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Southern Region

April 2016

Decision Notice
and
Finding of No Significant Impact

Laurel Creek Property Owners Association
Access Across National Forest System Lands Project

National Forests in North Carolina
Nantahala National Forest
Tusquitee Ranger District
Clay and Cherokee Counties, North Carolina

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Decision and Rationale

Final Decision

Based upon review of the environmental assessment, its alternatives and environmental analysis, the project record, public scoping and 30-day comments, objections, and having discussed the project and its environmental effects with forest, regional and state resources specialists, I have decided to select **Alternative B (**also referred to as the "Selected Alternative"**)** of the Laurel Creek Property Owners Association Access Across National Forest System Lands Project (June 2015 Environmental Assessment). The Selected Alternative will grant a special use authorization to the Laurel Creek Property Owners Association (LCPOA) allowing passenger vehicle access across National Forest System lands to their property at the headwaters of Laurel Creek for their stated purpose of ingress and egress to construct, use, and enjoy four primitive cabins (see Figure 1).

- The special use authorization will grant access beginning at the point where Rockhouse Branch Road (Forest Service Road (FSR) 340A) leaves Fires Creek Road (FSR 340) and continues up Phillips Ridge Road (FSR 340A1) to its end point. From the end point of FSR 340A1, the access crosses National Forest System lands for approximately one third of a mile to the LCPOA property.
- The special use authorization will allow the LCPOA to make improvements to FSR 340A1 and to build approximately 0.34 miles of new road from the end of FSR 340A1 to their property to enable access by passenger vehicles, providing year-round access to the tract of private land owned by the LCPOA.
- The Forest Service will not grant the special use authorization or approve any road construction or reconstruction until the LCPOA has successfully obtained the required permits, including North Carolina Department of Environment and Natural Resource National Pollution Discharge Elimination Permit (NPDES), a North Carolina Division of Water Quality 401 water quality certification and the US Army Corps of Engineers 404 Permit.

Scope and Limitations of the Access Application

The scope and limitations of the access are outlined in the Environmental Analysis (EA) (Section 1.9.4, Chapter 1). In summary, the scope and limitations include:

- The Forest Service will grant the special use authorization conditional upon (1) the LCPOA's compliance with all applicable Federal and State laws, such as but not limited to, the North Carolina Sediment Control Act, the Clean Water Act, and the Endangered Species Act and (2) the LCPOA's receiving (a) all necessary permits and waivers by the North Carolina Department of Environmental Quality and (b) all necessary permits and waivers by the United States Army Corps of Engineers.
- The special use authorization will not include utilities. If the LCPOA wishes to have electrical service at the property in the future, the LCPOA will have to apply for a utilities access and special use authorization from the Forest Service and go through a separate EA for the utilities application.
- The special use authorization will not extend to hauling logs. If the LCPOA wishes to conduct timber harvesting activities at the property in the future, the LCPOA will have to apply for a haul permit to transport logs across Forest Service roads.
- The special use authorization will not allow the LCPOA to engage in commercial activities at the property. If the LCPOA wishes to engage in commercial activities in the future, the LCPOA will have to apply for a separate special use authorization that includes commercial uses, go through a separate EA process, and comply with the National Forests in North Carolina (NFsNC) *General Guidelines for Road Construction – Roads Accessing More than Five Homes and Commercial Buildings* (EA, Appendix 1).
- The LCPOA will be responsible for the cost of any improvements necessary to upgrade any sections of the existing Forest Service roads to year-round standards and will also be responsible for all costs associated with constructing the new access.
- The LCPOA will be responsible for maintaining existing Forest Service roads to Forest Service

standards for passenger vehicles for the duration of the special use authorization.

- FSR 340A will continue to remain open to public vehicular use. FSR 340A1 will continue to remain closed to public vehicular use. Both roads will remain open to use by hikers and horseback riders to the boundary between National Forest System lands and the LCPOA property.

Modifications Based on Objection Review

The 2015 EA and draft decision were subject to review and objection pursuant to 36 CFR 218 regulations. Twelve objections to the proposed project were received during the objection period (June-July 2015), one of which was resolved and withdrawn. The Reviewing Officer determined that the majority of the concerns identified in the objections were adequately addressed in the EA and Draft Decision Notice (DN). However, the objection review identified a need to review, clarify and enhance the design criteria for controlling nonpoint-source water pollution and acid rock drainage.

As a result of this review, the Draft DN has been updated to clarify and enhance the design criteria, to ensure that no unforeseen environmental effects occur. The design criteria include: 1) a strategy for avoiding and minimizing disturbance of acid-producing rock (APR), 2) requirements for testing the Net Neutralizing Potential (NNP) of excavated material within the Nantahala Formation, 3) requirements for water quality monitoring prior to, during, and after project implementation, 4) utilizing a licensed professional to draft the testing and neutralization plans. Other measures include: 1) replacing and improving culverts, and 2) FS approval of offsite aggregate and fill materials used for construction and reconstruction.

These enhanced design criteria are based on a thorough literature review of acid-producing rock and acid-mine drainage related topics to identify the practicality and effectiveness of addressing resource related issues with both active and passive measures. This review identified that these measures have been successfully utilized in other projects and represent the most current science based strategies for reducing environmental effects from acid-producing rock.

The updated design criteria do not represent substantial changes to any of the alternatives or the effects predicted and described in the EA. Implementation of the project will follow the design criteria as specified in this Decision Notice.

Design Criteria

General Soil and Water Criteria:
During road reconstruction and construction, the LCPOA shall meet or exceed standards in the *North Carolina Forestry Best Management Practices Manual to Protect Water Quality* (as amended in 2006).

New Road Construction:

1. Wherever the LCPOA would have to establish a new road prism and new cut and fill slopes to access their property, the standards in the NFsNC General Guidelines for Road Construction (EA Appendix 1) shall be applied.
2. The LCPOA shall obtain the required permits, including North Carolina Department of Environment and Natural Resource NPDES Permit, NC Division of Water Quality 401 water quality certification and the US Army Corps of Engineers 404 Permit, as a precondition to the Forest Service granting a special use authorization.

Road Reconstruction:

1. Reconstruction and reconditioning activities include any work that is required to restore the road to a state where it meets the criteria set forth in NFsNC General Guidelines for Road Construction (EA, Appendix 1).
2. In areas along FSR 340A1, where cut and fill slopes are stable and the road is wide enough to accommodate FS administrative and fire response vehicles, the road will not be widened. The LCPOA will not be required to engage in reconstruction activities that would result in ground disturbance solely to achieve the minimum design standards in the NFsNC General Guidelines because doing so would result in unnecessary soil disturbance.
3. Resurfacing and maintenance of existing drainage structures would be completed along the entire 3.5 miles of existing FSR 340 A1.
4. All sections of road needing widening will be approved by the Forest Service based on final road design, but are not expected to exceed 7% of the entire length of FSR 340 A1.

Water Quality Protection:
During road reconstruction and construction, the following Best Management Practices (BMPs) shall be implemented to stabilize the road prism and reduce the risk of sediment movement:

1. Limiting road grade to a maximum of 12% and limiting fill slopes to a maximum of 2H:1V and cut slopes to a maximum of 1H:1V (H = horizontal, V = vertical);

2. The construction of outsloped roadway for portions of road with grades up to 8% and the construction of rolling dips at frequencies appropriate for the road grades;
3. The construction of crowned and ditched roadway where the grade exceeds 8% and the installation of relief culverts at spacings appropriate for the ditch grade;
4. The surfacing of the roadway using appropriate grade and depth of stone;
5. The use of silt fences, mulch, coir matting, and other standard measures to reduce sedimentation as needed;
6. Seeding exposed soil with native plants; and
7. The installation of a slash filter windrow along the entire length of road work.
8. The three existing stream crossings and the eroded crossing at Hickory Cove Creek shall be replaced with structures that provide passage for aquatic organisms and reduce the risk of road failure during flood events. Such structures could include bridges or open bottom arch pipes, sized to meet the bankfull width at a minimum.
9. Substandard and nonfunctional culverts shall be replaced. New and replaced culverts will be designed in accordance with NFsNC culvert standards, including 100-year storm event design for major stream crossings. Corrugated plastic pipe will be used where appropriate.

Design Measures for Acid Producing Rock

Some portions of existing and potential road corridors are located in areas that are in the Nantahala Geologic Formation, which poses a high risk for generating acid-runoff because of the abundance of iron sulfides in the rock. The close proximity of road reconstruction and road construction activities to Outstanding Resource Waters requires the following design criteria be implemented to reduce the risk of acid runoff from acid-bearing rock.

These design criteria follow a *principal concepts* approach and are informed by a literature review (incorporated into the project record) of standard industry practices used to control acid rock/acid mine drainage. They meet or exceed the December 14, 2007 Memorandum issued by the North Carolina Division of Water Quality (NCDWQ), *Assessing and Controlling Acid Rock Drainage on Projects Requiring Section 401 Water Quality Certification,* pages 26 and 27 of the Environmental Assessment (EA).

The *Principal concepts* cover four phases throughout the project's lifecycle.

1. Prior to any reconstruction or construction activities, ***testing*** will occur to identify the acid content of geologic material that may be disturbed during road reconstruction and construction.
2. Based on testing results, and as much as possible and practical, reconstruction and construction practices will be designed to ***minimize and avoid*** disturbing soil in areas with sample net neutralization potential (NNP) values < 0 $TCaCO_3/kT$.
3. In areas where soil disturbance cannot be minimized or avoided in areas where NNP values < 0 $TCaCO_3/kT$, a ***neutralization strategy*** will be developed and implemented.
4. A post-construction ***monitoring*** plan will be developed and implemented for all affected waterbodies.

Geologic Sampling and Testing

As part of the engineering design for road reconstruction and construction, the LCPOA shall submit to the Forest Service, for review and acceptance, a draft subsurface sampling protocol prior to commencing field testing and laboratory analysis for potential acid-producing rock. Once the plan is approved, the LCPOA will implement the testing plan.

1. The geologic sampling and testing plan shall be prepared, or approved, by a geologist licensed in the state of North Carolina.
2. The geologic sampling and testing plan shall be sufficient to characterize the NNP and the variability of the material that is excavated, where bedrock is exposed or removed, and in areas where the road design calls for cut slopes.
3. The sampling design shall have no less than one sample per 1000 cubic yards of excavated material. For portions of the road design where bedrock exposure is expected, or where cut slopes will be used, there shall not be less than two sample locations per excavated section. Sampling intervals/increments shall not be less than 5 foot increments in the vertical direction and shall extend 5 feet below the expected depth of excavation. Sampling intervals/increments shall be no greater than 50 feet in the horizontal direction.
4. The sampling and testing plan shall include provisions for increasing the level of sampling within areas of NNP of < 0 $TCaCO_3/kT$, or where highly variable characteristics are encountered. The plan shall state the circumstances or thresholds that will result in increased sampling.
5. Analysis of rock samples shall include Paste pH (ASTM D 4972, EPA 1978, or equivalent), Acid-Generation Potential and percent sulfur as

both total and pyritic sulfur (EPA 1978, ASTM E-1915, ASTM D 4239, or equivalent), and Neutralization Potential (using a modified procedure with hydrogen peroxide (as described in Skousen et al, 1997)).

6. The geologic sampling and testing submitted for approval will be evaluated against Tennessee Department of Transportation's 2007 document titled "Guideline for acid producing rock investigation, testing, monitoring, and mitigation" for approval by the Forest Service.

Minimizing and Avoidance

1. As much as possible and practical, given topographic features and other limiting factors along the road corridor, road designs will be developed, or existing plans amended, that avoid and/or minimize disturbance of acid producing rock, as defined by materials with an NNP value less than< 0 $TCaCO_3$/kT or where paste pH values are <5.
2. Any excavation or blasting of materials with an NNP value less than< 0 $TCaCO_3$/kT will only occur during periods of no rain, and operations will cease if rain begins during on-going construction. If, during construction, it begins to rain, the excavated/blasted material and other exposed surfaces of acid producing materials will be covered with plastic or other waterproof material to prevent runoff from these areas. These areas will remain covered until the rain event has passed.
3. Any excavated/blasted material and exposed surfaces of acid producing materials that are on-site at the end of a workday will be covered with plastic or other waterproof material. This shall continue until the neutralization practices are installed.

Neutralization

As part of the final engineering design for road reconstruction and construction, the LCPOA shall submit a site-specific neutralization strategy for all areas of disturbed and exposed materials with an NNP < 0 $TCaCO_3$/kT.

1. The neutralization plan shall address the management of water runoff from the disturbed areas, exposed bedrock, and/or cut slopes in the project. Drainage shall be directed away from excavated, exposed, or treated APR materials. Techniques and practices such as anoxic limestone drains, aerobic wetlands, limestone beds, settling ponds, oxic limestone channels, and/or amendments of alkaline materials to disturbed areas or discharge waters are appropriate for consideration in the neutralization plan. Passive techniques and practices to address runoff from excavated areas are preferred, and where active measures are included in the neutralization plan, they shall be limited to use prior to the confluence with the primary receiving waterbody (i.e. treated near source). The neutralization plan shall include information that demonstrates that each technique or design is appropriately sized/engineered for the expected amount and characteristics of the runoff, and include actions for maintaining the efficacy of the treatment/neutralization practices over the lifetime of the project.
2. All cut slopes and fresh-cut rock faces in materials with an NNP < 0 $TCaCO_3$/kT will be treated, using methods such as encapsulation or armoring, so that the surface is not exposed to air and water, and any runoff is neutralized.
3. Excavated material with an NNP < 0 $TCaCO_3$/kT will not be used as the fill portion of cut and fill slopes and material will be removed from the Fires Creek watershed and disposed of in accordance with applicable state requirements, unless a successful neutralization strategy can implemented.
4. Fill material and gravel aggregate that is obtained from off-site locations and used during construction and reconstruction shall be from a source that is approved by the Forest Service to ensure material brought on to the project does not contain APR materials.

Monitoring

Prior to approval of the final engineering design, the LCPOA shall submit to the Forest Service, for review and acceptance, a proposed water quality and aquatic biota monitoring plan.

1. The monitoring plan shall include baseline monitoring to commence prior to construction or site disturbance. The monitoring plan shall continue for at least three years after road construction and reconstruction is completed. Sampling shall be done, at a minimum, on a quarterly basis and include sampling requirements for both storm flows and base flow conditions. During construction and for a period of one year following the completion of construction, the sampling intervals shall be increased to no less than monthly. LCPOA shall provide the results from the monitoring to the Forest Service in a timely manner.
2. Designated sampling points shall be established to capture upstream, downstream, and project

areas including runoff from excavated and blasted sites, as well as cut slopes. Water sampling points shall include provisions for flow rate measurements.

3. The water chemistry results will include pH, conductivity, calcium, magnesium potassium, sodium, ammonia, sulfate, nitrate, chloride, total iron, and gran titration estimate for acid neutralizing capacity. All units of measure will be reported as micro-equivalents per liter. The selected laboratory shall be capable of processing samples from low ionic strength waters.
4. The LCPOA shall install pH sondes at locations upstream and downstream of areas affected by road construction reconstruction activities. If a site upstream of construction areas is not feasible, a location on Rockhouse Creek will serve as a suitable control. The sondes shall be programmed to measure pH at hourly increments. Sondes must be capable of measuring pH, temperature, conductivity, and pressure.
5. If areas of acidic rock are located during the testing phase and work in these areas cannot be minimized or avoided, then the streams nearest in proximity to disturbed areas must be monitored quarterly during rainfall events for changes in pH. Stream pH shall be measured immediately upstream of the excavated area (above any potential drainage) and downstream of the excavated area (within 50 feet of any drainage coming off of the excavated area). This monitoring can be accomplished by either measuring pH using a handheld probe or by installation of pH sondes like those referenced above. At least one monitoring period shall occur during the first substantial rainfall event (≥1 inch of rainfall in a 24 hour period, as measured at the Chatuge Dam rain gauge by TVA) following soil disturbance at sites with NNP values < 0 $TCaCO_3/kT$.
6. If water quality monitoring or aquatic biota monitoring indicates that state water quality standards are not being attained, or that the water quality following construction is not of the same quality as before construction, then LCPOA will be required to implement the necessary nonpoint source erosion control practices necessary to correct the problem.
7. If water quality monitoring indicates that upstream (control)/downstream pH monitoring shows that the neutralization practices are not sufficient to maintain water at baseline levels, or if the pH of the receiving waterbody trends toward values that are not supportive of aquatic life forms, then LCPOA shall be required to create an action plan to correct the problem within 30 days of notification by the Forest Service, and implement the plan within 30 days of Forest Service approval. Actions that may be taken to correct the problem include maintenance of neutralization practices, installation of additional neutralization capacity, or the installation of active treatment systems to mitigate for acidic runoff.
8. The use of active treatment systems for mitigating unacceptable pH changes will be required (in order to return water to either the upstream pH conditions or to baseline conditions), while passive mitigation practices or treatment systems are being installed.

Rationale

The purpose and need for the proposal are disclosed in Chapter 1, Section 1.3 of the June 2015 EA and respond to the LCPOA's application for a special use authorization across National Forest System lands. The Forest Service is required to respond to a formal request for transportation and utility systems and facilities on federal lands.

Title 36 CFR 251.110 through 251.114 - Access to Non-Federal Lands, establishes the procedures the Forest Service follows in evaluating proposals for access and defines the criteria, terms and conditions for the use of the access. As the land management agency responsible for managing the national forests, the Forest Service has the discretion to determine the location, design, type, and extent of the access to be granted across National Forest System lands.

The Forest Service has proposed and analyzed methods of access and the location of proposed access routes. The Forest Service has also disclosed the effects to the environment associated with each alternative consistent with the National Environmental Policy Act and with the Land and Resource Management Plan for the Nantahala and Pisgah National Forests based on the extent of the access.

In reaching this decision, I reviewed the purpose and need for the project and the alternatives considered in the EA. I then carefully weighed the effects analyses of the alternatives and the public comments received on the EA. The interdisciplinary team (ID team) conducted field surveys, database queries, and other localized analyses to determine effects of the alternatives.

I am selecting Alternative B (with clarified design criteria) because it achieves the purpose and need for the project and best addresses the overall resource protection needs. During their analyses, the ID Team evaluated past,

present, and reasonably foreseeable future actions that could be combined with expected effects from the LCPOA access proposal. The EA provides me with sufficient analyses and conclusions to make a reasoned decision. Compared to the two other access routes considered in detail, the selected alternative results in the fewest acres impacted, the smallest amount of new road construction in the Nantahala geologic formation, and results in a road system with smaller cut and fill slopes.

Other Alternatives Considered

In addition to the Selected Alternative B, I considered three other alternatives in detail: *Alternative A – No Action; Alternative C – Access from the East;* and *Alternative D – Access from the North.*

Alternative A – No Action

The no action alternative provides a baseline for estimating the effects of the proposed action. Alternative A would grant no additional access beyond the existing non-motorized routes currently available to the LCPOA as described in Sections 1.9.1 and 2.3 of the EA.

I did not select Alternative A because 67% of similarly situated properties in the area are accessible by passenger vehicle (Section 1.9.2 of the EA). I therefore concluded that vehicular access is the method that constitutes reasonable use and enjoyment of the land based on contemporaneous uses per 36 CFR §251.114, paragraph a: *"The authorizing officer shall determine what constitutes reasonable use and enjoyment of the lands based on contemporaneous uses made of similarly situated lands in the area and any other relevant criteria."*

Alternative C – Access from the East

This alternative would provide access to the LCPOA property from Big Stamp Road (FSR 427) for approximately 3.6 miles to its intersection with the Rim Trail and Rockhouse Creek Trail below Big Stamp, and the LCPOA would reconstruct the entire length of FSR 427 under this proposal. A new road segment approximately 1.6 miles in length would be constructed to access the inholding from the end of FSR 427.

I did not select Alternative C because this alternative would have resulted in 1.26 more miles of new road construction, 0.37 more miles of new road construction in the Nantahala Formation, would have been out of compliance with scenery standards in the LRMP, would have resulted in higher cut banks (65 feet), would have resulted in seven more acres of disturbance, and 72,000 more cubic yards of excavation than Alternative B. In addition, there are substantive concerns about the impacts that this alternative would have on areas that are important to Tribal history and culture.

Alternative D – Access from the North

This alternative would provide access to the inholding from the north, beginning at the gate that accesses FSR 6148A and continuing to a point approximately 1.3 miles from the gate at FSR 6148A. From that point, a new road segment approximately 3.5 miles in length would be constructed to Forest Service standards for passenger vehicles to access the inholding. The new road segment would approach Will King Gap on an unnamed ridge east of Nancy Hawkins Branch and then turn east above the headwaters of Aaron Creek, Alfred Creek, and Colvard Creek to access the inholding from its northwest corner at the rim of the Valley River Mountains.

I did not select Alternative D because this alternative would have resulted in 3.16 more miles of new road construction, 0.47 more miles of new road construction in the Nantahala Formation, would have been out of compliance with scenery standards in the LRMP, would have resulted in higher cut banks (80 feet), would have resulted in 43 more acres of disturbance, and 286,000 more cubic yards of soil excavation than Alternative B. In addition, there are substantive concerns about the impacts that this alternative would have on areas that are important to Tribal history and culture.

Alternatives Considered but not Analyzed in Detail

Public comments received in response to the proposed action provided suggestions for alternative methods for achieving the purpose and need. Four additional alternative routes for vehicular access were considered but were not analyzed in detail for reasons consistent with 40 CFR 1502.14 (Section 2.5 of the EA). Three alternatives (1, 3 and 4) were eliminated because they duplicated action alternatives. Alternatives 2a and 2b were found to be technologically unfeasible. See Section 2.5 of the EA for additional information.

I did not consider granting access via an OHV trail because OHV use is illegal on all Forest Service roads on the Tusquitee Ranger District.

Public Involvement

The proposal was provided to the public and other agencies for comment during a scoping period in April and May 2008. This proposal has been listed on the NFsNC Schedule of Proposed Actions since July 2008.

An EA was released to the public for a formal 30-day Notice and Comment period in November 2011. A total of 62 comments on the EA were submitted to the Forest Service by members of the public and by representatives of state and federal agencies and non-governmental organizations.

These comments were reviewed by the ID Team which concluded that sufficient issues were raised to warrant revision of the EA. These include revisions to Section 1.9 (Federal Regulations – Access to Non-Federal Lands); consideration of additional alternatives; and expanded recreational and scenery analyses. The ID Team further determined that the revisions were substantial enough to require that the revised EA be released to the public for a second 30-day notice and comment period.

In December 2012, the revised EA was released to the public for a 30-day notice and comment period. Forty three persons, organizations, and agencies commented on the EA. Comments received during the 2012 notice and comment period were carefully reviewed and used to guide the June 2013 decision to grant access to the LCPOA.

The 2013 decision was appealed on grounds that the Forest Service did not analyze in detail alternative access routes, particularly approaches from the north and east, and that the Forest Service had prematurely and improperly dismissed alternative routes from the north, east, and west. After review by the Regional Forester, the decision was remanded in August 2013. The LCPOA exercised their right to continue their application because a final determination on their application for access did not result from the June 2013 decision and subsequent appeal.

In October 2014, a new draft EA was released to the public for a 30-day notice and comment period. Forty persons, organizations, and agencies commented on the EA. Seven key issues were identified including the level and type of access and the potential impacts to several resources including recreation, scenery, wildlife and soils. The EA responded to points made in the appeal of the June 2013 decision by (1) analyzing in detail potential access routes from the north and east; (2) analyzing a potential access route from the south; and (3) comparing the three with an alternative that would not grant access. This EA also considered additional routes from the north, east, and west, but these were not analyzed in detail for reasons disclosed in Section 2.5. Additionally, a new and detailed engineering study was conducted to refine and to specify road corridor locations from the north, east, and south.

All comments received during the development of this decision were carefully reviewed and used to guide this decision. Comments are addressed in the EA and in the Response to Comments, Appendix 4.

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR §1508.27). Thus, an environmental impact statement will not be prepared. Findings are based on the following:

Context
For the proposed action and alternatives, the context of the environmental effects is based on the analysis of the biological, physical, and social conditions as presented in the EA.

There are approximately 52 miles of roads (open, closed, state, Forest Service) that result in approximately 85 stream crossings in the Fires Creek watershed. The access route authorized under this decision is approximately 3.84 miles in length, with 3.5 miles of that total consisting of partial reconstruction treatments to an existing road prism and the remaining 0.34 miles being new construction. The Selected Alternative has twelve existing stream crossings and new road construction will require one new stream crossing. The project will result in a 0.65% increase to the road network in the Fires Creek watershed. The four stream crossings that will be rebuilt with structures designed to facilitate aquatic organism passage will improve conditions to almost 5% of the existing stream crossings and the one new stream crossing will increase the total number of stream crossings in the watershed by approximately 1%.

The physical, biological and social effects are limited to the project area and immediate adjacent areas, which are analyzed in Chapter 3 of the EA. All actions are consistent with the Land and Resource Management Plan, Nantahala and Pisgah National Forests and Amendment 5. All environmental effects are within the range disclosed in the Final Environmental Impact Statement for the Land and Resource Management Plan, Nantahala and Pisgah National Forests.

Intensity
Intensity is a measure of the severity, extent, or quantity of effects, and is based on information from the effects analysis of this EA and the references in the project record. The effects of this project have been appropriately and thoroughly considered with an analysis that is responsive to concerns and issues raised by the public. The agency has taken a hard look at the environmental effects using relevant scientific information and knowledge of site-specific conditions gained from field visits. My finding of no significant impact is based on the context of the project and intensity of effects using the ten factors identified in 40 CFR 1508.27(b).

1. Both beneficial and adverse effects have been considered (see EA, Chapter 3, Environmental Consequences, pages 34-114). Design criteria include

actions to prevent or lessen adverse impacts of the decision (EA pages 25-27, DN pages 2 and 3).

2. There will be no significant effects on public health and safety and implementation will be in accordance with project design features (Chapter 2; Section 2.3; Chapter 3).
3. There will be no significant effects on unique characteristics of the area (historic and cultural resources, park lands, prime farm lands, wetlands, wild and scenic rivers or ecologically critical areas). Archaeological sites or other cultural resources found during the examination of the access routes by the Forest Service archaeologist will not be affected (EA, Section 3.7). There are no prime farm lands based on the type of soils and the topography in the area. Wetlands will not be impacted by the activities (EA, Section 3.3). Specific storm water control provisions will protect Outstanding Resource Waters (EA, Section 3.3). The EA analyzed potential impacts to the recreation resources in the Fires Creek area (EA section 3.1). No ecologically critical areas were identified along the access route during project analysis by Forest Service specialists. (Chapter 3).
4. The effects on the quality of the human environment are not likely to be highly controversial because there is no scientific controversy over the impacts of the project. Chapter 3 of the EA provides the scientific and analytical basis for the determination of effects to the physical, biological and social environment. Chapter 4 lists the Forest Service interdisciplinary team and other specialists who provided input and/or were consulted during analysis. Reference information is provided on pages 161-165 of the EA. Other federal and state agencies also provided input information during scoping and/or the review period or concurred with determinations made in the BA/BE and, where appropriate, in the review of the heritage reports. A review of the EA and the project record indicates that the best available scientific information was used to inform the environmental analysis. There is no known scientific controversy with respect to the effects of this action. The effects associated with this type of action are well understood and documented in scientific literature referenced in this EA and the Forest Plan FEIS. A thorough literature review of acid producing rock and acid mine drainage related topics was conducted to identify the practicality and effectiveness of addressing resource related issues with both active and passive mitigation measures. The literature reviewed did not identify any conflicting evidence related to the potential effects of acid-producing rock in this type of project.
5. The potential effects of the project are well understood and documented in the EA, and literature review. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk (see EA Chapter 3, Environmental Consequences, pages 34-114).
6. The actions in this decision are not likely to establish a precedent for future actions with significant effects and do not represent a decision in principle about a future consideration (EA, 1.1 Introduction (page 2) and 2.2 Alternatives (pages 20-24)). Future decisions will require review under the National Environmental Policy Act including public notification.
7. There are no significant adverse cumulative effects between this project and other past, present and reasonable foreseeable actions (see EA Chapter 3, Environmental Consequences, pages 34-114).
8. The action will have no effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (Section 3.7, Chapter 3). The action will also not cause loss or destruction of significant scientific, cultural, or historical resources (Section 3.7, Chapter 3). Heritage reports were completed for this project which found that two of the five archeological sites in the analysis area are eligible for the National Register of Historic Places. Alternative B will not affect these sites. The Forest Service consulted with the Tribal Historic Preservation Office (THPO) of the Eastern Band of Cherokee Indians and identified sites in the analysis area that have special significance to the Cherokee people. Alternative B will not affect these sites. The State Historic Preservation Office concurred with the reports on June 2, 2009 and the THPO concurred with the reports on December 2, 2011, March 8, 2013, and November 4, 2014.
9. The March 29, 2016 Biological Evaluation (BE) concluded:

    A. This proposal may affect, but is not likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) or the threatened northern long-eared bat *(Myotis septentrionalis)*. All timber clearing will be done during the hibernation season when bats are not present on the landscape. This proposal will not affect (directly, indirectly, or cumulatively) any other proposed or listed Federal T&E species because none occur in the project area. The U.S. Fish & Wildlife Service concurred with the determinations of effect on April 21, 2011, June 24, 2013, and on November 3, 2014. Compliance with the final 4d Rule to provide for the conservation of the Northern Long-Eared Bat was completed on March 29, 2016.

    B. The project may impact individuals of the sensitive aquatic species *Cambarus parrishi*, but is

not likely to affect the viability of the species across the forest.

C. The project may impact individuals of the sensitive plant species *Trillium rugelii*, but is not likely to affect the viability of the species across the forest.

D. The project may impact individuals of the sensitive terrestrial wildlife species *Callophrys irus, Plethodon teyahalee, Scudderia septentrionalis, Sorex palustris punctulatus*, and *Speyeria diana*, but is not likely to affect the viability of the species across the forest.

The action will not violate Federal, State, or local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA and this project will be consistent with the North Carolina Sediment Control Act, the Clean Water Act, and the Clean Air Act as well as the protection of wetlands (Executive Order 11990) and floodplains (Executive Order 11988).

10. The action is consistent with the Land and Resource Management Plan for the Nantahala and Pisgah National Forests, Amendment 5 (cited as Amendment 5 below) and the Land and Resource Management Plan for the Nantahala and Pisgah National Forests, 1986-2000 (cited as LRMP below).
    - Forest-wide Direction and Management Prescriptions
    - Riparian Area Management, Water Quality, Aquatic Habitats (Management Area 18, page III-179, Amendment 5) and Soil and Water Management (pages III-19 - III-21, LRMP).
    - Wildlife and Fish Resource Management, including Proposed, Endangered, Threatened, Sensitive, (PETS) and Forest Concern species - pages III-10 - III-12, LRMP.
    - Dispersed Recreation Management - pages III-7 - III-8, LRMP; Trails Management - page III-9, LRMP.
    - Visual Resource Management - pages III-6 and III-7, LRMP.
    - Cultural Resource Management - pages III-4 and III-5, LRMP.
    - Transportation System Management and Road Planning Construction and Maintenance - pages III-25 - III-28, LRMP.

Findings Required by Other Laws and Regulations

This decision to implement the Selected Alternative is consistent with the intent of the long-term goals and objectives listed on pages III-1 and III-2 of Forest Plan Amendment 5. This decision is also consistent with 36 CFR 251.110 - 251.114, Access to Non-Federal Lands.

Forest Service Manual 7712 states: "Use travel analysis to inform decisions related to identification of the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of NFS lands per 36 CFR 212.5(b)(1) and to inform decisions related to the designation of roads, trails, and areas for motor vehicle use per 36 CFR 212.51, provided that travel analysis is not required to inform decisions related to the designation of roads, trails, and areas for those administrative units and ranger districts that have issued a proposed action as of January 8, 2009."

A Project Level travel analysis process (TAP) was completed for this project. Recommended changes to the transportation system from the TAP were incorporated into the analysis and this decision.

Administrative Review and Contacts

This decision was subject to objection pursuant to 36 CFR 218, and a legal notice of the opportunity to object was published on June 25, 2015, in *The Asheville Citizen Times* and sent to those who provided comments during the project's development. There were 12 objections filed and processed by the objection reviewing officer in accordance with 36CFR 218, one of which was resolved and withdrawn in March 2016.

For additional information concerning this decision, contact: Angela Gee, Tusquitee District Ranger, 123 Woodland Drive, Murphy, NC, 828-837-5152.

Implementation Date

Per 36 CFR 218.11 (b), the decision may be signed when all concerns and instructions identified by the reviewing officer in the objection response letter have been addressed. Implementation may begin immediately following the date of this final decision.

Hurston A. Nicholas
Forest Supervisor
National Forests in North Carolina

4/7/16
Date

Figure 1. Selected Alternative (Alt. B) Access to the Laurel Creek Property Owners' Inholding.