White Mountain National Forest

United States Department of Agriculture

Forest Service

Eastern Region

Slippery Brook Road Repair Project

Jackson, Carroll County, NH

Environmental Assessment

Saco Ranger District

May 23, 2013

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Cover photo: Slippery Brook Road slump caused by Tropical Storm Irene. WMNF photo.

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Chapter 1 – Background and the Need for Action

The Slippery Brook Road, also referred to as FR 17, is a major entry point into the National Forest, providing access to over 20,000 acres via several secondary roads, and accessing the Slippery Brook area, Mountain Pond, the East Branch of the Saco River via East Branch Road, and Baldface Mountain via Slippery Brook Trail. Slippery Brook Snowmobile Trail uses this road to accesses other trails. Forest visitors of all types enjoy National Forest land accessed from this road.

On August 28 and 29, 2011, heavy rainfall from Tropical Storm Irene caused damage to a section of the bank of Slippery Brook adjacent to Forest Road 17, causing a slump in the road (see Pictures). A 200 foot section of road located near the Jackson and Chatham town line just south of the junction with Forest Road 38, slumped causing a concern for public safety and resulting in closure of FR 17 to public vehicular traffic.

This document presents the purpose and need for the project and a description of the proposed action and other alternatives considered.

Background

Tropical Storm Irene swept through New England on August 28, 2012. The storm brought several inches of rain to the White Mountain National Forest (WMNF). Slippery Brook reached flood stage comparable to a 50 or 100 year storm.

After Tropical Storm Irene, a variety of resource specialists reviewed the area to assess damage to the road and determine what repair or relocation opportunities were available in this section of road.

The Forest Service is partnering with Federal Highways Administration (FHWA) on this project. FHWA is providing both funding and technical engineering support to ensure the proposed action considered would repair this section of road and reduce or eliminate the chances of another road failure in the future.

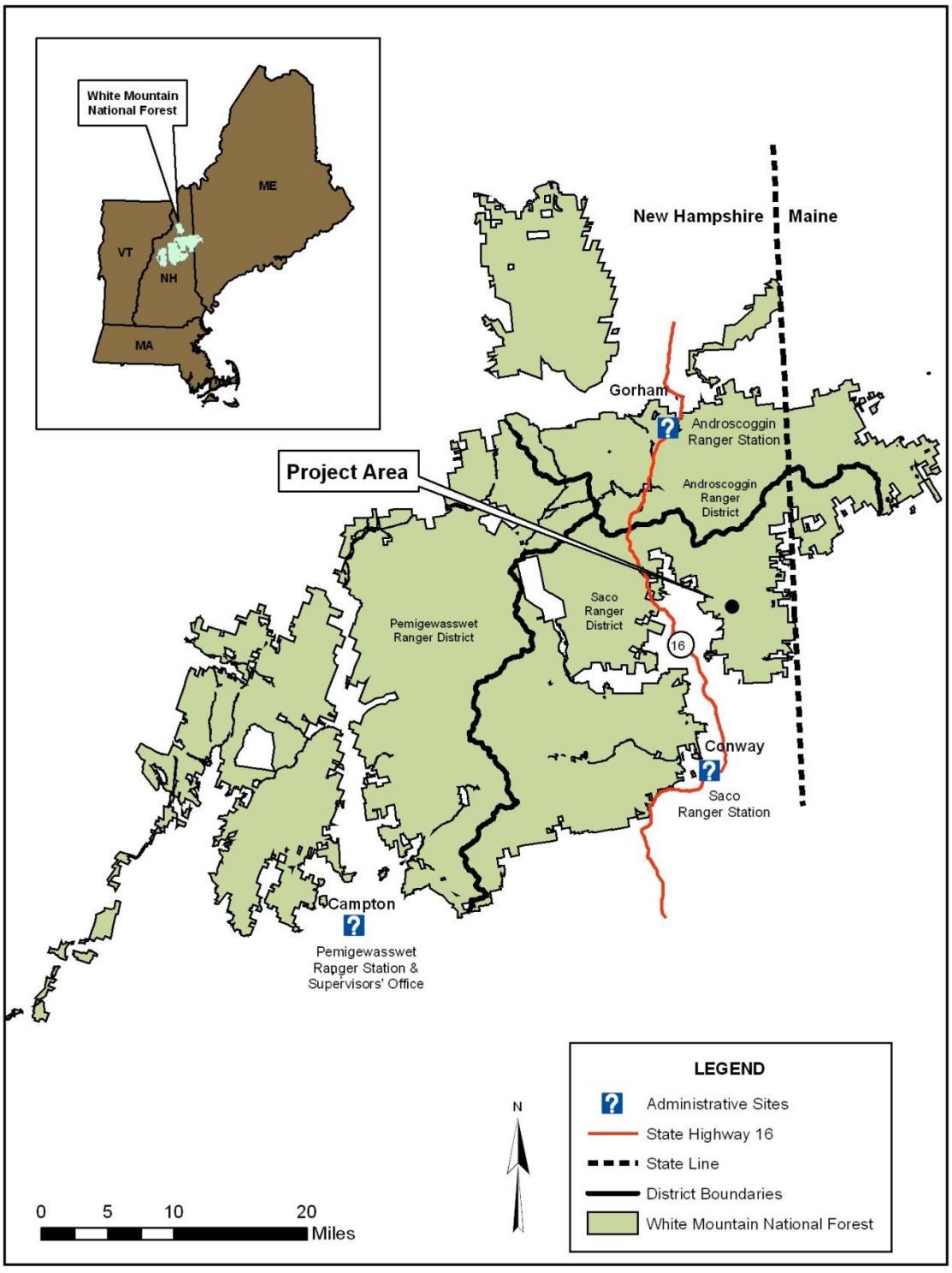

FIGURE 1: Vicinity Map of the Project Location

Purpose and Need for Action

Prior to Tropical Storm Irene, Slippery Brook Road provided public access to Mountain Pond, several hiking trails, for dispersed recreation in a vast area of National Forest. Public access following Irene is limited to non-vehicular, except for Snowmobiles. Transportation planning identified this road as critical to provide public and administrative access to these National Forest lands (see Project file).

Proposed Action

Based on identified needs, input from resource specialists, and Forest Plan guidance, the proposed action is designed to stabilize the fill slope and streambank adjacent to the slump, stabilize the road, and repair the road surface. To accomplish this

- The outer 10 feet of fill slope would be reconstructed using imported soil, and engineered with fabric to allow for drainage and add stability.
- Soil nails would be driven deep into the fill slope and base material at multiple depths to secure the slope. Soil nails are not visible, and are designed to hold the slope (fill and foundation) in place.
- Rock armor sized proportionate to meet streamflow requirements, would be placed at the base of the fill slope from below the river grade to above the 100 year flood level to stabilize and prevent erosion of the streambank and fill slope.
- Immediately above the rock armor, wire baskets containing topsoil and seed would be placed to stabilize and protect the newly constructed fill and allow for plant growth, whose roots would stabilize the soil.
- Erosion control mat would secure the soil and prevent surface soil erosion while plants develop roots.
- A new aggregate road surface would be placed for the travel width and installation of road drainage [ditch] placed on the inside road slope.

The National Forest has secured storm recovery funds from the Federal Highway Administration (FHWA) to complete the project and is providing engineering design, contract services, and acquiring the necessary environmental permits. The Forest Service contribution includes planning and project oversight. Upon completion of the project Forest Road 17 would again be open to public vehicles.

Connection to the Forest Plan

This project complies with the White Mountain National Forest's Land and Resource Management Plan, also known as the Forest Plan. The (2005) Forest Plan is a programmatic framework that documents the desired balance of multiple uses to meet society's needs while protecting, restoring, and enhancing the natural resources and the facilities and improvements thereon.

This EA is tiered (40 CFR 1508.28) to the Record of Decision (ROD) and Final Environmental Impact Statement (FEIS) for the Forest Plan (USDA Forest Service 2005a, 2005b, 2005c). Forest Plan direction, standards and guidelines are incorporated into this EA, which is focused on the pertinent site-specific issues.

Public Involvement

This project was listed on the quarterly White Mountain National Forest Schedule of Proposed Actions (SOPA) beginning in April 2013, and will remain on the SOPA until after a decision is made.

On February 28, 2013, a letter was sent to individuals, organizations, state and local agencies, partners, and all who were on the Forests project mailing list as of that date. The Scoping Report was posted to the WMNF website at: http://www.fs.fed.us/nepa/nepa_project_exp.php?project=41416 on February 28, 2013. Commenters included 7 individuals.

On April 16, 2013, the 30-day Comment Report was sent to individuals expressing interest in this project, and was published in the New Hampshire Union Leader. Two responses were received, both supporting the project.

Issues

An issue is a point of debate, dispute, or disagreement regarding anticipated effects of implementing the proposed action. Issues are usually identified by the interdisciplinary team based on comments from the public or other agencies. Occasionally issues arise within the interdisciplinary team if the concerns of all resources cannot be addressed in a proposal. For this project, the public comments received were supportive of the proposal, with one suggestion to evaluate possible road relocations above the slumped area of the road. This idea had already been considered by both the Forest Service and the Federal Highways Administration (FHWA).

A question whether river rocks would be used for armor was asked, confirming

that armor would come from an off-site location. A comment recommended using the largest rock possible for armoring. A third commenter recommended placing armor at a gentle slope percent, and emphasized the importance of proper drainage to protect the road and subgrade from soil saturation. These helpful suggestions are included in the current plans for this project, except for the suggestion to reroute the road (see Alternatives Considered but Eliminated from Further Study). No other substantive issues were identified.

Chapter 2 - Alternatives

This section describes the alternative ways of meeting the purpose and need that were considered by the interdisciplinary team and responsible official. Two of these alternatives (taking no action and implementing the proposed action) are analyzed in detail in Chapter 3.

Alternative 1 – No Action

This alternative proposes no comprehensive repairs or improvements to Slippery Brook Road at this time. The road would remain closed, preventing public use, likely resulting in further soil erosion and degradation of the road template, and risking continued sedimentation of Slippery Brook. Analysis of "no action" provides a baseline from which to compare the effects of the action alternatives.

Alternative 2 - Proposed Action

The proposed action would stabilize the fill slope and streambank adjacent to the slump, stabilize the road, and repair the road surface. To accomplish this

- The outer 10 feet of fill slope would be reconstructed using imported soil, and engineered with fabric to allow for drainage and add stability.
- Soil nails would be driven deep into the fill slope and base material at multiple depths to secure the slope. Soil nails are not visible, and are designed to hold the slope (fill and foundation) in place.
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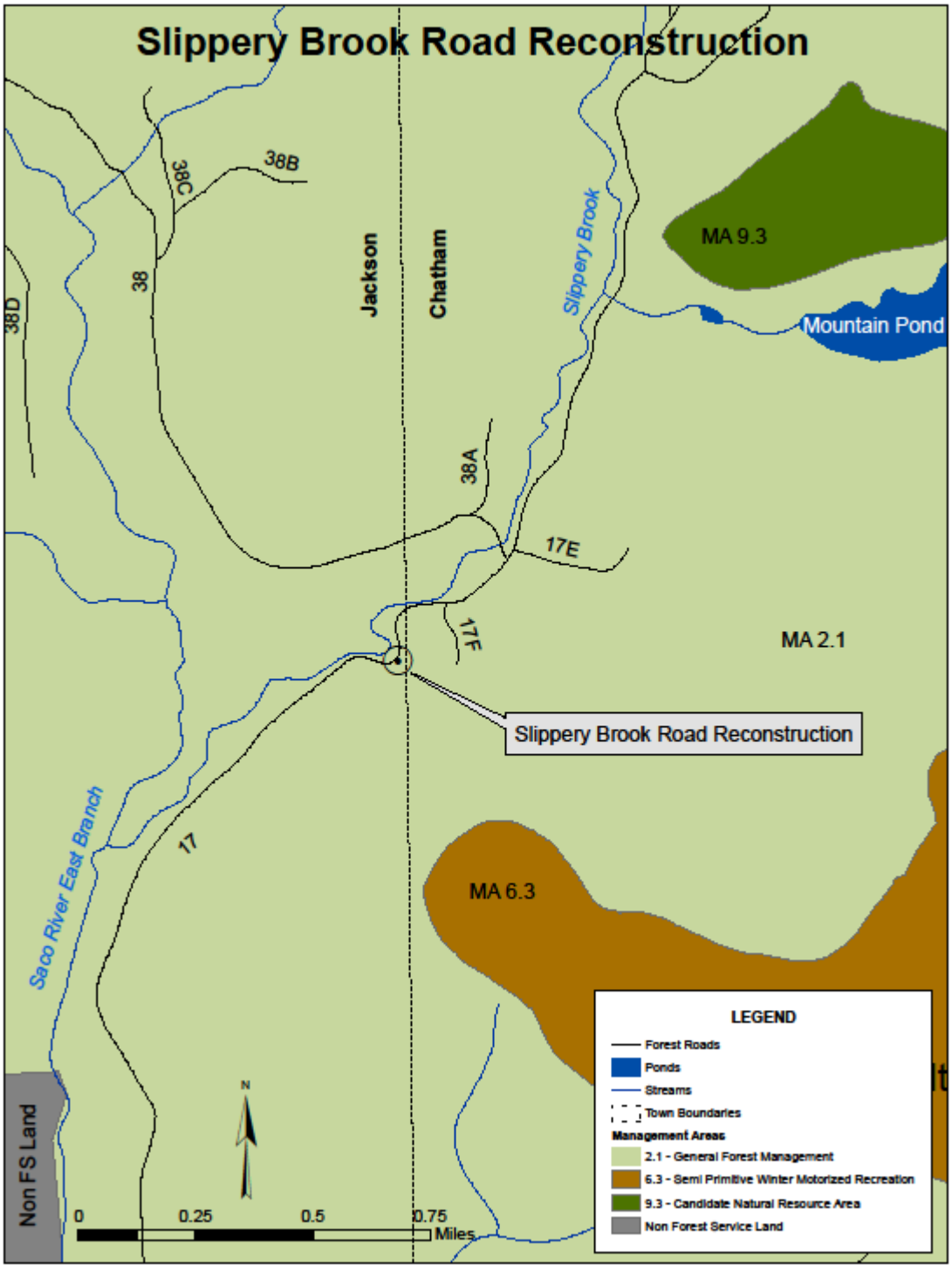

FIGURE 2: Proposed Road Repair Project Location

Mitigation Measures

- Best Management Practices for Road Maintenance (NH DOT 2001) must be followed.
- Best Management Practices (BMPs) for spill prevention and containment must be used when transporting or using potentially hazardous substances such as fuel.
- Work within the streambed must be isolated from stream flow using coffer dams or equivalent measures.
- Stream channel location, slope, dimensions and bed material shall not be changed, except where minor changes are necessary to anchor bank stabilization materials.
- Any heavy equipment must be visibly free of seeds and plants prior to entering the project area. Cleaning should take place off-Forest unless an on-Forest cleaning site has been approved by a Forest Officer in advance.
- Gravel and fill must come from weed-free sources. The Forest Service will inspect local gravel sources to identify weed-free borrow material.
- Minimize soil disturbance to no more than needed to meet project objectives.
- Where project disturbance creates bare ground, reestablish vegetation to prevent the establishment of weeds. Use native seed where appropriate, and use certified weed-free or weed-seed free hay or straw where reasonably available.
- Periodically monitor work areas for presence of NNIS plants.

Alternatives Considered but Eliminated from Further Study

In developing the proposed action, the interdisciplinary team and responsible official discussed the project objectives and considered several options. For reasons provided below no other alternatives are analyzed in detail in this environmental assessment.

Relocate a section of road that would bypass the damaged road.

The section of road damaged during Tropical Storm Irene, is approximately 200 feet long. The feasibility of constructing a route around the damaged area was

evaluated. The potential route, with its own resource concerns, would require approximately three quarters of a mile of new road due to uneven topography and intermittent wet soils involved.

The likelihood of this route creating as many resource issues as the current location is highly probable. The initial investment required to construct a road on the best available terrain would be cost prohibitive. Therefore, the probable resource impacts and expense needed to construct a by-pass around the damaged section of road, versus repairing the road in its existing location, eliminated this alternative from further consideration.

Chapter 3 – Effects Analysis

This section describes the direct, indirect, and cumulative effects on resources found in the Project Area resulting from Alternatives 1 and 2. Analysis of effects to resources is summarized from detailed Specialist Reports that are located in the project record.

The interdisciplinary team for this project consists of specialists in recreation, soil, water, fisheries, wildlife, plants, engineering and heritage resources. These specialists reviewed the project on the ground and considered the best available information when evaluating potential impacts on the resources present. The sections below summarize effects analyses that are available in the project record. The rationale for identified analysis areas and timeframes, and all literature cited also are located in the project record.

Direct and indirect effects are those impacts that result from implementation of the project. Cumulative effects are the combined impacts of the direct or indirect effects with impacts from past, ongoing, and known future actions in the identified timeframe and analysis area.

Soil Resources

Direct and Indirect Effects

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 best available science was used to address the findings on the land.

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 Forest Service standards that help prevent the concentration of water on the road surface which could lead to erosion and stream sedimentation.

The analysis area for direct and indirect effects on the soil resource includes the 18,600 square foot project area. 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 five years. Most changes related to proposed activities would be expected to take effect during and soon after construction.

Alternative 1: No Action

Effects to soil are expected to continue on current trends, meaning additional soil loss

into Slippery Brook at the location of the slump. Slippery Brook is undermining its bank at this location, and runs fairly deep and swift in high water events. Slippery Brook Road runs along this stretch and the brook continues to erode soil at the base of the road. Under this alternative Slippery Brook would eventually undermine this section of road. Continued erosion of the streambank at this location would add impacts to the soil and thus to water quality as the road failed.

Because it does not address existing resource concerns, this alternative has more impact to soil resources than the proposed action.

Alternative 2: Proposed Action

The proposed action would reconstruct a 200 foot section of Slippery Brook Road. The project Area is approximately 10,500 square foot area, and would include stabilization of the streambank below the road for an additional 8,100 square foot area.). Since 10,500 square feet of area is currently a road, there will only be 8,100 square feet of new temporary soil disturbance. The proposed action would lead to approximately 18,600sq.ft.of ground disturbance in the project area.

As long as this road exists, soil under the road would be compacted. The clearing limit width would be approximately 24 to 30 feet and during construction, the previously protected soils would be temporarily exposed to rainfall, and the organic-rich upper layer of soil could more easily erode. Following Forest Plan direction and BMPs related to surface erosion control at road sites, the appropriate timing of construction activities, and controlling road drainage, these design features should effectively rehabilitate temporarily disturbed areas, prevent soil erosion from occurring, and protect soils adjacent to the construction site.

The proposed action may initially cause ground disturbance and temporary sedimentation, but improving and maintaining roads prevents future soil erosion from occurring, thereby helping to prevent future soil erosion problems (Moll et al. 1997). Research has shown that maintenance, such as resurfacing roads with a layer of gravel, reduces sediment losses (NCASI 2000). Forest Plan Standards and Guides and well as BMPs would be followed to further prevent soil erosion and promote revegetation of areas disturbed by management activities.

This alternative has a net watershed benefit. The road and stream bank would be stabilized and the stream bank revegetated to minimize the current erosion. In summary, Alternative 2 has less detrimental impacts to the soil resource than the no action alternative.

Cumulative Effects

Land management activities, such as road building, typically result in site-specific soil erosion that is generally limited to the area of direct impact.

The area for the Cumulative Effects Analysis (CEA) is 58,600 square feet. This includes immediate areas around the 18,600 square foot project area. 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. This area was chosen because any effects from the project area are expected to be diluted beyond this point.

Within this CEA area, past and foreseeable actions include year-round recreational use on the road, and road maintenance that may occur. The time frame for analysis of cumulative effects is ten years in the past and ten years beyond the proposed action. This allows for consideration of effects on resources resulting from past actions and considers foreseeable activities that could affect the soil resource while the short-term effects of the project are still evident.

Alternative 1: No Action

Under Alternative 1, soil productivity would be expected to continue to degrade due to the ongoing soil erosion from the stream bank.

Alternative 2: Proposed Action

In summary, because the road is already considered non-productive lands and the stream bank stabilization would address the current soil erosion, Alternative 2 would have fewer negative effects on the soil resource than Alternative 1.

Water Resources

Direct and Indirect Effects

The direct and indirect effects analysis area includes a 100-foot corridor along Slippery Brook from the project area to the East Branch Saco River (22 acres). The analysis period is 10 years in the past and 10 years in the future. This is enough time to consider past impacts of Tropical Storm Irene and future effects of both road repair and use.

Alternative 1- No Action

Effects on water quality and channel function are expected to continue along current trends. Sediment loading would continue to be higher than pre-Irene levels due to continued erosion of the Slippery Brook Road prism and adjacent stream bank. While some bank erosion is natural after large storm events, the presence of a road bed rather

than intact vegetation on the bank decreases its stability. Massive failure of the stream bank has the potential to contribute a large volume of sediment over a short period of time, increasing turbidity and fine sediment presence for several years.

Approximately 17,100 square feet of riparian area (channel and banks) would have reduced function due to the eroding, unstable bank and road prism. Ongoing erosion and slumping could prevent natural revegetation and bank stabilization processes in this area for all or part of the analysis period.

Under Alternative 1, sedimentation could increase as a direct result of taking no action, since an eroding road bed on an unstable bank would not be addressed. Channel function could also deteriorate if future storm events cause adjacent areas of the bank to erode. Climate change could exacerbate some of these effects.

Alternative 2- Proposed Action

Water Quality

Road repair and bank stabilization are unlikely to directly affect water chemistry, since the only chemical use is likely to be fuel for construction equipment. Mandatory compliance with best management practices (BMPs) for spill prevention and containment would prevent water pollution during operations.

The ground, bank and stream bed disturbance associated with Alternative 2 increases the risk for short-term, direct effects on sedimentation during construction activities relative to Alternative 1. This risk is mitigated by Forest Plan Standards and Guidelines requiring isolation of work areas from stream flow and the erosion control required by the Forest Plan and applicable BMPs. Given these factors, this effect would be expected to be within the short-term, minimal effects allowable under the Forest Plan; which would not lead to impairment of water bodies. Monitoring stream crossing projects involving stream bed disturbance in 2011 found no increase in turbidity, or a small increase in turbidity that was within State standards. Where an increase occurred, it was undetectable 100 feet downstream from the project (WMNF 2012).

Table 1. Ground disturbance related to project activities

Activity	Alt 1	Alt 2
Road repairs – square feet (sq. ft.)	0	10500
Bank stabilization (sq. ft.)[1]	0	8100
Stream bed disturbance (sq. ft.)[1]	0	1600
Area of long-term erosion/instability (sq. ft.)[2]	17100	0

[1]Estimated area disturbed based on limits of construction.
[2]Estimated area based on existing erosion and potential expansion to reach stable grade.

A beneficial reduction in sedimentation would occur due to stabilization of an eroding bank and road bed. An estimated 17,100 square feet along Slippery Brook are currently eroding or are likely to erode if no action is taken. Under Alternative 2, this area would be stable after construction is complete. Within the analysis period, an overall decrease in sedimentation would be expected due to this stabilization relative to Alternative 1.

Therefore, the overall effect on water quality would be a short-term increase in ground disturbance, with trace amounts of sedimentation and small, temporary turbidity increases likely. The amount of turbidity and sedimentation would be less than under the no action alternative (in which several cubic yards of soil could wash away), and would be shorter in duration.

Cumulative Effects

Table 2 lists activities in the Cumulative Effects Analysis Area (CEA) that have the potential to affect water resources. Anticipated effects of climate change in New England are summarized in Johnson and Cate (2013), though these effects are expected to be relatively small during the analysis period.

Table 2. Past, Present and Reasonably Foreseeable Activities in CEA

Activity	Year	Description
Past		
Chandler Mountain Timber Sale	2006-2010	162 acres commercial thinning 239 acres single-tree selection 81 acres clearcut
Round Mountain Timber Sale	2004-2007	56 acres commercial thinning 89 acres single-tree selection
Present & Reasonably Foreseeable		
Slippery Brook Road repairs	2011-2013	Repairs within road bed outside of project area
East Branch Road and Bridge repairs	2011-2014	Minor repairs to road surface and replacement of a washed out bridge
WMNF road and trail maintenance	Ongoing	Periodic grading, resurfacing, ditch and culvert cleaning.

Alternative 1- No Action

Effects on water quality and channel function in the CEA are expected to continue along current trends. Sediment loading would likely be higher than pre-Irene levels due to continued erosion of the unstable bank, in combination with natural deposition from

Tropical Storm Irene. The negative impacts of sedimentation would be partially mitigated by natural processes, such as deposition behind wood jams. Potential negative impacts to channel function due to unstable banks in close proximity to roads would be exacerbated by more frequent, intense storms due to climate change.

Alternative 2- Proposed Action

Water Quality

Cumulative effects on water chemistry from all activities in the CEA are expected to be negligible due to the minimal need for chemical use and required Best Management Practices. Because ground disturbance from past harvest activities was completed at least 3 years ago, the overlap with the effects of this project would be minimal given typical revegetation rates in this area (WMNF 2012). The proposed activity would add less than 1 acre of temporary ground disturbance in the CEA, only 0.1 acre more than the area that is currently eroding. The proposed action would be expected to reduce sedimentation after the completion of the project by stabilizing the bank and road bed. Therefore, no cumulative effect is expected when this activity is considered in combination with other ground-disturbing activities or climate change.

Channel and Riparian Function

The past, present or reasonably foreseeable activities involving roads in the CEA would not be expected to affect channel function because they involve work in established road beds, mainly away from water. Ongoing or foreseeable work on stream crossings would maintain or increase the capacity of those crossings to handle high flows. No indirect effects on channel function due to hydrologic changes are expected to have occurred in this watershed, since less than 10 percent of the watershed has been harvested in the last 10 years (Hornbeck et al. 1993). Forest Plan Standards and Guidelines, state laws and stand locations are designed to maintain sufficient forest cover for good riparian function. The proposed action would address changed channel conditions after Irene, with the view of making the road more sustainable in its current location. Therefore, no effect or a slight positive cumulative effect on channel and riparian function would be expected.

Aquatic Species and Habitats

Direct and Indirect Effects

The timeframe for direct and indirect effects will be five years into the future. Generally the effects of sedimentation during project implementation will have ceased and this timeframe allows for two generations of brook trout to become established.

Alternative 1- No Action

Direct and indirect effects from the no-action alternative would range from "no effect" to moderate effect of fish productivity in Slippery Brook. No effects would be realized if the bank along the Slippery Brook Road were to stabilize naturally in the short term. If slumping were to accelerate, substantial turbidity and sedimentation would occur in the brook. Turbidity would cause both fish and stream invertebrates to mobilize and relocate in the short term. These effects downstream would be determined by the severity of the failure and weather patterns that determine erosion rates of the exposed bank. While these effects would not threaten the existence of fish populations in the watershed, it may reduce habitat quality and production for several years until the bank reaches a self-stabilizing slope.

Alternative 2 - Proposed Action:

Installation of a stabilizing structure along the Slippery Brook bank may cause some minor negative direct effects to aquatic life as minor sedimentation and turbidity into Slippery Brook could occur during construction. Following Forest Plan standard and guidelines (S&G's) and New Hampshire DES (NHDES) wetland permit conditions would minimize these effects. Mostly likely impacts of turbidity would mobilize individuals out of the area. A net reduction in sedimentation at the site would occur as the bank slope is stabilized. Sedimentation may occur and cause disturbance to fish and aquatic life in the short term, this effect would not have any measureable impact on growth, productivity, or the sustainability of local populations.

Cumulative Effects

The time frame for looking at cumulative effects in the project area is ten years in the past and 10 years forward. This timeframe was chosen because the effects of many management activities are no longer found after ten years. Ten years into the future was selected because this is a reasonable timeframe to consider extreme weather events that potentially have large effects on aquatic populations.

The past and reasonably foreseeable activities analyzed here are those same activities shown in Table 2 above under water resources.

Alternative 1- No Action:

Cumulative effects would generally be the same as in the direct and indirect effects in the next 10 years as none of the past, present, or future management activities would have measureable impacts on fish or fish habitat. The scale of vegetation harvesting that occurred in the past ten years, in combination with the implementation of design features and Forest Plan guidelines, resulted in negligible effects to fish and aquatic

habitats. Foreseeable natural events would however increase the potential for bank failure and disturbance to fish population as eventually the streambank would slump into the river. High sediment loads within a 10 year period could result in the filling of pool habitat and reducing the productivity of riffle habitats. Climate change would only increase the likelihood of this to occur as more intense storms are more likely to cause bank failure. Sedimentation and turbidity from a bank failure of this scope could affect aquatic life at the stream reach scale in a ten year period, although these effects may already be felt from the larger scale of bank failures that may have already occurred throughout the watershed from Tropical Storm Irene.

Alternative 2 - Proposed Action:

The past, present, and future management activities are not expected to have any measureable negative effects on fish or aquatic habitats if the proposed action is implemented. Sedimentation and turbidity that may occur from forest vegetation management activities is a fraction from what occurred during and after Irene. Stabilization of the Slippery Brook Road may have a positive effect to the lower reach of Slippery Brook, as the likelihood of bank failure is greatly reduced.

Terrestrial Wildlife, Plants, and Habitats

The Analysis Area for direct, indirect, and cumulative effects to TEPS/RFSS is the Project Area as described above plus a 200 foot buffer around the project site. This area was selected because this is where direct and indirect effects would occur from project implementation and includes connected actions such as coffer dams, and access to the work areas of the site.

The temporal scope for direct and indirect effects on TEP/RFSS species is the time period that encompasses implementation, connected actions and other project implementation because this is when TEP/RFSS species would most likely be affected by the proposed activities.

The temporal scope for all species considered in this BE is 5 years back and 5 years forward (2008 to 2018). The project as proposed should be implemented in less than one year and this time frame covers multiple seasons for the proposed actions to experience several highs and lows of water run-off, high precipitation events, road traffic, etc.

Direct, Indirect and Cumulative Effects on TES and Regional Forester's Listed Species

Below the road there are a few large pine trees. Habitat condition of the project area was determined from field surveys. A field review was conducted within the project area for

rare plants in 2011. No Federally listed species exist within the Project Area.

All species listed under the federal Endangered Species Act or designated by the Regional Forester as sensitive species for the WMNF were considered for evaluation of effects in this project (see Project File). No Federally listed species exist within the Project Area. The proposed activities would not jeopardize the continued existence of any species federally listed or proposed as threatened or endangered, or result in adverse modification to such species' designated critical habitat.

WOODLAND BATS

Eastern Small-footed Myotis (Myotis leibii)

Northern Myotis (*Myotis septentrionalis*)

Little Brown Myotis *(Myotis lucifugus*)

Tri-colored Bat (*Perimyotis subflavus*)

Based on review of the best available science, it is my determination that the No Action Alternative would have no impact on the four woodland bat species. There would be no impact under the Proposed Action if implementation occurs when the bats would not be present (September 15 to May). For implementation that occurs during summer, the highest risk to bats is when young are in maternity roosts (typically early June to mid-July). Implementation outside this window greatly reduces this risk. Therefore, the Proposed Action may impact individual woodland bats but would not likely cause a trend toward federal listing or loss of viability.

NORTHERN BOG LEMMING *(Synaptomys borealis sphagnicola*)

Based on review of the best available science, it is my determination that the No Action Alternative would have no impact and that the Proposed Action impact individual northern bog lemmings but would not likely cause a trend toward federal listing or loss of viability.

THIRD AMELETID MAYFLY (*Ameletus tertius*)

Based on review of the best available science, it is my determination that the No Action Alternative may have a beneficial impact on third ameletid mayfly. The Proposed Action may impact individual third ameletid mayflies but would not likely cause a trend to federal listing or loss of viability.

Heritage Resources

Direct and Indirect Effects

The analysis area for direct and indirect effects is the Project Area. The temporal scope is two years beyond project implementation.

Alternative 1 - No Action*:*

The No Action alternative would not affect cultural resources because no ground disturbance would occur.

Alternative 2 - Proposed Action*:*

There are no known cultural sites or potentially eligible National Register of Historic Place sites located in the Project Area. No cultural resources are known to exist in the area that would be disturbed by this project. If a new site is found during project implementation, all activity would stop and the Forest Archaeologist would be informed so the site could be assessed and protected. Therefore, no effects from this project's activities are anticipated.

Cumulative Effects

Since there would be no direct or indirect effects to heritage resources from either alternative, there would be no cumulative effects.

Transportation Facilities

Slippery Brook Road is a major collector road into this 20,000 plus acre watershed. A number of secondary roads and recreation opportunities are accessed from this road.

Direct, Indirect and Cumulative Effects

The analysis area for transportation is the Slippery Brook and East Branch Watershed. This area includes all the secondary roads that intersect with or accessed via Forest Road 17. It also includes the hiking trails that are accessed via Forest Road 17. The time frame for this analysis is from now out twenty years into the future.

Alternative 1 - No Action*:*

This alternative would not serve the public nor meet the long term Forest Plan goals. Under the No Action Alternative, public access would be greatly limited. Access for the public would be limited to foot traffic and bicycles. Access for administrative management of the area would be severely restricted. Few of the management goals

defined in the Forest Plan for this 20,000 acre area would be accomplished and limited public benefit could be provided.

Alternative 2 - Proposed Action*:*

The Proposed action allows for these recreation opportunities and the management of National Forest lands in this area to continue in accordance with Forest Plan direction. Forest Road 17 is integral to providing for the management of this area, and its multiple uses as defined in the Forest Plan. The team of specialists planning this project determined that to adequately serve the public and meet long term Forest Plan goals, access to this area via Forest Road 17 would be needed.

Roadless Area Conservation Rule and inventoried roadless area

The project is not within a Roadless Area Conservation Rule inventoried roadless area. The project lies adjacent to the Kearsarge 2005 Forest Plan revision roadless inventoried area, but would not enter it nor alter the potential for the Kearsarge inventoried area to be part of a future inventory.

Wild and Scenic Rivers

Slippery Brook is identified in the Forest Plan as eligible for designation under the Wild & Scenic Rivers Act as a scenic river. The Proposed Action would temporarily affect water quality within and near the project site. Long term, the proposed action would stabilize the streambank at this location. Effects to water quality would be short term only. The eligibility of Slippery Brook for designation under the Wild & Scenic Rivers Act would not be affected.

Park lands, prime farmlands, wetlands, and ecologically critical areas

There are no park lands, prime farmlands, research natural areas, or ecologically critical areas in or near the project area, and therefore none would be adversely affected. All actions are consistent with the Forest Plan. This action does not establish a precedent for future actions with significant impacts.