial feeding birds and woodland bats, especially when surrounded by mature closed canopy forest. Alternative 2 would maintain the quality of

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stream and riparian habitats, and it would not add any adverse cumulative effects to these habitats.

Migratory Birds

Alternative 2 would not have a measureable negative effect on Neotropical migratory bird populations, and thus would comply with the Migratory Bird Treaty Act that was designed to forestall hunting of migratory birds and the sale of their parts and was not meant to regulate timber harvesting or tree removal.

Ecological Indicators

American Marten: The Proposed Action would not add any adverse cumulative effects to marten or their habitat. Instead, the Proposed Action would provide long-term beneficial cumulative effects by concentrating human use and improving water quality and riparian habitats for marten and red squirrel (prey base).

Management Indicator Species Determinations

Table 13 summarizes the effects of Alternative 1 (No Action) and Alternative 2 (Proposed Action) on WMNF MIS within the Project Area. The effects to MIS and their habitat are within the range of effects described in the FEIS (USDA-FS 2005b). The MIS framework is useful for indicating the effects of Forest Plan implementation. MIS may be affected by individual project actions or no actions. Viable populations of MIS are to be maintained or monitored in the WMNF Forest-wide planning area.

MIS summary: Based on relatively minor, localized, short-term direct and indirect negative and long-term beneficial effects to wildlife and their habitat, Alternative 2 would not add adverse cumulative effects to MIS in the analysis area. Cumulatively, campsite relocation would have a beneficial effect of concentrating human use in the Project Area and improving water quality and riparian habitat (wildlife flyway-travel corridor) along Eastman Brook likely used by MIS.

Rationale: The Project Area would only affect about 0.1% of the entire 800,000 acre WMNF. The Proposed Action would cause a relatively minor decrease in the amount of mature age class hardwood and softwood habitat in the Project Area, possibly affecting only a few breeding pairs of MIS scarlet tanager, blackburnian warbler, and ruffed grouse. The Proposed Action would not interrupt the processes necessary for genetic interaction for maintaining population viability of MIS within the Forest-wide planning area.

Table 13. Effects of Alternatives on MIS and Habitat in the Analysis Area.

WMNF MIS	Alternative 1	Alternative 2
Chestnut-sided Warbler	Alternative 1 would not adversely affect population trends and viability of WMNF MIS within the Forest-wide planning area.	Would cause a relatively minor decrease in the amount of dominant mature age class habitat at the relocated campsites and hazard tree removal zone.
Scarlet Tanager		
Magnolia Warbler		Alternative 2 would not adversely affect population trends and viability of WMNF MIS within the Forest-wide planning area.
Blackburnian Warbler		
Ruffed Grouse		

BATS

A concentrated effort to remove hazard trees is proposed for fall and winter. Hazard tree removal is planned to occur outside of the summer roosting period. Therefore, there would be no direct effects of disturbance, displacement, or mortality because bats would not be present at that time (USDI-FWS 2015b). The potential effects of mortality, disturbance or displacement of individual bats and reduction in the amount of summer bat roosting habitat under the Proposed Action would likely be relatively minimal because:

- Woodland bats (i.e. little brown bat) oftentimes select roost sites in open areas that receive ample solar radiation (Sasse 1995). Some bat species rely on solar radiation to help keep warm (e.g. bats are often found in homes attics or in snags in openings where they are exposed to direct sunlight for much of the day). Much of the forest habitat that would be affected by the Proposed Action has a closed canopy and would not provide suitable roosting habitat sites for bat species seeking a site exposed to the sun. Relocating campsites outside of the riparian area would improve bat forage flyway areas.
- Hazard tree removal is proposed for fall and winter (Typically Oct 15-March 15).
- Only a portion of the Project Area is proposed for tree removal for campsite relocation, toilet and welcome center installation and hazard tree removal, leaving a large area of mature habitat available as bat

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roosting habitat. Upon completion of the project, the surrounding forest would still retain adequate numbers of mature trees and live and dead snags as roosting habitat for woodland bats, including the Northern long-eared, tri-colored, big and little brown bats (Sasse 1995, Veilleux 2005, Veilleux and Reynolds 2005, USDA-FS 2005a).

- Research on the WMNF found that bats often forage near water bodies, trails, roads, and forest openings (Krusic et al. 1996), presumably because insect prey may be more abundant in more open habitats and maneuvering in the air is easier. WMNF data (Millen 2011) indicates snags are not a limiting factor on the WMNF.
- There are no known management activities that are directly affecting WNS on or near the WMNF (USDA-FS 2012a).
- Most of the common woodland bats that summer roost in trees prefer to use snags (Sasse 1995, Veilleux 2005, Veilleux and Reynolds 2005). FP Standards and Guidelines would protect snags and retain wildlife trees (USDA-FS 2005a, pp. 2-35-36) and minimize the potential reduction of roost habitat.

Cumulatively, past management activities in the analysis area did not add any additional stress to woodland bats, because the disease was unknown prior to 2007. The potential disturbance or displacement of individual bats or reduction of summer roosting habitat from past, future, and proposed activities would be minimal. Very few individual bats would likely be disturbed or displaced from summer/fall activity because the Project Area is relatively very small and annually less than 1% of the WMNF is actively harvested each year and only a portion occurs when bats would be present. Tree removal under the Proposed Action would result in a very minor reduction in the amount of potential roost trees, but there are thousands of potential roost trees within and near the analysis area that would still be available to woodland bats during and upon completion of harvesting and other proposed activities. From a cumulative effects standpoint, it is essential to emphasize that WNS has not been linked in any way to general forest or recreation management practices or any activities included in the Proposed Action. No hibernacula have been found on the WMNF. All proposed activities under Alternative 2 would occur outside known documented cave areas, which are off-Forest, with no direct, indirect or cumulative effects on hibernacula (USDA-FS 2012a).

Private Land: The abutting private land currently contributes to habitat diversity via a mix of habitats. Activities on private land have and would affect wildlife

and their habitat (altered habitat, loss of habitat, improved habitat). The type and amount of activities that occurred on private land in the past ten years are likely to continue over the next ten years.

In summary, future FS projects within the analysis area would use similar Standards and Guidelines and activities on private land would likely follow State of New Hampshire Best Management Practices for protection of aquatic and terrestrial wildlife resources. Thus, Alternative 2 would not add any adverse cumulative effects to wildlife or their habitat in the cumulative effects analysis area.

Summary of Direct, Indirect, and Cumulative Effects to Wildlife Resources

Alternative 1

The No Action alternative would not cause any negative effects of disturbance, displacement, and / or mortality of wildlife from increased human presence, noise, and habitat alteration or improvements because no Federal activities are proposed in the Project Area at this time. However, under the No Action alternative there would be lost opportunities to relocate campsites out of the Eastman Brook riparian area to improve water quality and the wildlife flyway-travel corridor (Table 14). Alternative 1 does not meet the Purpose and Need for wildlife resources to improve water quality and riparian habitat and reduce human-wildlife conflicts and would not move the forest towards the desired future condition outlined in the Forest Plan.

Alternative 2

The Proposed Action alternative would cause negative direct effects of disturbance, displacement, and / or mortality of wildlife from increased human presence, noise, and habitat alteration or improvements during implementation. These direct effects would be relatively minor and short-term (except mortality) and localized within the Project Area. Long-term beneficial indirect effects include relocating and concentrating human use and providing more accessible toilets thereby improving water quality and riparian areas (wildlife flyway-travel corridor) (Table 14).

The Proposed Action would maintain habitat connectivity for wildlife travel to, from, or within the Project Area and the watershed, and would not cause fragmentation. The Proposed Action would not introduce new or increase predators known or expected in the Project Area (barred owl, red-tailed and broad-winged hawks, porcupine, raccoon, mink, weasel, marten, fisher, fox, coyote, bear, bobcat), nor alter existing predator-prey relationships. These

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determinations were based on extensive knowledge of wildlife and habitat occurrences in the Project Area and surrounding watershed from (but not limited to) multi-year/seasonal surveys, database checks, and Forest-wide monitoring.

Table 14. Summary of Direct, Indirect, Cumulative Effects to Wildlife Resource Indicators by Alternative.

Indicator	Alternative 1	Alternative 2
Important Habitats	Perpetuates continued negative impacts to water quality and riparian habitat (wildlife flyway-travel corridor). No effects to bear clawed beech or deer winter areas.	Relatively minor, short-term, and localized direct and indirect effects, but no cumulative effects to important habitats.
Ecological Indicators	Perpetuates continued negative impacts to water quality and riparian habitat for EI American marten.	Relatively minor, short-term, and localized direct and indirect effects, but no cumulative effects to ecological indicators or their habitat. Long-term beneficial indirect effects of improved water quality and wildlife flyway-travel corridor along Eastman Brook for EI marten.
MIS	The Alternatives <i>“would not adversely affect population trends or viability of WMNF MIS in the Forest-wide planning area.”</i>	

Alternative 2 has potential to cause more negative (yet minor) direct effects to wildlife and their habitat because more campsites would be relocated compared to Alternative 1. However, hazard tree removal during the fall and winter, concentrating human use (reducing nuisance bear incidence), and the previously cited Forest Plan Standards and Guidelines and design features would protect and maintain wildlife and their habitat. Therefore, the negative direct effects to wildlife and their habitat would be relatively minor in magnitude, localized, and short-term in duration (except possible mortality). Furthermore, Alternative 2 would cause greater positive indirect and long-term beneficial effects to wildlife habitat diversity because it would concentrate human use away from Eastman Brook riparian area (wildlife flyway-travel corridor) and improve water quality. Although Alternative 2 could cause relatively minor, short-term, and localized direct and indirect effects to Ecological Indicators, Management Indicator Species, or TEPS species or their habitats, the Proposed Action would cause no

cumulative effects to wildlife resources. The direct, indirect, and cumulative effects are within the range of effects analyzed for wildlife resources described in the FEIS. Thus, Alternative 2 best meets the intent of the goals and objectives for wildlife habitat management stated in the Forest Plan (p 1-22, 2-34).

Threatened, Endangered, Proposed Species and Sensitive Species

This section summarizes the analysis presented in the Biological Evaluation of Potential Effects of the Proposed Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project (Weloth 2015b; BE). The BE is available in the project record.

Federally-listed Threatened, Endangered and Proposed species (TEPS) are managed under the 1973 Endangered Species Act (ESA), as amended, Section 7, 50 CFR 402. Regional Forester Sensitive Species (RFSS) are plants and animals identified by a Regional Forester when population viability is a concern.

The process used and the sources examined to determine potential occurrence of TEPS or RFSS presence are listed in the BE. During Forest Plan Revision, best available science was used to evaluate TEPS/RFSS species and species viability. Information gathered during the species viability analysis was used in updating the Forest RFSS list. The BE for this project incorporates by reference information on species viability (USDA FS. 2005c, Appendix F) and TEPS/RFSS species used during Forest Plan revision including the Biological Evaluation of the White Mountain National Forest Land and Resource Management Plan Revision (USDA FS 2005b, Appendix G).

Potential habitat occurs within portions of the Project Area for two Federally-listed threatened species, the Canada lynx and the Northern long-eared bat (Northern myotis). There is also habitat for the following Regional Forester-listed sensitive species: little brown bat, tri-colored bat, *Ameletus* mayflies, Goldie's woodfern, Northern Adder's-tongue, and butternut.

There are minor amounts of marginal suitable habitat for Northern bog lemming in the wet spruce/fir/riparian areas of the Project Area. There are portions of fast moving headwater streams in the Project Area as habitat for RFSS Ameletid mayflies. No Federal-listed threatened small whorled pogonia (*Isotria medeoloides*) has been documented in the Project Area. There are documented occurrences of individual butternut trees along a localized portion of the Tripoli Road within the Project Area, which would be protected with no cut buffers during project activities including hazard tree removal. Habitat exists for several

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other RFSS plants, but surveys found no other TEPS of plants. The effect of this project on RFSS and TEPS is discussed in more detail.

Environmental Effects

Federally Threatened, Endangered, and Proposed Species (TEPS)

Canada Lynx (*Lynx canadensis*)

The analysis area for Canada lynx was LAUs 8 and 11 which includes the Project Area. This area was used because it addresses habitat diversity and connectivity at the landscape level. The temporal scope for direct and indirect effects was the duration of project implementation because that is when effects would occur. The past / future 10 years (2005-2025) was used for cumulative effects because that timeframe includes Forest Plan Standards and Guidelines that have and would protect wildlife habitats.

Alternative 1 – No Action

Determination: There would be no direct, indirect, or cumulative effects to Canada lynx under this Alternative. Alternative 1 would cause “no effect” to individual Canada lynx or critical habitat.

Alternative 2 – Proposed Action

Determination: There would be no direct, indirect, or cumulative effects to Canada lynx under this Alternative. Therefore, Alternative 2 would cause “no effect” to individual Canada lynx or critical habitat and Alternative 2 is consistent with the Standards and Guidelines outlined in the Forest Plan for protecting Canada lynx habitat on the Forest (USDA-FS, 2005a).

RATIONALE:

Determination was based on multi-year site-specific Project Area field reviews, Forest-wide wildlife surveys, prior FS BEs in the same and adjacent LAUs. The BE used best available information from internal and external databases, scientific literature reviews, and communications with internal and external professional biologists.

- The USDI-FWS (2009) designated lynx critical habitat in a Federal Register Notice, which did not include NH or the WMNF.
- In Winter of 2012, NHFGD Biologist documented lynx tracks along the Kinsman Trail in high elevation spruce/fir habitat in Franconia approximately 15 miles northwest of the Project Area. In 2011, four lynx kittens were documented in two locations in northern Coos County in

Pittsburg, NH (approx. 100 miles north of the Project Area). In winter of 2006, lynx tracks and scat were found on private land north of US Route 2 in the Town of Jefferson, NH (approx. 45 miles northeast of the Project Area). DNA tests confirmed the scat was from one female lynx (USDA-FS 2006a, b). Breeding populations of lynx may be reoccupying a portion of their former range in NH (which includes the WMNF) after having been absent during the later portion of the 1900s.

- However, lynx or their sign were not detected via multi-year surveys in the Project Area. Also, no sign of lynx was documented during past years of winter tracking on the Walker Brook Wildlife Monitoring Transect (located west in LAU 13) or on the Lost River Transect (located north of LAU 13) (USDA-FS unpublished data).
- Canada lynx have a relatively large home range and the No Action or Proposed Action would not prevent lynx movement across the landscape. The Proposed Action (including hazard tree removal) would adhere to Forest Plan Standards and Guidelines that protect lynx habitat. The Proposed Action would maintain habitat for snowshoe hare and red squirrel (lynx prey base).
- The Proposed Action would relocate existing campsites out of the Eastman Brook floodplain/riparian area (improving potential wildlife travel corridor) and concentrate the existing high levels of dispersed human activity.

Northern Long-eared Bat (NLEB; *Myotis septentrionalis*)

The potential effects of the Tripoli Road Campsite Relocation and Roadside Hazard Tree Removal Project on Federally-listed threatened Northern long-eared bat (NLEB) was addressed in the “Biological Assessment for Ongoing Project Activities With Determinations of No Effect or May Affect, Not likely to Adversely Affect for the Northern Long-eared Bat on the Green Mountain National Forest and White Mountain National Forest” (USDA-FS 2015). See the BA for complete details on analysis of effects on NLEB.

Alternative 1 – No Action

Determination: There would be no direct, indirect, or cumulative effects to NLEB under this Alternative and Alternative 1 would cause “no effect” to individual NLEB.

Alternative 2 – Proposed Action

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

Determination: Implementation of Alternative 2 would have potential direct, indirect, and/or cumulative effects to the NLEB. Alternative 2 “may affect, but is not likely to adversely affect” individual NLEB. The potential effects of Alternative 2 to NLEB from the campsite relocation portion of the project were addressed in the “Biological Assessment for Ongoing Project Activities with Determinations of No Effect or May Affect, Not likely to Adversely Affect for the Northern Long-eared Bat on the Green Mountain National Forest and White Mountain National Forest” (USDA-FS 2015). See the BA and the USDI-FWS concurrence letter on the BA (USDI-FWS 2015b) for more details. Consultation on the hazard tree removal portion of the project is pending.

Regional Forester-listed Sensitive (RFSS)

RFSS Woodland Bats: Little Brown Myotis (*Myotis lucifugus*), and Tri-colored Bat (*Perimyotis subflavus*)

The analysis area for direct and indirect effects to RFSS woodland bats little brown myotis (*Myotis lucifugus*) and tri-colored bat (*Perimyotis subflavus*), was the Project Area. This area was used because: the scale is large enough to include the Project Area where campsites would be located and the roads where hazard tree removal would occur and it contains the home ranges of an array of wildlife including woodland bats. The temporal scope was the duration of project implementation because that is when direct and indirect effects would occur. The analysis area for cumulative effects on RFSS woodland bats was the Eastman Brook and Upper West Branch of the Mad River Watershed, and private land abutting the Project Area. This area was used because it is large enough to cover the array of wildlife home ranges including woodland bats and addresses habitat connectivity, travel, and migration corridors to and from the Project Area, the watershed, and private land. This area addresses habitat diversity (rivers, streams, ponds, a mix of open and forested habitat, dirt and paved roads, developed areas, manicured lawns, and private land) at the landscape level available for woodland bats. The temporal scope for cumulative effects was the past and future 10 years (2005-2025) because: The timeframe includes WMNF Forest Plan Standards and Guidelines that have and would maintain water sources, riparian areas, and wildlife and their habitat including snag trees for roosting woodland bats.

Alternative 1 – No Action

Determination: Because No Action would occur at this time in the analysis area, this alternative would cause no direct effects to RFSS little brown myotis or tri-

colored bat, and would cause no indirect effects to roosting or winter habitat (there are no documented caves) within the Project Area. But, indirect adverse effects include continued human activity in the riparian habitat of Eastman Brook (a travel corridor for wildlife including woodland bats) due to no campsite relocation out of the riparian area at this time

Alternative 2 – Proposed Action

Determination: Implementation of Alternative 2 would have potential direct, indirect, and/or cumulative effects to the little brown myotis, tri-colored bat or their habitat **that** “may impact individuals, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species” of these bats.

RATIONALE: Determinations were based on best available local and relevant science and new information (USDA-FS 2014, USDA-FS 2012a, USDA-FS 2012b, USDA-FS 2010; USDI-FWS 2015a, USDI-FWS 2015b, USDI-FWS 2015c, USDI-FWS 2013) and on site-specific Project Area field surveys (see BE Literature Cited), and WMNF mist-net surveys (Chenger 2002, 2004; Yamasaki 2000), and recent cave surveys in NH (NHFGD 2010, Veilleux 2005, 06, 07, and Veilleux and Reynolds 2010), and woodland bat surveys off the WMNF in New York and Vermont (Kiser et al. 2001, 2002).

- There are no documented overwinter hibernacula (caves, mines, or tunnels) and no old buildings exposed to sun as roost sites (USDA-FS 2005a, Appendix G, pages 224-227) within Project Area.
- Several years of bat acoustic driving surveys along the Tripoli Road (bisects the Project Area) documented occurrence of the RFSS little brown and the tri-colored bat during the summer.
- Tree removal (including hazard tree removal) under Alternative 2 would only occur in portions of the Project Area that would affect a very minor percentage of the entire 800,000 acre WMNF. Using stringent NLEB roost tree criteria, Forest Inventory and Analysis data determined there are approximately 55 million live trees, and 13 million standing dead trees which are available to NLEB and little brown bats on the WMNF. The WMNF only harvests approx. 85,000 trees per year, and < 1% of the WMNF is harvested in any one year (Millen 2011). The majority of the WMNF is in the mature age class, and roosting habitat is not considered limiting on the WMNF (USDI-FWS 2015a).

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

- WMNF Forest Plan Riparian and Wildlife Standards and Guidelines (Ch. 2 pp. 24-26 and 33-36) would maintain riparian areas and wildlife trees Forest-wide. Additionally, MA 6.1-6.3 Wilderness and Natural Research Area lands are not subject to vegetation management and woodland bat habitat would be available Forest-wide.

RFSS Ameletid Mayflies: (*Ameletus browni*) and (*Ameletus tertius*)

RFSS mayfly larvae are found in cold, well-oxygenated, fast-moving headwater streams of relatively high pH, with canopy cover and rocks or boulders present. Adults typically remain along streambanks near emergence sites (Chandler 2002). The analysis area for direct and indirect effects to RFSS mayflies is the perennial streams in the Project Area. This area was chosen because of specific and restricted mayfly aquatic habitat requirements. The temporal scope was the duration of project implementation because that is when effects would occur. The analysis area for cumulative effects to RFSS mayflies was the perennial streams in the Eastman Brook/Upper West Branch Mad River Watershed and any abutting private land because of the specific and restricted aquatic habitat requirements of mayflies and the boundary includes natural river and stream features to address species dispersal and habitat connectivity. The temporal scope was the past and future 10 years (2005-2025) because it spans past and current Forest Plan Standards and Guidelines that protect habitat.

Alternative 1 – No Action

Determination: There would continue to be negative effects on water quality and riparian habitat (source of shade and instream nutrients) of Eastman Brook directly and indirectly affecting mayflies and their habitat from Alternative 1.

Alternative 2 – Proposed Action

Determination: There would be no adverse direct, indirect, or cumulative effects from the proposed action to the RFSS-listed mayflies. Therefore, implementation of Alternative 2 would cause “no impact” to the population or species of mayflies (*Ameletus browni* or *A. tertius*).

RATIONALE: This determination was based on site-specific Project Area surveys, personal communication with internal and external professional biologists, and scientific literature reviews.

- There are no known current or historic documented occurrences of these mayflies in headwater streams in the Project Area.

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- Suitable Ameletid mayfly aquatic habitat (riparian and water quality) within the Project Area would be improved under Alternative 2.
- Forest Plan Standards and Guidelines protect riparian areas and maintain aquatic habitat for mayflies that is well-distributed across the Forest.
- NH wetland and water quality laws would provide some protection of aquatic and riparian habitat on private land.

RFSS Plants: Goldie's Woodfern (*Dryopteris goldiana*), Butternut (*Juglans cinerea*) Northern Adder's-tongue (*Ophioglossum pusillum*)

The analysis area for RFSS plants Goldie's Woodfern (*Dryopteris goldiana*), Butternut (*Juglans cinerea*) Northern Adder's-tongue (*Ophioglossum pusillum*) was the Project Area. This area was used because that is where ground disturbing activities would occur. The temporal scope was the duration of project implementation because that is when the direct and indirect effects would occur. The analysis area for cumulative effects to RFSS plants was the Project Area and abutting private land because plants are sessile. The temporal scope was the past and future 10 years (2005-2025) which spans past and current Forest Plan with Standards and Guidelines that have and would protect soil, water, riparian, and plant resources.

Alternative 1 – No Action

Determination: There would be no adverse direct, indirect, or cumulative effects to the RFSS-listed plants. Therefore, Alternative 1 would cause "no impact" to the population or species of all RFSS plants listed for the WMNF.

Alternative 2 – Proposed Action

Determination: Implementation of Alternative 2 would have potential direct, indirect, and/or cumulative effects to the RFSS-listed plants. Therefore, implementation of Alternative 2 "may impact individuals, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species" of known or undiscovered RFSS-listed plants in the Project Area.

RATIONALE: Based on site-specific Project Area plant surveys and best available information from database and scientific literature reviews.

- There is documented occurrence of one RFSS (butternut) in portions of the Project Area. A project design feature of no cut buffers would be placed around butternut trees along the Tripoli Road which would protect butternut trees from hazard tree removal activities.

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- Several multi-year and site-specific Project Area plant surveys documented no other TES plants beyond the three listed.
- Cleaning equipment of obvious plant material before entering the Project Area and use of straw (when available) during project activities would help prevent the introduction and spread of Non-native invasive species and reduce the threats to TEPS and RFSS plants.

Table 15. Biological Evaluation Effects Determinations (see BE in the Project File for complete details).

Alternative 1 (No Action)	Alternative 2 (Proposed Action)
<p><i>"No effect"</i> and/or <i>"no impact"</i> to TEPS species.</p> <p>Under No Action, there would be lost opportunities to consolidate human use and improve riparian habitat and wildlife flyway-travel corridor along Eastman Brook.</p>	<p><u>Federally-listed Threatened Species:</u></p> <p><i>"No effect"</i> to individual Canada lynx (<i>Lynx canadensis</i>). No lynx present, only habitat is present</p> <p>Alternative 2 is consistent with the Standards and Guidelines outlined in the White Mountain National Forest Land and Resource Management Plan for protecting Canada lynx habitat on the Forest (USDA-FS, 2005a).</p> <p><i>"May affect, not likely to adversely affect"</i> individual Northern long-eared bats (Northern myotis; <i>Myotis septentrionalis</i>).</p> <p><u>Regional Forester-listed Sensitive Species:</u></p> <p><i>"May impact individuals, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species"</i> of little brown myotis (<i>Myotis lucifugus</i>) and Tri-colored bat (<i>Perimyotis subflavus</i>)</p> <p><i>"No impact"</i> to the population or species of mayflies (<i>Ameletus browni</i> or <i>A. tertius</i>).</p> <p><i>"May impact individuals, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species"</i> of known or undiscovered RFSS-listed plants: Bailey's Sedge (<i>Carex baileyi</i>); Goldie's Woodfern (<i>Dryopteris goldiana</i>); Butternut (<i>Juglans cinerea</i>); Northern Adder's-tongue (<i>Ophioglossum pusillum</i>)</p>

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Glossary of Terms

Developed Camping: Camping at sites adjacent to or accessible by roads and including some level of amenities, for example, Dolly Copp, Jigger Johnson, Wild River campgrounds or identified roadside sites such as along the Gale River Road.

Guidelines: A required course of action or level of attainment. It is intended to move the Forest toward desired conditions in a way that permits operational flexibility to respond to variations in conditions. Guidelines can be modified or not implemented if site-specific conditions warrant a deviation. The rationale for deviating from a guideline must be documented in a project-level analysis and signed decision.

Hazard Tree (Danger Tree). A standing tree that presents a hazard to people due to conditions such as deterioration of or damage to the root system, trunk, stem, or limbs or the direction or lean of the tree (29 CFR 1910.266(c); FSH 6709.11, glossary).

High-Priority Hazard Tree Hazard. A road or road segments where danger trees are determined to be highly likely to fail and where those failures would be highly likely to cause injuries.

Multiple Use: Managing National Forest resources in a manner to best meet the needs of the American people, recognizing that not all uses can occur on all acres and that changing needs and conditions over time will change the combination and intensity of use. Productivity of the land and sustainability of ecosystems is maintained, and the interrelationships among resources and the effects of use are monitored and evaluated. Multiple use management does not necessarily prescribe the combination of uses that will give the greatest dollar return or the greatest unit output.

National Forest System (NFS) Road: A classified forest road under the jurisdiction of the Forest Service. The term “National Forest System road” is synonymous with, and replaces, the term “forest development road” as used in 23 U.S.C. 205.

Recreation Opportunity Spectrum (ROS): A system that provides a framework for defining the different types of outdoor recreation opportunities the public might desire. The spectrum describes six different outdoor recreation opportunity classes: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Rural, and Urban. The ROS defines and integrates a range of outdoor settings with recreation activities allowed in management areas.

Recreation Opportunity Spectrum (ROS) Inconsistency: When a particular aspect of the physical, social, or managerial setting does not match the overall ROS objective of a

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particular area. Some inconsistencies are present at the time of ROS inventory, and others may appear after the inventory.

Riparian Area: Geographically delineable areas with distinctive resource values and characteristics that are comprised of aquatic and riparian ecosystems.

Riparian Ecosystem: A transition between the aquatic ecosystem and the adjacent terrestrial ecosystem; identified by soil characteristics or distinctive

Road: A motor vehicle travel corridor over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified or temporary.

Road Improvement: Activity that results in an increase of an existing road's traffic service level, expansion of its capacity, or change in its original design function.

Road Maintenance: The ongoing upkeep of a road necessary to regain or restore the road to the approved road management objective (FSM 7712.3).

Road Realignment: Activity that results in a new location of an existing road or portions of an existing road and treatment of the old roadway (36 CFR 212.1).

Road Reconstruction: Activity that results in the improvement or realignment of an existing classified road as defined.

Road, Classified: Road wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long term motor vehicle access, including state roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service.

Road Operation Maintenance Level (ML): The level of service provided by, and maintenance required for, a specific road (FSH 7709.58).

Level 1 (Closed for more than 1 year): Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Roads receiving ML 1 may be of any type, class, or construction standard, and may be managed at any other ML while they are open for traffic. While being maintained at ML 1, they are closed to vehicular traffic, but may be open and suitable for non-motorized uses.

Level 2 (High-clearance vehicles): Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted,

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dispersed recreation, or specialized uses. Log haul may occur on roads maintained at this level.

Level 3 (Passenger vehicles-surface not smooth): Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this ML are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material.

Level 4 (Passenger vehicles-smooth surface): Assigned to roads that provide a moderate degree of user comfort and convenience at moderate traffic speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated.

Roads, Objective Maintenance Level: The maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns.

Roadside Camping: Camping along roads outside of developed campgrounds. At some locations these are specified sites, while at other locations they are not specified. This is considered developed camping as opposed to dispersed camping (backcountry facilities or dispersed campsites).

Appendix A: Conceptual Designs

The following conceptual designs illustrate the general layout for campsites (pages 2-6) and parking areas (pages 7-8) proposed under Alternative 2 (Proposed Action). The capacity of sites would vary, and would be limited by the amount of off-road parking at each site. Roadside parking would be prohibited. Parking areas would accommodate as few as two and as many as ten vehicles. Using an average of 2.5 people per vehicle, site capacity would range from approximately 5 up to 25 campers. Parking would be limited, but there would not be an upper limit on the number of campers per site. The designs presented in this appendix address sites ranging in capacity from two to eight vehicles (five to 20 campers); the design for ten vehicles would be similar to that illustrated for the eight vehicle scenario. Some deviations to the conceptual designs would occur to address specific site conditions such as topography.

(2) CAR PARKING CAPACITY

(3) TENTS TOTAL

SIZE

(-) EX LARGE - (-)

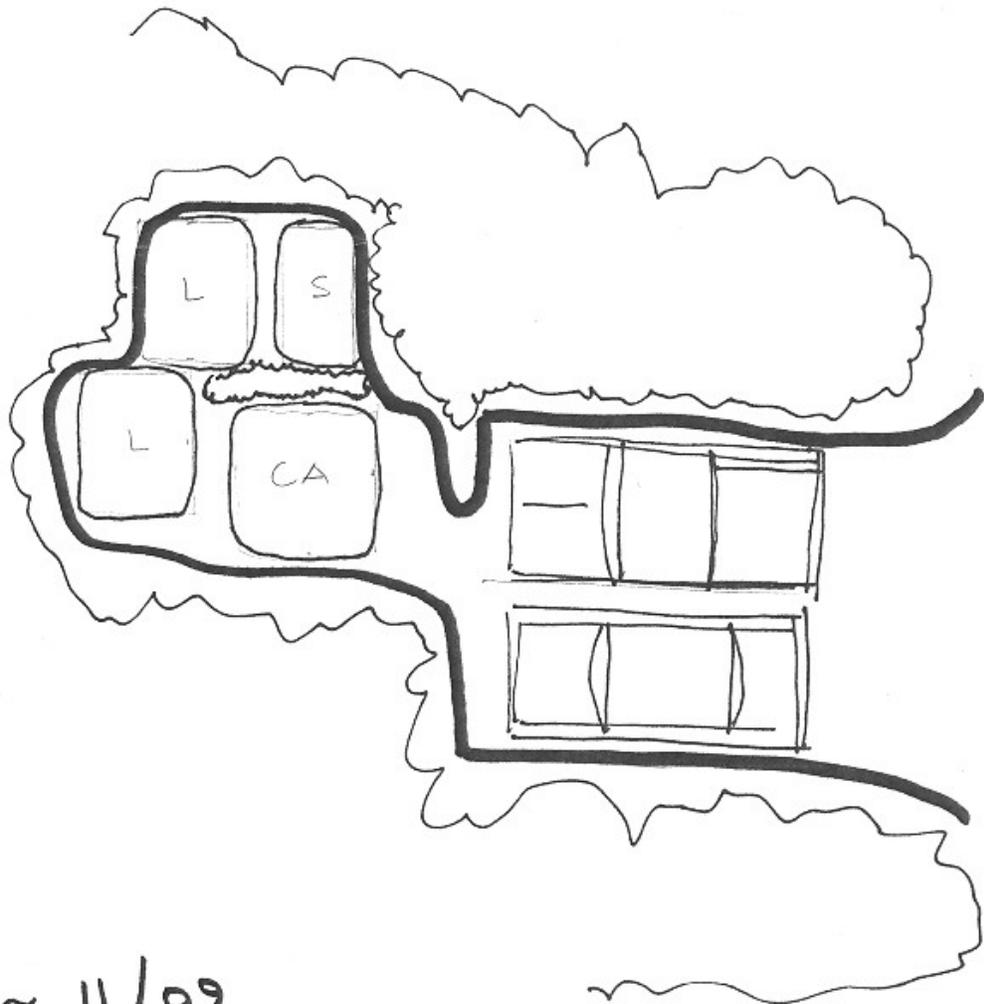
(2) LARGE - (6' x 8')

(1) SMALL - (4 x 8')

COMMUNITY AREA - (8' x 8')

⊙ FIRE RING

SAMPLE DIAGRAM



PEMI ~ 11/09

TRIFOLI CAMPING

(2) CAR CONCEPT

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

(3) CAR PARKING CAPACITY

(4) TENTS TOTAL

SIZE

(-) EX LARGE - (-)

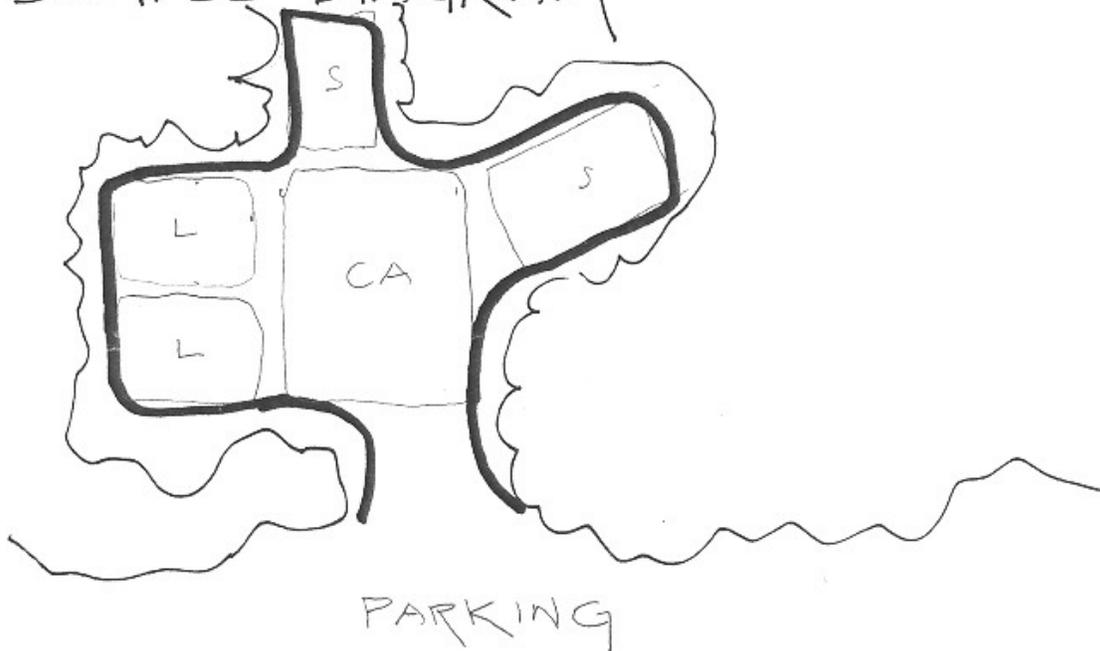
(2) LARGE - (6' x 8')

(2) SMALL - (4 x 8')

COMMUNITY AREA - (10' x 10')

⊗ FIRE RING

SAMPLE DIAGRAM



PEMI ~ 11/09

TRIPOLI CAMPING

(3) CAR CONCEPT

(4) CAR PARKING CAPACITY

(4) TENTS TOTAL

SIZE

(-) EX LARGE - (-)

(3) LARGE - (6' x 8')

(1) SMALL - (4' x 8')

COMMUNITY AREA - (10' x 10')

⊗ FIRE RING

SAMPLE DIAGRAM



PEMI ~ 11/09

TRIBOLI CAMPING

(4) CAR CONCEPT

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

(6) CAR PARKING CAPACITY

- (5) TENTS TOTAL
- | | SIZE |
|----------------|---------------|
| (-) EX LARGE | (-) |
| (4) LARGE | (6' x 8') |
| (1) SMALL | (4' x 8') |
| COMMUNITY AREA | (12' x 12') |
- Ⓜ FIRE RING

SAMPLE DIAGRAM



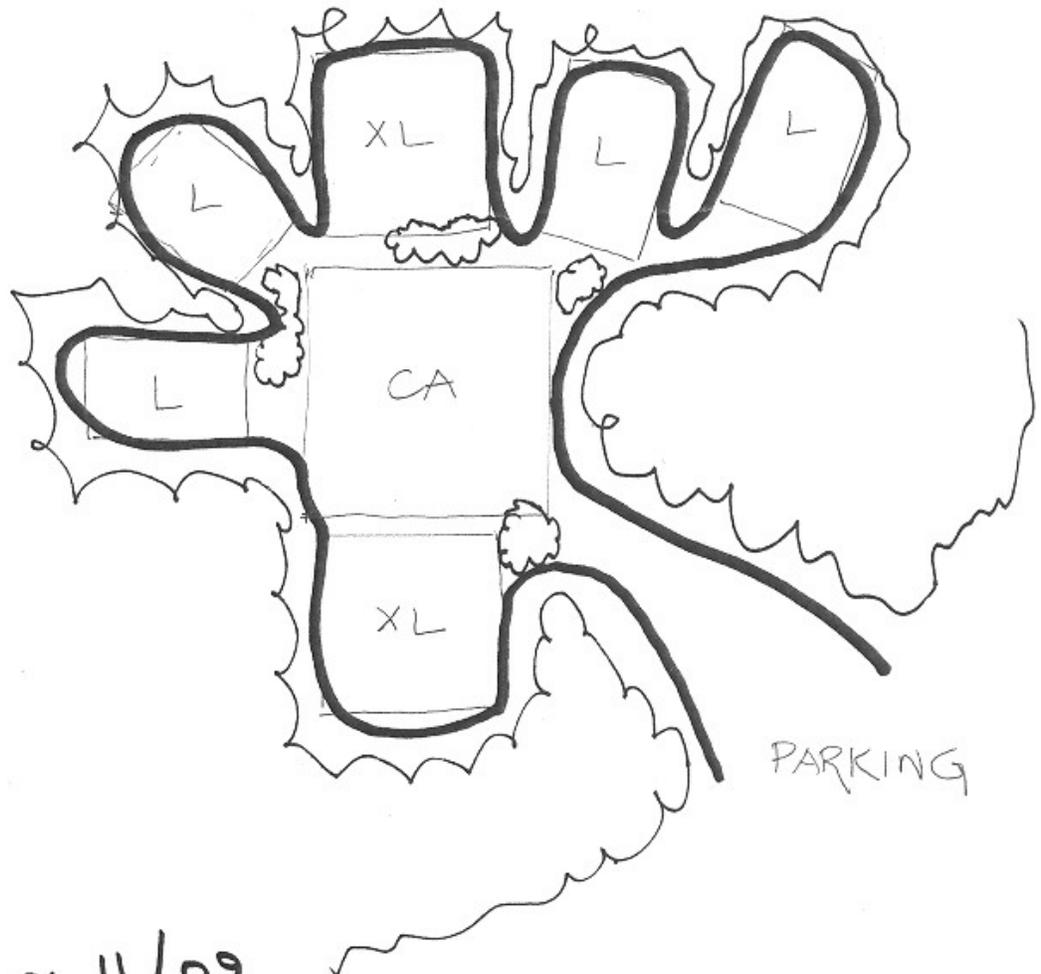
PEMI ~ 11/09

TRIPOLI CAMPING

(6) CAR CONCEPT

(8) CAR PARKING CAPACITY
(6) TENTS TOTAL SIZE
 (2) EX LARGE - (10' x 10')
 (4) LARGE - (6' x 8')
 (-) SMALL - (-)
COMMUNITY AREA - (14' x 14')
 ⊕ FIRE RING

SAMPLE DIAGRAM



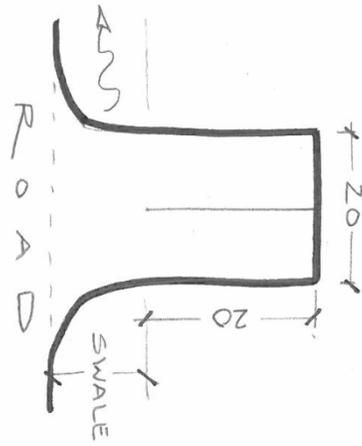
PEMI ~ 11/09

TRIBOLI CAMPING

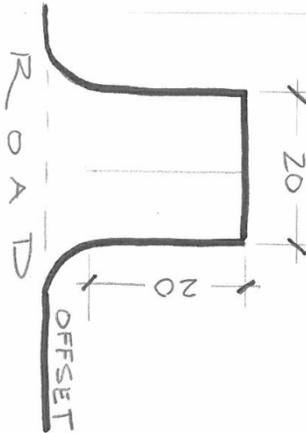
(8) CAR CONCEPT

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

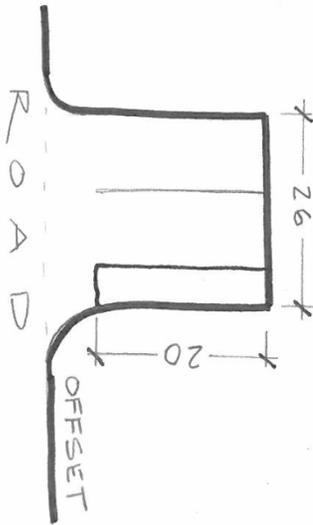
STANDARD 2 CAR @ SWALE
SWALE OFFSET BASED UPON CONDITION



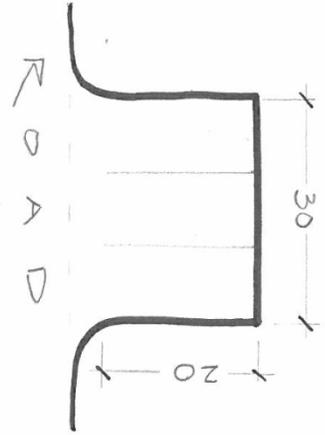
STANDARD 2 CAR
OFFSET BASED UPON CONDITION



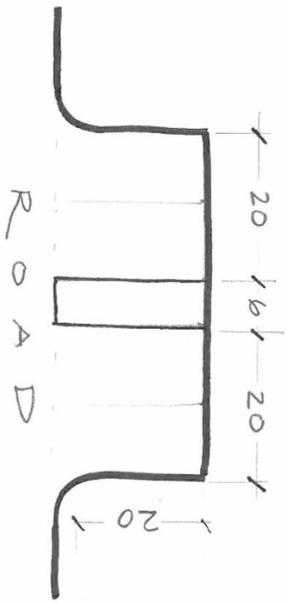
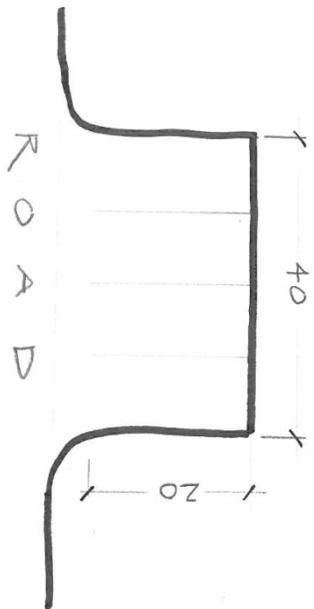
ACCESSIBLE 2 CAR - STANDARD
(PLUS 6 FEET TO SPACE OF 10 FOOT DIM)



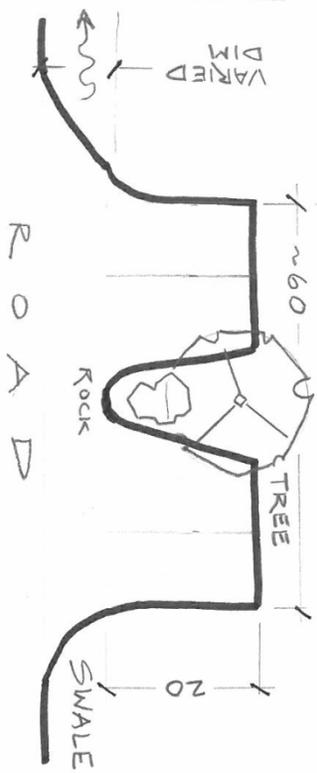
STANDARD 3 CAR @ BASIC 24" OFFSET



STANDARD 4 CAR @ BASIC OFFSET

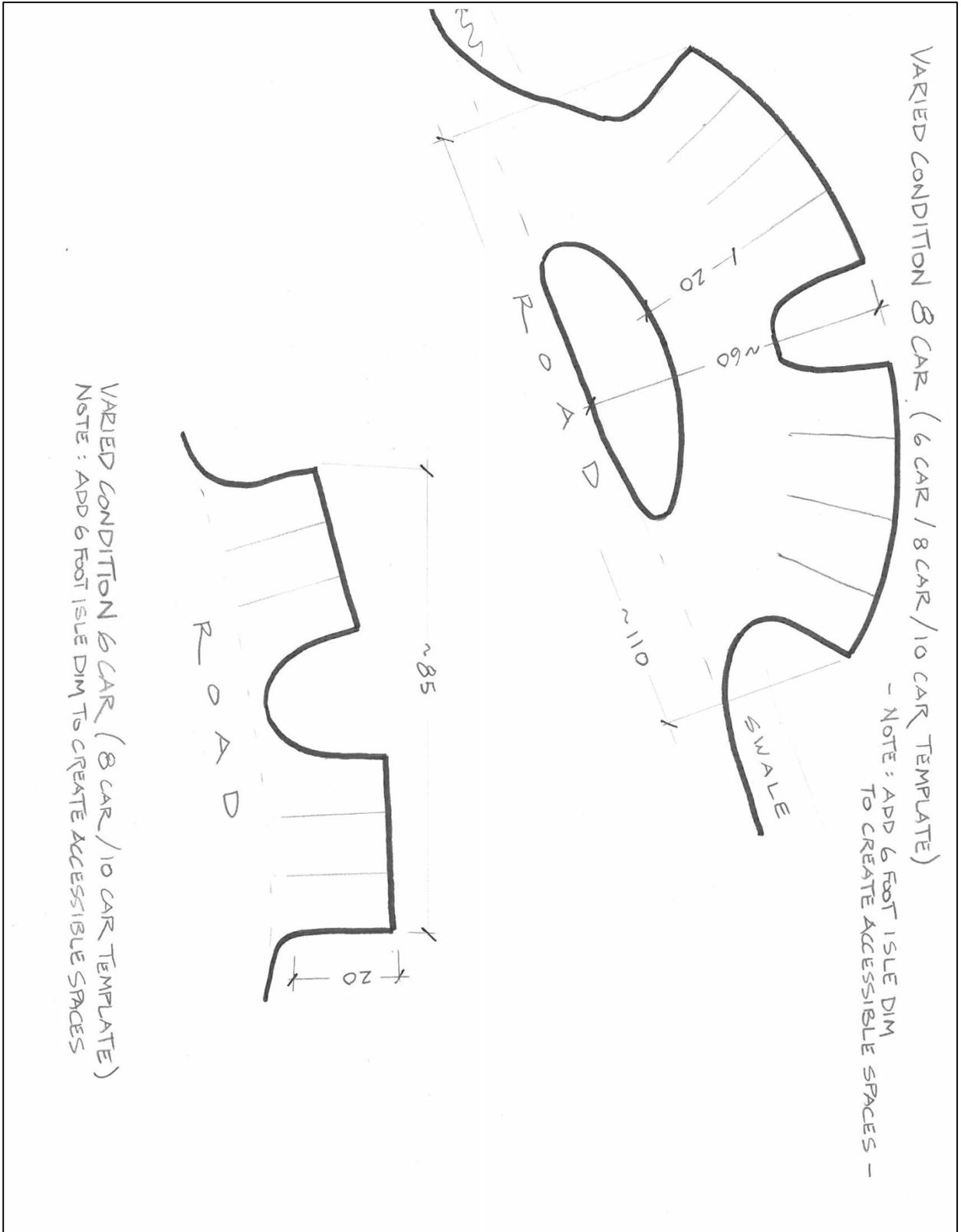


ACCESSIBLE 4 CAR @ CENTER ACCESS
(ACCESS CAN BE LOCATED ON ANY SPACE)



VARIED CONDITION 4 CAR @ SWALE

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project



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Appendix B: Response to Comments

National Environmental Policy Act (NEPA)

Comment: I think your Analysis Area for this Project is much too large...unlike a logging project where you let skidders and feller bunchers to drive all over the place damaging the soil and streams in a large area all of the activities are going to be concentrated right in the Project area and in the downstream streams...shouldn't the Analysis area just be that acreage?

Response: The Project Area was defined to include the approximate acreage covered under the current Concessioners Special Use permit to operate the Tripoli Road Campsites, the proposed new campsite locations, and the hazard tree removal. Each resource provided a rationale for the use of this or a larger analysis area in order to analyze the direct, indirect, and cumulative effects of the project on resources. The rationale for choosing the analysis area for each resource is in Chapter 3 of this document and the resource specialist reports in the project record.

Hazard Tree Removal

Comment: Has there been any estimation of the number of trees that the USFS is going to declare as "hazardous" and take down for 75 feet on either side of the road? That could potentially be many board feet of trees, is that how the USFS is planning on paying for all this work? Any estimate of what all this work is going to cost? Sorry for being so suspicious about the "hazardous tree removal" since other NFs are using "hazardous tree removal" as just another excuse for logging...there was also no "justification" given (or I missed it) for the choice of cutting trees 75 feet from each side of the road, given the fact that for the tree to fall over the road it has to fall forward toward the road it is just as probable that it will fall away from the road I'd like to see that 75 foot "buffer" lowered to 50 feet at a maximum, would actually like it a lot lower...

Response: Hazard tree removal involves the removal of individual trees scattered along the roadside and adjacent to campgrounds. It does not involve a focused stand-level prescription (i.e., it does not involve the same amount of harvesting that would result from single tree selection). The 75 foot buffer accounts for tree height. In regards to the commenter's initial question "*Has there been any estimation of the number of trees that the USFS is going to declare as "hazardous" and take down for 75 feet on either side of the road"*", page 28 of this project's 30-Day Comment Report provides a description of the process used to

Environmental Assessment

designate trees as “hazardous”. From a project level, individual hazard tree designation would be intermittent within the Project Area and it would be difficult to provide an accurate estimate of the number of individual trees to be designated as hazardous without spending a considerable amount of time surveying the existing condition of trees within 75 feet of project roads. Without these data, the FS cannot select a method of felling and removal, which would lead to an estimation of the cost. The 30-Day Comment Report lists multiple ways to dispose of hazard trees, and these would be evaluated during implementation of the project.

In regards to commenters follow up statement and questions “*That could potentially be many board feet of trees, is that how the USFS is planning on paying for all this work?*”, the forest has product specifications that categorize a tree as merchantable or unmerchantable. The specifications largely take into consideration the size, soundness, and length of the tree. If a tree does not meet minimum specifications, it is not considered merchantable. Board feet of unmerchantable trees are not accounted for in timber sales. Trees designated as hazardous are typically damaged, diseased, or dead and do not meet minimum product specifications for commercial sale. Therefore, the amount of board feet generated by hazard tree removal during implementation of this project is not anticipated to be sizeable.

Non-Native Invasive Species NNIS

Comment: I didn’t see any discussion of NNIS in the 30 Day Comment Report, all I found was this “The following resources were considered, but the effects on these resources were not analyzed in detail: Air Quality, Climate Change, Non-native and Invasive Species,”

I would think with that many people showing up from all over the place (probably quite a few from MA) that the chances of them bringing in some plant NNIS on their vehicle tires, shoes, boots, etc. would be quite high, and also NNIS pests like Long Horned Beetle and maybe Emerald Ash borer in firewood...is there going to be no analysis of this? How about some signage for the kiosk that tells people if they brought firewood from other locales to please make sure it is all burned up and not left for the “next person” which provides the opportunity for any pests to escape into the area around Tripoli Road.

Response: Vehicular and foot traffic have the potential to introduce NNIS of plants. This risk exists for both permitted and not-permitted (illegal) uses. Any single activity that is a potential source for NNIS invasion (including bringing in

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

illegal firewood) does not in isolation change the overall level of risk for NNIS invasion in the project area.

Tripoli Road has been a high use camping area for over 40 years, yet NNIS have not been an issue. Currently there is only one small purple loosestrife infestation at that is along FR 607 (E side of Talford Bk.) about 1,500 feet up from Tripoli Road and is outside the project area. There are also a couple of locations of coltsfoot and hellaborine, but those are low priority species for treatment since they are considered low-impact NNIS plants. Because of the very low NNIS infestation rate in the project area, the one purple loosestrife infestation can be handled under the annual prioritization/treatment efforts set forth in the NNIS EA. This area has been treated for several years and is coming under better control. It will continue to be on the NNIS treatment list for next year as a matter of course, and also just to make sure we minimize its potential to spread in the project area in response to roadside disturbance associated with the project. In addition, continued implementation of NNIS related S&Gs during implementation should be adequate to prevent or limit potential new infestations from becoming established, and continued implementation of the Forest Wide Invasive Plant Control Project will ensure responsiveness to new infestations.

The Forest recently updated its Firewood Order to be consistent with recent changes in state and county level bans in place within New Hampshire and Maine (Order Number 2016-02). The Forest Order prohibits firewood from being imported from out of state or from a county that is under firewood quarantine. LEOs and FPOs monitor for illegal firewood transport onto the Forest. In addition, the WMNF is a participating member of the New Hampshire Forest Pest Advisory Group, a consortium of partners and landowners in the state that coordinates efforts to prevent or limit the spread of forest pests, and to enable coordinate response in the event of new infestations. The WMNF posts educational signs at campgrounds, visitor centers, dispersed camping sites, and day use areas regarding the risk of non-local firewood, and VIS staff are versed in communicating this message as well. The WMNF is currently coordinating with the NH Department of Agriculture on placement of large educational firewood signs at strategic locations on the National Forest. We anticipate promoting the use of a new resource for visitors to find local firewood at firewoodscout.org.

Recreation

Comment: Twenty of us have been camping in the same spot on Tripoli Road near the intersection of Mack Brook Road for 20 years. I am concerned that moving the campsites to the spur roads would be dangerous because of the increased exposure to ticks.

Response: Unfortunately, the possibility of ticks being present on the spur roads is just as much of an issue with their potential presence on Tripoli Road. The black legged tick or deer tick (*Ixodes scapularis*), which is the vector of the organism which transmits Lyme disease, relies on large animals, such as white-tailed deer and bears, as one of its hosts to complete its three stage life cycle. We have no evidence to support the notion that large animals frequent the spur roads differently than the campsites located along Tripoli Road. In order to safely camp in these areas, as well as any other areas of New Hampshire, it is highly recommended that campers apply insecticide or repellent and follow up with thorough body checks daily to inspect oneself for the presence of ticks and carefully remove them promptly in order to prevent the transmission of Lyme disease.

Comment: The sound of the river is very important to our experience.

Response: In developing the proposal to relocate campsites away from the streams and brooks along Tripoli Road, the Forest Service balanced the need for resource protection – in particular the impacts of compaction, erosion and human wastes entering the water versus a stated desire by numerous campers to preserve the experience of camping alongside the water. Our analysis acknowledges that there would be some changes to the camper's experience. These trade-offs were considered when the proposal was developed with its primary purpose to protect the natural resources of the area and in particular to improve the water quality of the watershed and provide clean water sources to the public downstream of these streams and brooks.

Comment: I am dead-set against this project. I have been camping at the top of Mack Brook in August for 40 years. We have a group of 12 campers and we camp in the turnaround. I am concerned that there isn't enough room for all the campers to move from Tripoli Road to the spur roads. We go on Thursday to secure the site for the weekend and we are worried that we won't be able to camp there anymore.

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

Response: Overall capacity in this proposal will drop from an estimated maximum that has occurred historically of 750 campers on a very busy holiday weekend to a designed capacity of approximately 330 people. The analysis for this project included these considerations in developing the proposal and settled on the design of 38 total campsites to reasonably accommodate typical weekends and therefore the likelihood of reaching the maximum capacity will increase on busy weekend. The Forest Service appreciates the concern of not being able to find a site and will consider management various management strategies and policies that are available in regards to the operation of the campground if the proposal is implemented including the possibility of establishing site reservations if there is compelling need or public interest. It is also worth noting that Forest has numerous other areas for roadside camping that are similar to the current level of amenities found on Tripoli Road which could accommodate potential overflow.

Comment: We like to make a lot of noise and have bonfires. The concessioner and Forest have directed us to the top of Mack Brook Road to be out of the way and be able to make as much noise as they want without affecting other people. I am worried that families will be camping next to us and we won't be able to make a lot of noise and have the experience that they've been having for 40 years.

Response: The site at the end of Mack Brook Road is proposed to be retained in this project and the next nearest site is an existing site approximately 1,000 feet south on the east side of Mack Brook Road, which is also an existing site. The proposed action does not seek to change many of the social aspects of the Tripoli Road camping experience including the lack of quiet hours, however this is a management decision that is outside the scope of the decision for this project. The Forest Service is interested in not only protecting the natural resources of this area but also promoting the reasonable and lawful use of the public land it is entrusted to manage. Excessive noise and very large bonfires will be a concern for the future use of this area as it is currently. Historically, the limited ability to enforce and patrol these areas due location of the campsites and the lack of any effective design in the development of their layout is not viewed as a precedent to condone unreasonable and potentially dangerous activity in the future. This proposal seeks to redesign the layout of the campsites in a way that they can be patrolled more efficiently and effectively in order to protect the type of camping experience the public expects to encounter at a campground on public land managed by the Forest Service. The limitations on what type of behavior is acceptable without quiet hours in effect will largely be determined by the future

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actions of campers using this area and law enforcement and management will respond accordingly when necessary.

Comment: Keeping people off the decommissioned campsites is going to take a lot more education and monitoring than in previous years is the cost for camping there going to increase to pay for that monitoring?

Response: Functionally, there is no connection between the cost of camping on Tripoli Road and the cost of monitoring of decommissioned campsites. The area is currently patrolled by Forest Protection Officers, Forest Service Law Enforcement personnel, and sheriff deputies from Grafton County. Under the proposed action, it will be relatively easy to detect campers using decommissioned sites due to the presence of their cars parked on Tripoli Road. Under the proposed action, parking for the campsites on Mack Brook Road and Hix Mountain Spur A will be limited to the designated parking areas within each campsite and no roadside camping on these spur roads will be permitted. The Forest Service can implement closure orders restricting camping at decommissioned sites and, if necessary, restrictions on parking along Tripoli Road, with an exception for designated areas to accommodate day users of the area. Through these management controls and the current and projected level of enforcement and monitoring, the expected additional burden of keeping people off the decommissioned sites is not anticipated to be significant and will not be tied to the cost of camping.

Roadless

Comment: I totally disagree with the following statement “The analysis area for direct and indirect effects on roadless and wilderness characteristics is the Waterville Inventoried Roadless Area. This single inventoried roadless area was selected as the analysis area because the expected direct, indirect, and cumulative effects are localized and would not extend into any other inventoried roadless area.” Looking at the number of Projects that have been proposed in Inventoried Roadless Areas (below) versus the number of Projects that don’t include Inventoried Roadless Areas it is clear that the USFS is targeting the Inventoried Roadless Areas to ensure that there won’t be any more Wilderness being proposed on the WMNF....The USFS is KILLING the Inventoried Roadless Areas on the WMNF by a “death by a thousand cuts” and as such needs to look at the Cumulative Effects of ALL these Projects on the Inventoried Roadless Areas on the WMNF. As part of this project you are proposing campsites and toilets and upgrading roads from ML 1 to ML 3, all things that will affect the roadless

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

character of this area and make it ineligible for Wilderness designation. Inventoried Roadless Areas that have been targeted by the USFS since the 2005 Forest Plan.

Response: The inventory criteria and measurement indicators used during the 2005 Forest Plan Revision were designed to assess the conditions of individual areas such as the Waterville Inventoried Roadless Area. This area is also where the direct, indirect, and cumulative impacts are expected to occur. For these reasons, the Waterville Inventoried Roadless Area was used to analyze the effects of this project.

Impacts from past human activity were in evidence, including the current road network, recreation facilities (campsites), forest structure and composition when the area was assessed during Forest Plan revision. Despite those past management activities, the Waterville inventoried roadless area met all inventory criteria. Alternative 2, the Proposed Action, would result in a net reduction in the amount of developed acres in this roadless area (approximately -0.8 acres). The decrease would result from the decommissioning 46 campsites (approximately 1.7 acres) minus the development of 19 new campsites and three toilets/wildlife-resistant dumpsters (approximately 0.7 acres). Decommissioning the sites and associated access routes would result in approximately 1.5 acres of land within the roadless area being restored. There would be no increase in the miles of road, although 0.6 miles of road would be improved from maintenance level 1 to maintenance level 3. Neither the direct, indirect, nor cumulative effects would compromise the ability of the area to continue to meet Forest Service inventory criteria under any alternative. Roadless values and recreation management have coexisted in this area previously, evidenced by the area's recreational history and its inclusion in the most recent roadless inventory. The proposed activity in this inventoried roadless area does not set a national precedent. Implementing the activities under the proposed action does not make a commitment to take similar actions in any other WMNF inventoried roadless area or any other inventoried roadless area in the country.

Scenery

Comment: I saw that you are also not going to be analyzing any effect to the "scenery", I found this posting out on Views from the Top talking about how the closed canopy over the road is one of the main features of the road (post #7)

<http://www.vftt.org/forums/showthread.php?43344-Tripoli-Road-to-become-regular-campground>

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Response: The proposed action would move camping activities (campsites and individual parking spaces) from the main travel corridor and relocate them to a side road with a single point of egress. This action would remove all visibility of the activities from the main roadside and out of the view of the traveling / recreating public. The side road is not immediately visible from other areas or superior viewpoints. The activities proposed would create new micro openings along the side road and each would be partially obscured from the roadside traveler by design, and are not anticipated as being seen from other locations or viewpoints.

Hazard tree removal involves the removal of individual trees scattered along the roadside and adjacent to campgrounds. This activity as proposed for Tripoli Road, would result in little change to the overhead canopy of road. There is always the chance that there will be an increase to the amount of sky visible from disturbance to the canopy, however unless multiple trees in the same immediate area require complete removal, the opportunity for this effect is small.

Any further proposed design as well as any proposed construction would be carried out in a visual sensitive manor following best design and management practices. Because any potential for even a minor visual impact is minimal and the project does not require further visual analysis.

A "hazard tree" is a standing tree, either live or dead, having defects, singly or combined, in roots, butt, bole, or limb, which predispose it to mechanical failure in whole, or in part, and which is so located that such failure has a probability of injury and damage to persons and property. As described in Chapter 2 of the EA, FS guidelines for the identification of hazard trees would be used to evaluate trees for defect and risk to travelers along the roadway. For public safety, potentially hazardous trees within approximately 75 feet of these roads, campsites, and toilets would be felled and tops and limbs would be left on site. The boles could be removed as part of a timber sale, or they could be made available for firewood. Existing standing dead and dead-and-down woody material not posing a public safety hazard would not be cut or removed (Forest Plan pp. G-3, 2-36). No cut buffers would be placed around butternut trees to protect them from hazard tree removal activities.

The following statement provided by the commenter supports the removal of hazard trees, as defined above, "As for tree trimming, preventative removing of dead and diseased limbs is a good idea but the overhead canopy is a desired feature of this road and healthy trees should be retained. (post #7)"

Tripoli Road Campsite Relocation & Roadside Hazard Tree Removal Project

<http://www.vftt.org/forums/showthread.php?43344-Tripoli-Road-to-become-regular-campground>”

Water and Soil

Comment: Does the USFS have any examples of closing out campsites and getting people to actually stay off those campsites, especially if they’ve been going there for many years? You don’t have much of an LEO presence on the WMNF (1 LEO per District last I knew...).

Response: Several popular campsites on Tripoli Road have already been closed and successfully rehabilitated. Monitoring of these sites shows successful rehabilitation with no sign of illegal use by campers. Successful closure and rehabilitation was achieved through a mixture of public education, extensive closure signage, blocking access, and patrolling for enforcement, particularly when the closures first took place. This has included roadside parking restrictions adjacent to closed sites. The sites proposed for closure during the first summer of implementation are clustered to increase our ability to enforce the closures. Roadside parking restrictions would be a tool used to improve compliance with the closures.

Comment: Could the limbs and tops from the trees you cut down be chipped up and used as part of the rehabilitation process for some of the campgrounds, especially if you try to break up the compacted ground, maybe mix the chips in to help with drainage?

Response: Several levels of rehabilitation have been identified for each campsite based on site-specific characteristics. While some sites simply need to be closed to allow for rehabilitation to occur naturally, others need more extensive work to aid in the rehabilitation process. For the later, scattering slash or mulch, from the limbs and tops of trees adjacent to the site, could be used as a rehabilitation method to enhance the buildup of organic matter, minimize soil displacement, and encourage revegetation.

Wildlife

Comment: The Tripoli Road campground is located in an area of the state with the highest bear density. To minimize bear-human conflicts education materials such as brochures instructing campers how to store their food and keep the campsite clean can be incorporated into the campsite registration paperwork the concessionaires pass out. New Hampshire Fish and Game Department has

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education material to assist the WMNF. Signs informing campers they are “Camping in Bear Country” can be placed in kiosks.

Recommendations to minimize bear-human conflicts:

All dumpsters should be constructed of metal with locking lids. Plastic parts on the dumpster will not deter a bear from gaining access. Bears are likely to investigate dumpsters on the perimeter of a campground first so campers need to be vigilant in closing and securing lids. Monitoring of dumpster placement will probably need to be studied to determine if the location is suitable to minimize wildlife conflicts. Consider food lockers similar to a tool box to manage food, or a building to store coolers, rather than in vehicles. Campers will need to be vigilant in using bear-proof food containers. Backpacks and coolers are inadequate for securing food from bears. Thank you for the opportunity to comment on this recreation proposal which will likely have an impact on camper-wildlife interactions at a high use area on the WMNF.

Response: The Purpose and Need for this project includes addressing issues with improper food and waste disposal. The benefit of the Proposed Action (Alternative 2) is that concentrated human use at designated campsites would help facilitate better management of proper food storage in bear country and help reduce the number of human-nuisance bear conflicts. The Forest Plan provides direction for managing recreational use to minimize negative impacts on wildlife, including minimizing the potential for human-wildlife conflicts (Forest Plan, p. 1-22). The Forest Plan also provides preventive measures and environmental education strategies regarding proper food storage and garbage disposal to alleviate potential conflicts (Forest Plan, p. 2-34). The new welcome station proposed in Alternative 2 would include wildlife-resistant food storage lockers and a kiosk describing proper food storage and waste disposal techniques to use in bear country. This information would also be provided during check in, at toilet locations, and by the concessioner, law enforcement, and Forest Staff. Educational material provided by New Hampshire Fish and Game Department would be welcome. Alternative 2 also would install wildlife-proof trash receptacles in up to nine locations. These receptacles would be bear resistant, constructed of metal with locking lids. Alternative 2 would be implemented over the next 10 years using an adaptive management approach to achieve the desired resource and visitor experience conditions. Further bear-human conflict prevention measures, including additional food storage lockers, could be implemented in the future if circumstances warrant.