Biological Assessment/Evaluation
Threatened, Endangered, Proposed and Forest Service Sensitive Species

Smith River National Recreation Area
Restoration and Motorized Travel Management Project

Klamath Province
Six Rivers National Forest
Smith River National Recreation Area

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I. INTRODUCTION

The purpose of this Biological Assessment/Evaluation (BA/BE) is to review and evaluate the proposed Forest Service action, **Smith River National Recreation Area Restoration and Motorized Travel Management (RMTM) Project**, in sufficient detail to determine if the proposed action may affect any of the threatened, endangered, or Forest Service sensitive species listed below. This BA/BE is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (19 U. S. C. 1536 (c), 50 CFR 402), and standards established in Forest Service Manual direction (FSM 2672.42).

This BA/BE incorporates the information from the Forest-wide Reference Document (March 2014) for BA/BE's. The Reference Document contains current management direction, species life history and habitat requirements information (on which effects of proposed projects are evaluated), and literature cited. The Reference Document is updated periodically as species status or other information changes.

The Smith River RMTM Project will determine which system roads are to be kept, upgraded, downgraded, repaired, or decommissioned; and which non-system roads will be improved and added to the system.

List of Species Considered
The following endangered, threatened, proposed, and Forest Service sensitive (TESP) wildlife species are addressed in this document. These species are known to or are suspected to occur on the Smith River NRA (Forest-wide Reference Document March 2014). TESP plants and fish species are addressed in separate documents.

Endangered
none

Threatened
Northern spotted owl (*Strix occidentalis caurina*)
Marbled murrelet (*Brachyramphus marmoratus*)

Critical Habitat
Northern spotted owl
Marbled murrelet

Proposed
California wolverine (*Gulo gulo luteus*)

Forest Service Sensitive Species
Bald eagle (*Haliaeetus leucocephalus*)
Northern goshawk (*Accipiter gentilis*)
Pacific fisher (*Martes pennanti pacifica*) **also a Federal Candidate species**
American marten (*Martes americana*)
Townsend's big-eared bat (*Corynorhinus townsendii)*

Fringed myotis (*Myotis thysanodes*)
Southern torrent salamander (*Rhyacotriton variegatus)*
Northern red-legged frog (*Rana aurora aurora*)
Foothill yellow-legged frog (*Rana boylii)*
Western pond turtle (*Clemmys marmorata*)
Mardon Skipper (*Polites mardon mardon*)
Western Bumblebee (*Bombus occidentalis*)

II. CONSULTATION TO DATE

In 2006, this project was evaluated by the Six Rivers National Forest Wildlife Level 1 Team, which includes biologists from both Forest Service (FS) and US Fish and Wildlife Service (USFWS), and formal consultation was completed in 2007 (file number 8-14-2007-3069). Before implementation could begin, the project was appealed and the decision was rescinded. The Forest decided to go through additional public involvement and collaboration, and to prepare an Environmental Impact Statement.

On October 31, 2013, the project was again reviewed by the Level 1 Team. The Level 1 Team agreed that the determinations reached in 2007 were still valid.

The Level 1 team agreed with the following determination: 1) may affect, likely to adversely affect the marbled murrelet (MAMU) and the northern spotted owl (NSO) based on the potential for noise disturbance during the breeding season, and 2) may affect not likely to adversely affect NSO critical habitat and MAMU critical habitat due to minor habitat degradation at culvert removal sites.

The latest federal species list for the project area was obtained from the U.S. Fish and Wildlife Service website (http://www.fws.gov/arcata/specieslist/speciesreport.asp) dated January 14, 2014 (Document Number: 743300506-15316) for species occurring on the Smith River National Recreation Area. The Region 5 Forest Service Sensitive Wildlife Species that were addressed were identified from the *US Forest Service – Pacific Southwest Region Sensitive Animal Species List*, September 9, 2013.

On July 31, 2006, a memorandum prepared by the Arcata Fish and Wildlife was received by the Forest with guidance that addressed the potential effects of noise disturbance on the federally listed northern spotted owl (*Strix occidentalis caurina*; NSO) and marbled murrelet (*Brachyramphus marmoratus*; MAMU). This guidance titled *Estimating the Effects of Auditory and Visual Disturbance of Northern Spotted Owls and Marbled Murrelets in Northwestern California,* (USDI, 2006) discussed the results of decibel testing of potential noise-generating activities and the distances needed to be maintained from occupied or unsurveyed suitable nesting habitat to prevent harassment to these species. This information is incorporated into the proposed action, which uses a 500ft. distance for noise disturbance due to the short duration of heavy equipment use at culvert sites.

III. CURRENT MANAGEMENT DIRECTION

See the Six Rivers National Forest Land and Resource Management Plan (LRMP) and the Forest-wide Reference Document (March 2014).

NSO Recovery Plan

On June 28, 2011, the FWS released the *Revised Recovery Plan for the Northern Spotted Owl (Strix occidentalis caurina)*. The purpose of recovery plans is to describe reasonable actions and criteria that are considered necessary to recover a listed species. The 2011 Revised Recovery Plan (RP) for the Northern Spotted Owl represents the "best available science." The 2011 RP recognizes the importance of maintaining, and restoring, habitat for the recovery and long-term survival of the spotted owl. The 2011 RP relies on Federal lands to provide the major contribution for recovery (USDI Fish and Wildlife Service 2011).

Northern Spotted Owl Revised Critical Habitat

On December 4, 2012 the Final 2012 Northern Spotted Owl Critical Habitat rule was published (77 Fed Reg. 71876-72068). Critical habitat consists of those areas which have "physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection." 16 U.S.C. § 1532(5)(A). In total, approximately 9,577,969 acres (ac) (3,876,064 hectares (ha)) in 11 units and 60 subunits in California, Oregon, and Washington fall within the boundaries of the critical habitat designation Federal agencies are required to consult on any project that may affect newly designated Critical Habitat under the ESA. The rule became effective on January 3, 2013.

IV. DESCRIPTION OF THE PROPOSED ACTION

Background

The project encompasses the Smith River NRA and Gasquet Ranger District and is referred to collectively as the Smith River NRA. Access throughout the Smith River NRA is dependent on National Forest Transportation System (NFTS) roads, as well as State and County roads. NFTS roads are constructed and maintained to specific Forest Service standards. Table 1 describes the existing NFTS and their current Operational Maintenance Level (OML) on the Smith River NRA. More information about OMLs is located in Appendix A of this document. The NFTS on the Smith River NRA is comprised of approximately 479 miles of roads and 21 miles of motorized trails. Of the 479 miles of NFTS roads on the NRA, there are 58 miles of OML1, 270 miles of OML 2, 114 miles of OML 3, 18 miles of OML 4, and 19 miles of OML 5 roads. In addition to the NFTS, there are approximately 116 miles of State and County roads within the administrative boundary, and approximately 155 miles of inventoried unauthorized routes (UAR). Unauthorized routes are not maintained by the Forest Service. UARs evaluated in this project are open and drivable but are not currently on the NFTS.

The 1990 Smith River NRA Act restricted motorized travel to designated routes. On November 2, 2005 the Forest Service published the Travel Management Rule (36 CFR 212) which established policies and procedures to ensure that the use of motorized vehicles on public lands would be

controlled to protect the resources, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands. The Rule consists of two parts, Subpart A and Subpart B.

Subpart A requires the administrative units to conduct a Travel Analysis Process (TAP) to evaluate the road and trail system in order to: 1) identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands; 2) identify roads for decommissioning, including priorities, and; 3) evaluate unneeded roads that might be converted to other uses.

In 2005 the Smith River NRA Roads Analysis Process (RAP)/Off-Highway Vehicle Strategy was completed, which addressed OML 1 and 2 roads, and unauthorized routes. The Smith River NRA RAP tiers to the Six Rivers National Forest RAP (USDA 2003), which was completed at the Forest scale. The Forest-scale RAP addressed Forest Service Maintenance Level 3, 4, and 5 roads that provide access to large land areas across the Forest and to recreational destinations such as campgrounds, picnic sites, and trailheads. The Smith River NRA RAP in combination with the Forest-scale RAP meets the requirements of the Travel Management Rule, Subpart A, to complete a Travel Analysis Process (TAP).

The 2005 Smith River NRA RAP identified the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest system lands. The Smith River RAP developed resource risk and administrative need assessments for every OML 1 and 2 road and unauthorized routes on the Smith River NRA, which resulted in management recommendations for each road or route. The RAP identified road-associated environmental and public safety risks; site-specific priorities and opportunities for road improvements, decommissioning, and restoration; areas with special resource values; routes that are potential candidates for road or trail designation; and developed specific information that may be needed to support project-level decisions. The results of this analysis were reviewed in preparation of this document and updated when conditions were known to have changed.

Subpart B involves the designation of roads and trails for motor vehicle use, including designation by vehicle class and season of use.

State, County, and Smith River NRA OML 3, 4, and 5 roads are all main access roads on the NRA. These main roads accommodate passenger cars and are not being considered in this analysis, with the exception of 17N49 which is an OML 3 road that is being proposed for mixed-use. Also not considered in this analysis are roads that were closed under previous NEPA decisions. No new construction or reconstruction would occur under this proposal, and only minor expansion of existing open areas (brush removal) will occur to allow parking along 17N49. The proposed parking areas do not occur in potential habitat for any TES wildlife species.

Proposed Action

There are 4 action alternatives proposed for this project. Alternative 6 is the preferred alternative, which will be addressed in this BA/BE.

The Six Rivers National Forest proposes the following actions[1]:

1) The addition of 18 unauthorized routes as roads, totaling 4 miles, to the current NFTS;
2) The addition of 75 unauthorized routes as motorized trails to the NFTS, totaling 43 miles;
3) The seasonal gate closure on 13 roads and 7 motorized trails, totaling 34 miles;
4) The mixed-use of 1 road (17N49), totaling 0.5 miles;
5) The decommissioning of 110 NFTS roads, totaling 53.98 miles, and;
6) The restoration of 210 UARs totaling 101 miles
7) The addition of 4 parking areas

The proposed action includes the types of management actions described below. Proposed changes to the NFTS, resource risk mitigations, and unauthorized route restoration actions are described on a route-by-route basis in Appendix B (Proposed Action Table).

MANAGEMENT ACTION DEFINITIONS

This section provides more information on the types of actions encompassed in the proposed action.

Add to Road or Motorized Trail System Desirable unauthorized routes will be added to the NFTS either as a road with an identified OML, or as a motorized trail with a designated vehicle class. Consideration of whether to designate an unauthorized route as a road versus a trail is based on the identified primary purpose of the route. The vehicle class for motorized trails indicates the management intent to accommodate a specific use, which is based on an assessment of the resource use, recreation opportunities, and constraints of the area. The proposed vehicle class designation is Off-Highway Vehicles (OHV).

Upgrade to OML2 In some cases, a road is designated as OML 1 (closed to motorized use) but is currently drivable and identified as having a high recreation need. Upgrading these roads provides public access and allows the Forest to manage and control the current use to reduce resource risk. Upgrading may involve road surface improvements, such as installing, repairing or replacing culverts, rolling dips or waterbars.

Downgrading to OML1 Downgrading is primarily aimed at the reduction of maintenance costs on low-use roads. Downgrading to OML 1 will close the road for motorized use but would maintain the option of future administrative use. Downgrading and managing as OML 1 may involve removing culverts and other drainage features and leaving the road in a hydrologically maintenance-free condition.

Motorized Mixed-Use (Combined-Use) Designation This changes the allowed vehicle class of a road from highway legal only to include all vehicles, including non-highway legal vehicles, on passenger car roads (OML 3 and higher). Mixed-use designation is subject to the approval of the California Highway Patrol and the Forest Service's Region 5 Office.

[1] Lengths are rounded to whole numbers in miles.

Decommission Road / Restore Unauthorized Route Decommissioned roads and restored unauthorized routes are not part of the NFTS, and therefore are not open for motorized travel.

> Decommission Road This action includes removing low use or high risk roads from the NFTS. Removing a road or trail from the NFTS may simply involve an amendment to the Transportation database for those routes that are currently non-drivable and present a low-risk; however in other cases, when a road is still drivable and/or there is a moderate or high resource risk, decommissioning and restoration actions described below may be required.
>
> Restore Unauthorized Route This action will occur on unauthorized routes where there is a moderate or high resource risk, or the route is still drivable, and there is a low need.

The suite of actions within this category (decommission roads and restore unauthorized routes) are aimed at re-establishing vegetation and, if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road or route. These actions are designed to restore hydrologic function. Decommissioned roads and restored routes are left in a maintenance-free condition (i.e. remove drainage structures, re-establish natural drainage patterns), are not drivable by motor vehicles, and are not part of the NFTS. Depending on slope location, type of stream crossings, and diversion potential of an unneeded road or route, decommissioning roads and restoring unauthorized routes may require as little as a simple barricade or as much as the use of heavy equipment to correct drainage problems. The specific actions needed are based on the site-specific conditions and may include the following treatments.

- **Outslope, Waterbar** – These activities are aimed at re-establishing former drainage patterns. These water dispersion strategies are all designed to minimize stream diversion potential (i.e., prevent water from flowing down the road or trail), which minimizes the potential for off-site sediment delivery.
- **Remove Culvert and Associated Fill** – This action aimed at re-establishing drainage patterns.
- **Barricade** – This includes the placement of a barrier at the entrance to a road or route. The objectives are to prevent motorized use and to allow for revegetation.

Resource Risk Mitigations Resource risk mitigations apply to NFTS roads and trails to reduce risk and impacts to botanical, wildlife, aquatic, or Port Orford-cedar on system roads and trails. Table 3 provides a summary of the resource risk mitigations.

- **Barricade –**This includes the placement of a barrier on NFTS roads and trails. The objectives are to prevent motorized use and to allow for revegetation.
- **Seasonal Gate Closure –** Reinforcing the seasonal closure through the installation of a gate is one of the management actions identified as a method to reduce the risk of spread of *Phytophthora lateralis* root disease to Port Orford-cedar populations. Seasonal gate closure dates vary depending on location and existing ground conditions, but in general, the dates range from October to May.

- **Gravel -** Reinforce existing gravel on routes or add new gravel along sections of road near POC to reduce vehicle contact with mud and the spread of *Phytophthora lateralis* root disease to Port Orford-cedar populations.
- **Route Delineation** – Placement of a physical barrier to travel, such as large boulders or other imported material, in close proximity to the motorized trail prism, designed to keep vehicular traffic on the designated route.
- **Posted Speed Limits –** Posting speed limits to reduce travel speed is aimed at reducing dust generation and the potential for inhaling dust that may contain asbestos.
- **Public Information** – This is aimed at increasing public awareness about the potential exposure to asbestos while traveling on newly added NFTS roads and motorized trails, and the risk associated with exposure. Information may be made available in maps and literature available at the Ranger District office, or through signage posted on newly added NFTS roads and motorized trails.
- **Stormproofing** – This is a suite of management actions that will be applied to NFTS roads and trails to reduce water quality and sedimentation risks through culvert and road surface improvements, including redesigning of culverts for fish passage.
    - **Installation of Culvert, Rolling Dip** – These water dispersion, and/or containment strategies are all designed to minimize stream diversion potential (i.e., prevent water from flowing down the road or trail), protecting the travel route, as well as, minimizing the potential for off-site sediment delivery. The term "culvert" includes cross drains and stream crossings.
    - **Repair/Replace Culvert** – This action includes upsizing culverts to pass the 100-year flood flow and associated debris.
    - **Remove Culvert and Associated Fill** – When applied to NFTS roads remaining on the system, this action is limited to OML 1 roads.

High Priority Roads: In some cases, road work (both decommissioning/restoration and stormproofing) cannot be accomplished within the limited operating period for NSO and MAMU due the number of culverts to be removed/replaced etc. There are 76 roads that have high risk to aquatic resources where work will occur during the breeding season for these species. Not all the roads or all segments of each road are within 500 ft. of suitable NSO and or MAMU nesting habitat for these species. There are 76 roads that have high risk to aquatic resources where work will occur during the breeding season for these species (Appendix B). Of these, 70 roads/routes at least partially occur within 500 ft. of suitable NSO and or MAMU nesting habitat. Only one road (18N01, less than 1 mile in length) occurs entirely within suitable nesting habitat. Only portions of the remaining 69 roads occur within 500 ft. of suitable nesting habitat for the owl and MAMU.

Vegetation removal: No new road construction or reconstruction will occur as part of this project; therefore, no habitat will be removed for any TES species. However, in cases of culvert removal during decommissioning/restoration, the fill at the site needs to be removed and the stream crossing recontoured. Culvert removal may require minor amounts of vegetation removal (usually 1/10 acre or less) of brush and smaller diameter trees (saplings up to 11" dbh). No large diameter or predominant trees will be removed.

Routine Road Maintenance: Annual road maintenance activities will be required on a subset of the District's roads/routes (depending on site-specific conditions) to ensure public and

administrative safety and to reduce resource damage. Routine road maintenance activities (Appendix C) can prevent sedimentation, drainage diversion, and slope failure problems that can potentially result from road operation and use. Routine road maintenance will maintain the functionality of Level 2 and above roads. Following Forest Service Manual direction, all Level 1 roads will be put into a hydrologically maintenance-free condition under the RMTM Project, and will not require routine road maintenance.

Routine maintenance will allow the Forest to meet its responsibilities under the Highway Safety Act (23 U.S.C. sections 401-410). The maintenance activities will remove obstacles and repair damaged road surfaces, increasing traveler safety.

Operating Restrictions

Maintenance actions will occur on high-use roads where normal background noise equals or exceeds the noise generated by the maintenance. No seasonal restrictions are necessary to mitigate noise disturbance on high-use roads. A high-use road is defined as one or more of the following:

--Use by 5 or more vehicles per day
--Access to a high-use destination such as a trailhead, campground, or private land
--Use for hauling associated with timber harvest that is concurrent with maintenance activities.

A road is no longer considered high-use in the case where the road, no matter what maintenance level, has been blocked by unusual circumstances that would cause work to be beyond routine maintenance activity. If for any reason a road of any maintenance level has been closed for a full year, background noise levels would be exceeded by the routine maintenance activity. In such cases, a separate biological assessment/evaluation must be prepared.

Some routine road maintenance projects may occur on low-use Level 2 roads if they are of a mobile nature, such as blading or brushing, or if they are of short duration, such as using a chainsaw to clear the roadway of fallen trees to gain access. Short duration activities may not exceed 15 minutes of use per day within 500 ft. of unsurveyed NSO or MAMU nesting habitat during the breeding season.

Maintenance activities within 500 ft. of a NSO AC or an occupied MAMU site require additional consultation with the Level 1 Team.

PROJECT DESIGN FEATURES

Project design features provide project specific implementation direction to reduce unintended adverse effects of the project.

Water Quality

To reduce the risk of sediment delivery to streams, all applicable Best Management Practices will be implemented.

Restoration, decommissioning and upgrading work will occur when stream flow is at a minimum, typically during the summer months. Streams will be dewatered where necessary prior to any

activity involving heavy equipment. Specific dewatering methods (pipe, pump, etc.) will be determined on a site-by-site basis.

Native or straw mulch will be applied to all disturbed ground prior to seasonal rain or summer thunderstorms to minimize surface erosion.

Decommissioned or restored stream channel sideslopes and channel bottom gradients will be designed to blend with the natural channel above and below to minimize potential for unexpected channel adjustments.

Large rocks will be placed in the restored stream channels where needed to protect newly created sideslopes and reduce the potential for post-treatment channel adjustments.

Replacement of stream crossings (upgrading) culverts will be designed to accommodate the 100-year flood event and have no diversion potential.

Wildlife

No large snags would be felled unless they pose a hazard to public or staff safety. All hazard trees would be felled and left on site.

Northern Spotted Owl (NSO)

Except for specific road segments with a high risk to aquatic resources scheduled for upgrades or decommissioning, noise generating activities (use of heavy equipment for maintenance and restoration activities) within 500 feet of unsurveyed or occupied suitable northern spotted owl nesting habitat will not occur between February 1 and July 9, unless surveys determine the site to be unoccupied.

To minimize impacts to NSO from noise-generating activities on high priority roads, no activities will occur between February 1 and July 9 within 500 feet of occupied NSO activity centers (nest site) unless surveys determine the birds are non-nesting.

Marbled Murrelet (MAMU)

Except for activities on high priority roads, noise-generating activities (use of heavy equipment for maintenance and restoration activities) within 500 feet of unsurveyed low-quality suitable marbled murrelet nesting habitat will not occur between March 24 and August 5. In addition, work between August 5 and September 15 will not begin until 2 hours after sunrise and stop 2 hours before sunset unless surveys determine the site to be unoccupied.

Except for activities on high priority roads, noise-generating activities within 500 feet of unsurveyed high quality suitable MAMU habitat would not occur between March 24 and September 15 unless surveys determine the site to be unoccupied.

To minimize impacts to MAMU from noise-generating activities on high priority roads, no activities will occur between March 24 and September 15 within 500 feet of occupied MAMU habitat (nest site) unless surveys determine the birds are non-nesting.

Noxious Weeds
Project design features to prevent the introduction and spread of noxious weeds include the cleaning of equipment moving prior to entering a work site and insuring that materials such as mulch and gravel imported into the project area are free of noxious weed seeds.

Port Orford-Cedar
All heavy equipment will be cleaned prior to entry to a work site to reduce the risk of spread of Port-Orford-cedar root disease.

Implementation of this project would begin in 2014 and would be completed by the end of 2029, depending on available funding and workforce.

There are no interrelated or interdependent activities that involve this proposed action and threatened, endangered, proposed or Forest Service sensitive species.

This project will contribute to the desired future condition of habitat for all species considered in this document by reducing road density across the District which will reduce fragmentation of habitat, increase patch size, reduce sedimentation in stream channels, and reduce disturbance and direct mortality. In the long term, the project will benefit TES species.

V. EXISTING ENVIRONMENT

A. Species Account

The following federally listed or Forest Service Sensitive species are known to or may occur in the project area, according to historic records, current sightings and, in some cases, formal surveys. In the absence of formal surveys for the remainder of the species considered in this document, the following information is supplied to support the determination presented in section VII. This is based upon the best available information at this time and the level of likelihood of species occupying territories/habitat where they could be affected by the project. See the *Six Rivers National Forest Species Reference Document* (USDA Forest Service, Six Rivers National Forest, 2014) for species life history information.

Federally Threatened, Endangered, or Proposed Species

Northern Spotted Owl (*Strix occidentalis caurina*)
Status: Federally Threatened

The northern spotted owl is associated with mature and older mixed conifer, Douglas-fir forests of the Pacific Northwest. The species was listed as Threatened in July 1990 due to the loss of older forests throughout the Pacific Northwest as a result of timber harvest (Thomas et al, 1990).

Critical Habitat has been designated for the northern spotted owl, and occurs in 3 areas on the Smith River NRA, Rowdy Creek (CA-18), Coon (CA-19), and Yurok (CA-46) watershed.

There are an estimated 92,051 acres of suitable spotted owl nesting/roosting (N/R) habitat and 87,147 acres of potential foraging on the Smith River National Recreation Area. This comprises approximately 50% of the total land base of the NRA. Approximately 40,000 acres of what is considered N/R habitat for the NSO is in the mid-mature seral stage. Although this seral stage meets the size class and canopy cover requirements, it often lacks multi-layered conditions, large snags, downed logs, and trees with deformities necessary to meet the habitat needs of this species. Therefore the suitable habitat available to NSO and other late-successional species may be less than what is estimated here.

In 2010 and 2011 all Six Rivers National Forest NSO known activity centers (AC) were surveyed to determine current status of the ACs. Using the information gained, a review was conducted in 2012 with concurrence of USFWS assessing the validity of the 374 established activity centers on the Forest. Valid AC's were determined based on the criteria presented in the Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls (USFWS 2011). During this review, 208 ACs were considered valid and kept in their original location. A further 99 were moved from their original locations. AC locations were moved when the original location had been mapped incorrectly; when there were new detections that were higher in the hierarchy within AC locations (i.e. new pair location replaced a territorial single location); or in the case of habitat disturbance or loss at the site center, AC locations were moved to the nearest high quality habitat. Finally 67 ACs were dropped or retired because they either did not meet the minimum criteria and should not have been delineated as an AC in the first place or extensive habitat loss occurred throughout the AC (e.g. fire). A total of 307 AC's of varying reproductive and occupancy status are now recognized by the Forest.

There are 44 known NSO activity centers in the Smith River NRA. Of these, 34 have been confirmed as pairs and 10 as territorial singles (recorded from both historical records and survey data). District-wide status surveys occurred on all ACs in 2010 and 2011 and current surveys have been conducted in specific project areas. However, no surveys have been conducted specifically for this project; therefore all suitable N/R habitat is considered occupied for the purposes of this consultation.

The project encompasses the entire Smith River NRA; therefore, the Action Area is 358, 843 acres. There are 59,527 acres of NSO Critical Habitat designated in the Action Area, 41,027 acres of which overlap with the LSRs.

Project activities will not occur within 500 ft. of any currently known activity centers; however, activities may occur within 500 feet of unsurveyed suitable N/R habitat. The project will not remove suitable habitat for the NSO.

Marbled Murrelet (*Brachyramphus marmoratus*)

Status: Federally Threatened

Marbled murrelets nest on platforms generally created by large diameter branches in large conifer trees that are close enough to coastal foraging environments for them to adequately supply their young with small marine fish.

The entire Smith River Basin occurs within Zone 1 for the marbled murrelet as described in the FEMAT Report. There are approximately 84,325 acres of potentially suitable murrelet habitat within the Smith River National Recreation Area. However, survey results show that key habitat areas appear to occur closer to the coast in old-growth (predominantly redwood) forests; therefore, the suitable habitat available to MAMU may be less than what is estimated here. The State and National Redwoods Parks contain most of this key habitat remaining in the Smith River Basin.

On the SRNRA, multiple birds were seen on multiple days in 1988 at the same Myrtle Creek location, during a distribution study at inland California sites conducted by Pacific Southwest Range and Experiment Station (Paton and Ralph 1988, Paton and Ralph 1990). Sightings were approximately 10 miles (18.5 km) inland. Vegetation in this drainage is predominantly old growth Douglas fir and Port Orford cedar. Nearby old-growth redwood stands at Jedediah Smith Redwoods State Park had higher activity levels. Surveys in the Myrtle Creek drainage were repeated in 1992, 1995, and 1996, with no detections. In 1992, an immature murrelet was found on the ground on private property near Panther Flat campground, approximately 15 miles (28 km) inland. There was no suitable nesting habitat in the vicinity of the bird, so it is not known where it came from (possibly blown off course during the large storm event the previous day). There were no other sightings on the SRNRA during survey efforts across the District between 1992 and 1996. In 1997, multiple sightings of MAMU occurred in old growth Douglas fir and redwood forest in the Copper Creek drainage on the western edge of the Smith River NRA. A radar study conducted by ABR, Inc. (Blaha and Cooper, 2011) recorded 14 murrelet-like detections in 2010 and 17 murrelet-like detections in 2011 on the SRNRA. There were no audio-visual observations to confirm these, however, a suite of characteristics were used to minimize contamination of the dataset. These detections occurred in the Rowdy Creek drainage to the north and Blue Creek drainage to south. There have been no detections beyond the old growth habitats on the western edge of the Forest. However, no surveys have been conducted specifically for this project; therefore all suitable nesting habitat is considered occupied for the purposes of this consultation.

Marbled Murrelet (MAMU) Critical Habitat was revised in 2009 with a final rule published on October 5, 2011 (USDI 2011). Located primarily on Federal land, and to a lesser extent on State, county, city and private lands, this final critical habitat rule provides protection requirements under section 7 of the Endangered Species Act for federally regulated activities. There are 76,463 acres of marbled murrelet Critical Habitat within the Action Area. Marbled murrelet Critical Habitat is entirely within LSR boundaries.

Project activities will not occur within 500 ft. of any currently known occupied sites; however, activities may occur within 500 feet of unsurveyed suitable nesting habitat. The project will not remove suitable habitat for the MAMU.

Proposed Species

California Wolverine (*Gulo gulo luteus*)

In North America, wolverines occur within a wide variety of alpine, boreal, and arctic habitats, including boreal forests, tundra, and western mountains throughout Alaska and Canada. The southern portion of the species' range extends into the contiguous United States, including high-elevation alpine portions of Washington, Idaho, Montana, Wyoming, California, and Colorado (USFWS 2011). Wolverines do not appear to specialize on specific vegetation or geological habitat aspects, but instead select areas that are cold and receive enough winter precipitation to reliably maintain deep persistent snow late into the warm season (USFWS 2011). The requirement of cold, snowy conditions means that, in the southern portion of the species' range where ambient temperatures are warmest, wolverine distribution is restricted to high elevations, while at more northerly latitudes; wolverines are present at lower elevations and even at sea level in the far north (USFWS 2011).

Female wolverines use natal dens that are excavated in snow. Consistent snow cover greater than 5 feet deep appears to be a requirement for natal denning, because it provides security for offspring and buffers cold winter temperatures. Deep, persistent, and reliable spring snow cover (April 15 to May 14) is the best overall predictor of wolverine occurrence in the contiguous United States (USFWS 2011).

During the winter of 1993, the Six Rivers National Forest, in conjunction with the California Department of Fish and Game and the University of California Berkeley, conducted a cooperative wolverine study on multiple Forests and ownerships in potential or historic habitat areas using baited infrared camera stations. The Six Rivers stations were located in areas with historic incidental sightings or in potentially suitable habitat. No wolverines were detected. In 1996 and 1997 a systematic track plate survey was conducted across the Six Rivers National Forest, also with no detections of wolverine. Since that time numerous camera and track plate stations have been used across the NRA all without detections of wolverine.

There are no verified records of wolverine on the Forest: however, incidental sightings of wolverines have been reported on the NRA. Most of the sightings occurred in the 1970's and 80's. Considering their need for persistent spring snow cover, preference for subalpine and alpine habitats or climatic conditions and their aversion to human disturbance, wolverines are only likely to occur on the NRA at higher elevation area in the Siskiyou Wilderness.

Candidate Species

Pacific fisher *(Martes pennanti pacifica)*

In northern California, fishers occupy mid-elevation, multi-storied mature and old-growth conifer, mixed conifer and mixed-conifer hardwood forests with contiguous canopy cover. Closed canopies (>50%) are typically selected but fishers will use areas of low to moderate canopy cover (25-40%) if there is sufficient understory (Lofroth et al. 2010). They do not occur in high-elevation alpine or subalpine habitats.

Foraging habitat varies with primary prey species. Since fishers in California prey primarily on small to medium-sized mammals (woodrats, squirrels etc.) they will use forests with hardwood components which provide mast for prey, structurally complex structures near the forest floor (brushy understories) and high abundance of downed, woody debris (Lofroth et al. 2010).

Thompson et al. (2007) determined that based on data from a 1994-1995 soot track plate study, a 1996-1997 telemetry study, and a 2002-2003 mark-site study, fishers appear to be abundant and well distributed across "the managed forests of extreme northwest California". An exact population estimate and distribution for the Forest are still unknown.

Systematic surveys occurred across the Forest in 1999 (Carroll, Zielinski, and Noss 1999) show the highest probability of detections centered on the Trinity River, with detection probability decreasing the farther north and south you go.

Survey results in the past indicate that the species occupies roughly 20% of its historical range in Washington, Oregon and California (USDI 2010). The population in the southern Oregon/northern California region may be the largest remaining in the western states (Zielinski et al. 2000, Powell and Zielinski 1994) with population estimates of 4,616 individuals (USDI 2010) and is critical to the restoration of fishers elsewhere in California and Oregon (Zielinski, pers. com.).

Fisher occupy similar habitat to that of the NSO. There are approximately 92,051 acres of suitable fisher habitat on the NRA.

Incidental fisher sightings have occurred on the NRA, during all months of the year. Forest carnivore surveys (track plates and cameras) have been conducted large areas across the District. Fisher have been detected at many of the stations; however, no den sites have been found. The project area occurs in and within 500 ft. of suitable fisher habitat.

Forest Service Sensitive Species

Bald Eagle (*Haliaeetus leucocephalus*)

Nesting habitat is composed of low elevation, open (less than 40% canopy cover), mature/old-growth stands near permanent lakes and free-flowing rivers. Platform stick nests are built in large trees (greater than 36 inches dbh) with open branches, but some foliage usually shades the nest. Nests are located 50-200 feet (16-61 m) above ground, usually below tree crowns. Tree height and size appear to be more important than species

There are historical records of bald eagles nesting within the NRA; however, the last known nest site was in 1976. There are no known nests in the Smith River NRA, although there have been recent nests discovered to the west of the District around Lake Earl. There have been recent BAEA sightings on the NRA in late winter and spring. The project may occur within designated bald eagle network territory. The projects occur within 0.5 miles of suitable nesting habitat.

Humboldt Marten (*Martes americana*)

Marten prefer multi-storied mature and old growth mixed conifer, white fir (*Abies concolor*), red fir (*Abies magnifica),* and pine (*Pinus* spp.) forests, with moderate to dense canopy closure (greater than 40%). They require nearby small meadows, clearings, or riparian areas for foraging habitat. Closed canopy travel ways (especially on ridgetops) are also necessary between foraging areas.

The first verified Humboldt marten in 50 years was detected in 1996 by Zielinski and Golightly on the NRA. Since then, survey work has been conducted using track plates, baited photograph stations and radio telemetry to determine the size and range of the population. The current occupied area is 267 square miles extending from the mouth of Rock Creek on the Smith River in the SNRA south to the Bluff Creek watershed on Orleans Ranger District, and east to the headwaters of Rock Creek drainage of the Klamath River in Siskiyou County (Slauson et al. 2009b). This area encompasses lands on the Smith River National Recreation Area, Orleans Ranger District, Ukonom Ranger District, Redwood National and State parks, and private timber lands.

Current population estimates by Slauson et al. (2009b) show a decline from 2000-01 surveys from approximately 60 individuals to approximately 40 individuals in 2008. These estimates were determined using a multi-state occupancy method utilizing detection data from 2000-01 and 2008 surveys. These surveys did not cover all possible habitat but the population is likely to be <100 individuals. No den sites have been found. The project area occurs in and within 500 ft of suitable marten habitat.

Northern Goshawk (*Accipiter gentilis*)

Goshawks are known to use mature forest habitats for nesting and foraging. Nesting stands are typically in dense pockets of large trees, often on north-facing, bench slopes near water. Foraging habitats are often more open to allow for the aerial ambush foraging strategy of the goshawk.

Historically, there have been numerous sightings of goshawks on the NRA, with at least three reproductive territories known to occur. However, the most recent territory was discovered in 1992. Comprehensive surveys of nest territories across the entire Forest in 1994 and 1995 determined that none of the nesting territories, or any of the suitable habitat within a one mile radius of the territories, were occupied. Additional surveys have been conducted on 45,000 to 50,000 acres (project-level surveys) with no detections. The status of the goshawk on the NRA is unknown at this time.

Goshawks occupy similar habitat to that of the NSO. There are approximately 92,051 acres of suitable habitat on the NRA. There are no recent sightings of goshawk or any known nest sites in the project area. The project area occurs within 500 feet of suitable goshawk habitat.

Townsend's big-eared bat (*Corynorthinus townsendii*)

The Townsend's big-eared bat occurs in a variety of habitats, and is strongly correlated with the availability of caves or cave-like roosting habitat. It has been found from sea level to 8700 ft. elevation and occurs in xeric to mesic habitats; although throughout much of its range it occurs in mesic habitats characterized by deciduous and coniferous forests. Because of this, it is difficult to define measurable habitat variables. The most limiting factor appears to be availability of suitable roost sites.

Little is known on the species abundance and distribution, although potentially suitable roost sites exist within the NRA. This species is known to roost in caves, mine shafts and abandoned buildings. No surveys have been conducted for this species; however, incidental sightings have been recorded. The project occurs within 500 ft of potentially suitable roost sites.

Fringed Myotis (*Myotis thysanodes*)

The fringed myotis is rare across its range but may be quite common locally from sea level to 1,950m (6,400ft). It occurs in a wide range of habitats from desert scrub to high elevation coniferous forests (Pierson & Rainey, 1998). It uses open habitats, early successional stages, streams, lakes and ponds as foraging areas. They roost in snags, caves, mines, crevices and man-made structures (Zeiner et al. 1990).

Maternity and overwintering roosts have been most commonly reported in caves, buildings and mines. However, tree roosting has been observed in heavily forested environments in the northern part of the range (Pierson & Rainey, 1998).

Like other tree-roosting Myotis species, the fringed myotis switches roosts less than every two days on average (Weller & Zabel, 2001) and requires a large number of suitable roost sites in an occupied area. Roost choice appears to vary throughout the range of the fringed myotis with snags exhibiting greater importance in California, New Mexico and Arizona and a heavy reliance on rock crevices in South Dakota, Oregon and Washington (Lacki & Baker, 2007). Weller & Zabel (2001) found that fringed myotis prefer large (>30cm dbh) snags in decay class 2 or 3 that are the tallest in the stand and have reduced canopy cover (necessary for thermoregulation). This is consistent with the few snags reported by Lacki & Baker (2007) who also found that female the fringed myotis in arid climates used rock crevices that were 1-4cm wide and located in non-forested areas. It is unclear if the fringed myotis actually prefers rock crevices in these areas or if there is a deficient amount of quality snags.

Little is known on the species abundance and distribution, although potentially suitable roost sites exist within the NRA. This species is known to roost in caves, mine shafts and abandoned buildings. No surveys have been conducted for this species; however, incidental sightings have been recorded.

Western Pond Turtle (*Clemmys marmorata*)

The western pond turtle inhabits fresh or brackish permanent and intermittent water from sea level to about 4500 feet (1372 m). Turtles are often concentrated in low gradient and low velocity sections of creeks and rivers, especially in sloughs, side channels and backwater areas. They prefer creeks that have deep still water and sunny banks. Hatchlings prefer shallow edge water areas with minimal current, including vernal pools. Adults prefer deep-water pools with lots of underwater debris, presumably for escape cover. Basking structures are important habitat elements. Potential basking sites include protruding or floating woody debris, protruding rocks, emergent vegetation, overhanging vegetation that touches the water, and banks. Young turtles also bask on algae or small surface debris.

The pond turtle has been sighted in the Smith River estuary and Lower Smith River, but there have been no sightings anywhere else on the Smith River. There have been no surveys conducted specifically for turtles, however, there is little suitable habitat for the species on the NRA, due to the geology and geomorphology of the Smith River. The projects occur in potential suitable western pond turtle habitat.

Northern Red-legged Frog (*Rana aurora aurora*)

Red-legged frogs are inhabitants of moist forests and riparian areas usually below 2876 ft. (850 m) in elevation. They are generally found near permanent bodies of quiet water including small ponds, quiet pools along streams, springs, lakes, and marshes. Red-legged frogs are found in ponds and intermittent and permanent streams with slow or still water. Intermittent streams must retain surface water pools year-round in order for the frogs to survive. Deep pools are necessary for many aspects of the red-legged frog's life cycle

Northern red-legged frogs have not been recorded beyond the western edge of the Forest. There is potential red-legged frog habitat within the project area.

Yellow-legged Frog (*Rana bolyii*)

Foothill yellow-legged frogs preferred aquatic habitats are relatively slow to moderately moving water or pools. Breeding habitats occur in shallow, slow flowing water with at least some pebble and cobble substrate. Pebble/cobble river bars along both riffles and pools, with at least some shading, seems to be preferred by sub-adults and adults.

Foothill yellow-legged frogs are relatively common in the Smith River Drainage. The project occurs in YLFR habitat.

Southern Torrent Salamander (*Rhyacotriton variegatus*)

This species is associated with seeps, small streams, and waterfalls in wet or mesic coastal forested habitats. Changes to forest canopied and the hydrology of seeps and streams can affect southern torrent salamanders.

No surveys have been completed for this species; however they are known to occur on the District. Habitat for this species may be present in the project areas.

Mardon Skipper (*Polites mardon*)

The mardon skipper inhabits early seral stage open grasslands that are dominated by short-statured grasses or sedges and forbs and are generally free of overstory trees and shrubs. Areas as small as 0.5 acres will support small populations of mardon skippers but most areas consist of mixed forest-grassland complexes with some connectivity between habitat patches for dispersal and movement of individuals. In northwestern California and southwestern Oregon, mardon skipper is found in small meadows (0.5-5 acres) dominated by Idaho fescue in sparse Jeffrey pine forests. Sites are 7-15 miles inland from the Pacific coast and range in elevation from 1,500-3,000ft. These sites are associated with serpentine based soils and are within the fog belt (USDI 2012).

The mardon skipper was petitioned for listing in 2002 and placed on the candidate list as "warranted but precluded" (evaluation delayed due to limited funding that was dedicated to court-ordered or higher priority listings). On September 4, 2012, the USFWS released a 12-month finding which determined that listing was not warranted at this time. An increased survey effort from 2003-2011 found an additional 165 sites which was a dramatic increase from the 14 documented sites in the 2002 petition.

There are two main population sites on the NRA, each containing multiple meadows. One of the sites is believed to be the largest population in California based on a one day count of 204 individuals in 2008 (Black & Mazzacano, 2010). Monitoring at these sites over the last 5 years indicate that populations at the sites on the NRA appear to be stable.

Western Bumblebee *(Bombus occidentalis)*

Western bumble bees require open meadows with rich supplies of floral resources with continuous blooming from spring to autumn. Western bumble bees have been observed taking nectar from a variety of flowering plants.

Historically the western bumble bee ranged from central California north to Alaska, east through Alberta and western South Dakota and southward into Arizona and New Mexico. Surveys in 2007 found isolated populations in northern Arizona, Utah, Nevada and northern California. The species has declined dramatically in the west (Washington, Oregon, California, British Columbia and Alaska) since the mid-1990s with most areas seeing a complete absence of the species from 2002-2007. Although the general distribution trend is steeply downward, especially in the west coast states, some isolated populations in Oregon and the Rocky Mountains appear stable (Rao et al. 2011, Koch and Williams 2012). The overall status of populations in the west is largely dependent on geographic region: populations west of the Cascade and Sierra Nevada mountains are experiencing dire circumstances with steeply declining numbers, while those to the east of this dividing line are more secure with relatively unchanged population sizes. The reasons for these differences are not known.

Probable causes for the population decline include the spread of *Nosema bombi* and other diseases from *B. occidentalis* and *B. impatiens* colonies that were raised in Europe and then shipped back to the U.S. and used commercially, loss of genetic diversity, livestock grazing, urban development, habitat fragmentation, habitat encroachment due to fire suppression and pesticide use (Thorp et al, 2008).

There is little information regarding the western bumble bee on the Forest. There are currently no detections recorded for the Forest. The nearest confirmed detections were of two workers in 1997 in the Marbled Mountain Wilderness on Klamath National Forest.

B. Habitat Status

Road upgrading or decommissioning will occur across the District. The proposed project occurs in and within 500 feet of suitable NSO and MAMU habitat. The project occurs in and within LSRs, Riparian Reserves, and NSO and MAMU Critical Habitat. The proposed projects occur in Zone 1, and are within 30 miles of the coast. The project occurs in and within 500 ft. of Forest Service Sensitive Species habitat.

VI. EFFECTS OF THE PROPOSED ACTION

Habitat Effects

NSO and MAMU

Alternative 6 will reduce overall OML 1 and 2 roads and unauthorized route miles on the NRA by 36% (Table 1). Road density will be reduced from 1.59 mi/mi^2 to 1.32 mi/mi^2 across the District, varying from 0.67 mi/mi2 to 2.02 mi/mi2 depending on the 5th field watershed (Table 2).

Three routes (0.16 mi total) will be added to the NFTS within late-successional habitat that would be potentially suitable nesting habitat for NSO and MAMU. These 3 sites are popular dispersed camping sites that have been in use for many years. No additional habitat will be removed or degraded.

No new road construction or reconstruction will occur as part of this project; therefore, no NSO or MAMU habitat will be removed or degraded. In the long term, the RMTM Project will have beneficial effects for NSO and MAMU because road miles across the District will be reduced by approximately 36% (approximately 155 miles), which will reduce habitat fragmentation and disturbance from continued road use.

In cases of culvert removal during decommissioning, the fill at the site needs to be removed and the stream crossing recontoured. Culvert removal may require minor amounts of vegetation removal (usually 1/10 acre or less) of brush and smaller diameter trees (saplings up to 11" dbh). No large diameter or predominant trees will be removed. Minor vegetation removal at culvert removal sites may degrade suitable habitat for NSO or MAMU by removing brush and small

diameter trees; however the removal will be negligible in any one area. Approximately 170 culverts will be removed across the District under Alternative 6, with a total of 17 acres of vegetation removed. This overestimates the amount of vegetation to be removed in that not all culverts sites have been brushed in, the roads may occur in naturally open areas, or the amount of vegetation to be removed is less than 1/10 of an acre. It is also unlikely that all culvert sites occur in suitable habitat for NSO or MAMU, therefore 17 acres of suitable habitat degraded is also an overestimate.

Table 1 Changes to NFTS and effects to NSO and MAMU

Indicator	Alternative 6
Miles/number of routes of UAR added in late successional habitat	0.16 mi (3 routes)
Miles of UAR added in within 0.25 mile of known NSO AC or MAMU occupied site	0
Miles/number of routes of UAR added in LSR/MAMU Critical Habitat**	1.93 mi (8 routes)
Miles /number of routes of UAR added in NSO Critical Habitat	1.92 mi (5 routes)
Miles /number of system roads and UAR decommissioned/restored in Late Successional Reserves and MAMU Critical Habitat	60.13 mi (112 routes)
Miles/number of system roads and UAR decommissioned/restored in NSO Critical Habitat	52.1 mi (97 routes)
Miles/number of system roads and UAR decommissioned/restored in NSO territories	80.39 mi (157 routes)
Total percent restored/decommissioned	36%

Table 2. Road density by 5th field watershed of the Smith River basin

5th Field Watershed	Current Road Density (mi/mi^2)	Alternative 6 Road Density (mi/mi^2)
Lower Smith River	0.97	0.73
Middle Fork Smith River	2.46	2.02
North Fork Smith River	0.81	0.67
South Fork Smith River	1.93	1.64

Critical Habitat

Unauthorized routes are proposed to be added to the system within LSR/MAMU CHU (8 routes for a total of 1.93 miles) and NSO Critical Habitat (5 route for 1.92 miles). None of the roads to be added to the system occur in suitable nesting habitat for the MAMU or NSO.

There are 112 roads/routes (60.13 miles) to be decommissioned in MAMU CHU, with some roads to be removed in each MAMU CHU on the District. It is possible that some 11"dbh saplings could be removed at culvert removal sites, and that they could be ½ site potential tree height. If all culvert sites in MAMU CHU occurred in suitable nesting habitat and had trees up to 11" dbh removed, which is unlikely, less than 17 acres (one-tenth acres per site) of MAMU CHU would be degraded across the District. Habitat removal at culvert sites would be negligible. The project will not change the function of nesting habitat in the CHU.

There are 97 roads/routes (52.7 miles) to be decommissioned in NSO CHU, with some roads to be removed in each NSO CHU on the District. Due to the young age of the vegetation to be removed culvert sites, it is possible that NSO CHU dispersal habitat could be degraded by the removal of 11" dbh saplings. If all culvert sites in NSO CHU removed saplings up to 11" dbh, less than of less than 17 acres (one-tenth acres per site) NSO CHU dispersal habitat would be degraded. Habitat removal at culvert sites would be negligible. The project will not change the function of dispersal habitat in the CHU.

Disturbance

No unauthorized routes will be added within 0.25 miles of known NSO AC or MAMU occupied site. Approximately 157 roads/routes (80.39 miles) will be removed (decommissioned or restored) from within known NSO territories. There are no NFTS roads or UARs within 0.25 miles of an occupied MAMU site; although two NFTS roads that access the occupied Rowdy Creek watershed are being downgraded to OML1 (closed year round) or decommissioned.

The UARs to be added to the system are open and drivable and in use for decades. Although the roads are technically not part of the NFTS they are not physically barricaded, and continued to be used. There will be no increase in the level of noise disturbance within the vicinity of these routes over current conditions. Most of the routes to be added do not occur in nesting/roosting or foraging habitat for the NSO or nesting habitat for the MAMU.

There are 76 roads that have a high risk to aquatic resources where work will occur during the breeding season of the NSO and MAMU. Work on these roads will include decommissioning and upgrading (stormproofing). Upgrading involves replacement of culverts to withstand larger flood events, and correcting other road drainage issues. Delaying the work until after the breeding season would mean that the work would require multiple years of work, which greatly increases the cost of the work as well as increasing risk to aquatic resources. Therefore no LOP will be imposed on activities proposed for these 76 roads except at occupied NSO activity centers or occupied MAMU habitat (see Project Design Features above). Not all the roads or all

segments of each road are within 500 ft. of suitable habitat for these species. Several roads are within the 199 corridor, and have high ambient noise levels. Others occur in unsuitable habitat. Implementation of the project during the breeding season will cause disturbance in 2842 acres of unsurveyed habitat for the NSO and 2338 acres for the MAMU. Since these roads represent a high risk to aquatic resources, it is expected that the needed work will be accomplished within the first 5 years of the project. It is expected that the project will result in 568 acres of take per year for the NSO and 468 per year for the MAMU until the project is completed.

For the most part, routine road maintenance activities will occur on roads that receive a regular amount of everyday traffic, which results in a higher level of normal background noise. It is assumed that birds and mammals nesting or denning near frequently used Forest roads are habituated to the noise generated by those roads. The routine road maintenance projects described in Appendix C of this document entail the use of machinery such as graders, dump trucks, rollers backhoes, and bucket loaders, all of which generate a certain amount of noise through their use. However, the roads on which these machines will be used are designed for and regularly receive a substantial amount of traffic. The mobile nature of most of the road maintenance activities, and the short duration of the non-mobile activities are not expected to generate a higher level of noise than that generated by the average daily use of these roads.

Routine road maintenance projects may occur on low-use Level 2 roads may only occur under this document if they are of a mobile nature, such as blading or brushing, or if they meet the definition of "short duration" (15 minutes within 500 ft. of any individual area of unsurveyed NSO or MAMU nesting habitat). Long duration stationary road maintenance projects would exceed normal background noise levels thereby creating noise disturbance, and could not be tiered to this document.

Wolverine

The US Fish and Wildlife Service (2011) found that it is unlikely that wolverines occur in this portion of California. There are no verified sightings anywhere on the District and habitat suitable to support wolverine is limited to wilderness areas. The RTMT project will have no effect on the wolverine.

Forest Service Sensitive (FSS) Species

No new road construction or reconstruction will occur as part of this project; therefore, no habitat will be removed for any FSS species. In the long term, the RTMT Project will have beneficial effects for FSS species because road densities across the District will be reduced by 36% (approximately 155 miles), which will reduce habitat fragmentation, disturbance from continued road use, and direct mortality (road kill).

In cases of culvert removal during decommissioning, the fill at the site needs to be removed and the stream crossing recontoured. Culvert removal may require minor amounts of vegetation removal (usually 1/10 acre or less) of brush and smaller diameter trees (saplings up to 11” dbh). No large diameter or predominant trees will be removed. Minor vegetation removal at culvert removal sites may degrade suitable habitat for FSS species by removing brush and small diameter trees; however the removal will be negligible in any one area. Approximately 170

culverts will be removed across the District, with a total of 17 acres of vegetation removed. This may be overestimating the amount of vegetation to be removed in that not all culverts sites have been brushed in, the roads may occur in naturally open areas, or the amount of vegetation to be removed is less than 1/10 of an acre. It is also unlikely that all culvert sites occur in suitable habitat for FSS species; therefore 17 acres of suitable habitat degraded is also an overestimate.

Culvert removal/replacement activities could directly affect FSS aquatic species such as the yellow legged frog and southern torrent salamander during project implementation and noise disturbance may impact species such as the fisher, goshawk and marten during the breeding season. However, reducing road density across the District will reduce fragmentation of habitat, increase patch size, reduce sedimentation in stream channels, and reduce disturbance and direct mortality. In the long term, the project will benefit FSS species.

Cumulative Effects

Cumulative effects are those effects of future State or private activities, not involving Federal activities, which are reasonably certain to occur within the action area of the Federal action subject to consultation.

A review of CalFire site (December 04, 2013) found no proposed timber harvest plans (THP) on private land within the action area.

This project is a long-term project (15 years), and it is expected that other activities will occur on state, federal, and private land that will have cumulative effects on TES species. Forest, County, and state road maintenance activities will continue, and may have negative impacts on aquatic resources. Vegetation management activities on the District and private land may cause negative impacts to TES species and their habitats. Recovery on private land is expected to be slower (or non-existent) than on federal land because of continued development and loss of habitats.

The trend for wildlife habitats on the NRA is towards recovery. Since the 1990 NRA Act, timber harvest on the NRA has been limited and geared towards habitat restoration (thinning in younger stands). Fuel treatments have been developed to help restore natural fire regimes and to protect existing habitats. Since the NRA Act in 1990, 884 acres have been thinned using silvicultural prescriptions designed to accelerate the development of late-successional habitat characteristics and 1,966 acres have had fuels reduction treatments completed to restore habitat through the reintroduction of fire and to protect existing late-successional habitat from stand-replacing fire. The Big Flat Vegetation Management and Fuels Reduction Project is currently being implemented and will improve habitat conditions on 1084 acres and protect existing habitat through fuels reduction on 735 acres. The Gordon Hill Vegetation Management and Fuels Reduction Project is currently in the planning stage, and proposes to improve habitat conditions on 1515 acres and protect existing habitat through fuels reduction on 1273 acres. Accelerating the development of late-successional characteristics, and protecting existing habitat, will move the area toward the historic range of variability of seral stages and reduce fragmentation of habitat, improving habitat conditions for TES species.

Since the signing of the Six Rivers LRMP in 1995, 51.6 miles of road have been decommissioned or downgraded to OML 1 on the NRA. Alternative 6 of the Smith River RMT project will remove 155 miles of road/routes and reduce road density across the NRA. Short-term negative impacts could occur from the use of heavy equipment (noise disturbance) while decommissioning or upgrading roads. However, reducing road density across the District will reduce fragmentation of habitat, increase patch size, and reduce disturbance and direct mortality. In the long term, the project will benefit TES species.

Regarding all the past impacts from land uses (mining, timber harvest, road constructions) on FS land, the proposed action will reduce the current effects from old failing roads, and will accelerate the recovery rate of disturbed areas and facilitate restoration by reducing road density across the District. The beneficial cumulative effects include the reduction of habitat fragmentation and reducing road-related disturbance and mortality for TES species.

VII. DETERMINATION

Based upon the size, nature, and duration of this proposed action, it is the determination of the wildlife biologist that this project **may affect and is likely to adversely affect the northern spotted owl and marbled murrelet** due to implementation of the project within 500 feet of suitable habitat during the breeding season. The project will create disturbance within 500 ft. of 2842 acres of unsurveyed suitable NSO habitat and 2338 acres of suitable MAMU habitat. The project will have short term adverse effects but long-term beneficial effects for NSO and MAMU through the reduction of road density. The Forest will report the actual acreage affected for each species every year until the work on these high risk roads is completed.

Minor vegetation removal at culvert removal sites (less than 1/10 acre) may degrade suitable habitat for NSO or MAMU by removing brush and small diameter trees; however the removal will be negligible in any one area. Approximately 170 culverts will be removed across the District under Alternative 6, with a total of 17 acres of vegetation removed. It is unlikely that all culvert sites occur in suitable habitat for NSO or MAMU, therefore 17 acres of suitable or Critical habitat degraded is an overestimate.

The project **may affect but is not likely to adversely affect NSO CHU** through the degradation of **less than 17 acres** of dispersal habitat.

The project **may affect but is not likely to adversely affect MAMU CHU** through the degradation of **less than 17 acres** of trees that could be ½ site potential nest tree height within CHU.

The proposed action will have **no effect on the wolverine**.
Although the Six Rivers Land and Resource Management Plan (LRMP) requires an analysis at the 0.7 mile scale, it is only required for formal consultations involving habitat manipulations. is a federal candidate species (as well as a Forest Service Sensitive Species), currently being considered for listing under the ESA. Implementation of this project may impact individual fisher from project implementation during the breeding season, but will not appreciatively

diminish the recovery options for this species on the Six Rivers National Forest. The project will have long-term beneficial effects for the fisher through the reduction of road density.

The proposed action may impact individuals, but will not cause a trend towards Federal listing for any FSS species. The project will have long-term beneficial effects for FSS species.

VIII. MANAGEMENT RECOMMENDATIONS

There are no management recommendations for this project

IX. LITERATURE CITED

See the Forest-wide Reference Document (2014), Six Rivers National Forest.

X. CONTRIBUTORS

Mike McCain, Fisheries Biologist, Smith River National Recreation Area

Appendix A

Definition of Operational Maintenance Level (OML)

Roads are maintained at operational maintenance levels depending on identified management needs (FSH 7709.58). All Forest roads are categorized into one of five maintenance levels as described below.

National Forest System Roads are those forest roads under the jurisdiction of the USFS that are constructed to specific standards depending on the needs identified for the road. Roads will be maintained and available for use at maintenance levels commensurate with the identified management needs.

Maintenance Level 1
This level is assigned to roads that are closed to vehicular traffic for a period of greater than one year but still exist on the forest transportation system for potential future use. Custodial maintenance is done to provide the basic care needed to protect the road investment and minimize damage to adjacent land and resources.

Maintenance Level 2
This level is assigned to roads that will be open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic volumes are usually minor. Provides the basic custodial care described above and keeps roadway clear for safe passage.

Maintenance Level 3
This level is assigned to roads that will be open and maintained for safe travel by a prudent driver in a passenger car. User comfort and convenience is not considered a priority. Roads at this maintenance level are normally characterized as low speed, single lane with turnouts. The SRNF considers the functional classification of these roads is normally a collector (has lower level roads branching off from it).

Maintenance Level 4
This level is assigned to roads that will provide a moderate degree of user comfort and convenience at moderate travel speeds. Some roads may be single lane and some may be paved/and or dust abated. The SRNF considers the functional classification of these roads is normally collector or minor arterial (has one or more collectors branching off from it).

Maintenance Level 5
This level is assigned to roads that will provide a high degree of user comfort and convenience. These roads are normally double-lane, paved facilities. Some may be aggregate-surfaced and dust-abated.

Appendix B

Proposed Action Table: * marks the roads with a high risk to aquatic resources ** marks those within 500 ft. of NSO and MAMU nesting habitat

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
199.102	0.13	UAR	Add to road system. OML2. Administrative access only to water system for campground.	2							T17NR3E
199.103	0.10	UAR	Add to road system. OML 3, Madrona Campground	3						x	T17NR3E
199.104	0.11	UAR	Add to road system. OML 3, Madrona Campground	3						x	T17NR3E
199.105	0.03	UAR	Add to road system. OML 3, Darlingtonia Trail head access	3						x	T17NR2E
199.106	0.18	UAR	Add to road system. OML 3, Eighteen-mile river access site	3						x	T17NR2E
199.109**	0.10	UAR	Barricade to allow parking at turnout and hiking access to river.	Restore							T17NR1E
199.111	0.09	UAR	Add to road system. Add road to creek as OML 2. Barricade at creek to provide non-motorized access.	2				x			T17NR1E
305.100	0.57	UAR	Barricade through boulder placement.	Restore							T18NR1E
305.101	1.08	UAR	Barricade.	Restore							T18NR1E
305.101A	0.04	UAR	Barricade.	Restore							T18NR1E
305.101B	0.50	UAR	Barricade.	Restore							T18NR1E
305.102	0.15	UAR	Barricade.	Restore							T18NR1E
305.103	0.14	UAR	Barricade.	Restore							T17NR1E
305.104	0.14	UAR	Barricade.	Restore							T17NR1E
305.105	0.22	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x						T18NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
305.106	0.21	UAR	Barricade.	Restore							T19NR1E
305.108	0.06	UAR	Barricade.	Restore							T18NR2E
305.109	2.43	UAR	Add to trail system. Motorized Trail; Install drains and gravel at wet areas to keep vehicles on the roadway (near mp 1.00 & 1.5). Improve surface drainage, place boulders strategically, increase enforcement.	M. Trail	x		x		x	x	T18NR2E
305.109A	1.02	UAR	Barricade.	Restore				x			T18NR2E
305.111	0.13	UAR	Barricade.	Restore							T18NR2E
305.113	0.12	UAR	Barricade.	Restore							T18NR2E
305.114	0.63	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
305.115	1.74	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
305.115A	0.18	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
305.118	0.80	UAR	Add to trail system. Motorized trail. Delineate Route, POC mitigation - seasonal closure at beginning of route. Gate mid-October through early June; need culvert at POC site, barricade end of route.	M. Trail	x	x		x		x	T18NR1E
305.118	0.76	UAR	Outslope or rolling dips as needed.	Restore							T18NR1E
305.121	0.63	UAR	Barricade.	Restore							T18NR1E
305.121A	0.28	UAR	Barricade.	Restore							T18NR1E
305.121B	1.03	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T18NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delineation	Seasonal Closure - Gate	Gravel	Barricade	Storm-proof	Speed Limit & Sign for NOA	
305.123	0.63	UAR	Barricade.	Restore							T18NR1E
305.124*	1.20	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR1E
305.125	1.44	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T18NR1E
305.126	1.56	UAR	Barricade.	Restore							T17NR1E
305.128	0.69	UAR	Barricade through boulder placement.	Restore							T18NR1E
305.129	0.27	UAR	Barricade through boulder placement.	Restore							T18NR1E
305.131	0.09	UAR	Barricade through boulder placement.	Restore							T18NR1E
314.1*	1.21	UAR	Add to trail system. Motorized trail. POC mitigation - Barricade at mp 1.21	M. Trail				x			T17NR2E
314.107	0.26	UAR	Add to road system. OML 2; Delineate route. Three Ponds camping area. POC mitigation - Gravel near POC.	2	x		x			x	T18NR3E
315.100	1.68	UAR	Barricade.	Restore							T18NR3E
315.102	0.48	UAR	Barricade.	Restore							T18NR3E
315.106	0.25	UAR	Barricade.	Restore							T18NR3E
315.107	0.30	UAR	Barricade.	Restore							T18NR3E
315.108	0.46	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x						T18NR3E
315.2	0.51	UAR	Outslope or rolling dips as needed. Remove culverts at mp 0.07 0.13 and 0.18 to improve drainage.	Restore							T18NR3E
315.3	0.98	UAR	Remove all culverts. Outslope as needed.	Restore							T18NR3E
315.3A	0.24	UAR	Remove all culverts.	Restore							T18NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			Outslope as needed.								
315.9A	1.22	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR3E
316.1	0.26	UAR	Add to road system. OML 2 administrative use only; add rolling dips. POC mitigation - Gravel near POC.	2			x		x		T17NR3E
324.100	0.13	UAR	Barricade.	Restore							T18NR4E
405.10	0.74	UAR	Add driveable portion to trail system. Motorized trail. Delineate route. Route delineation at .36mp.	M. Trail	x					x	T16NR2E
405.100	0.11	UAR	Barricade.	Restore							T16NR3E
405.101	0.17	UAR	Barricade.	Restore							T16NR3E
405.103	3.47	UAR	Add to trail system. Motorized trail. Improve surface drainage near creek; repair culvert.	M. Trail					x	x	T16NR2E
405.9	0.05	UAR	Barricade.	Restore							T16NR3E
411.101	0.30	UAR	Barricade.	Restore							T17NR2E
411.102	0.17	UAR	Barricade.	Restore							T17NR2E
427.101	0.15	UAR	Add to road system. OML 1.	1							T15NR2E
427.103	0.32	UAR	Add to road system. OML 2. Delineate Route.	2	x					x	T16NR1E
427.105	0.29	UAR	Add to road system. OML 2, County disposal site; may be gated periodically for administrative purposes.	2							T16NR1E
427.106	0.13	UAR	Add to trail system. Motorized Trail; install rolling dips to improve	M. Trail					x		T15NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			drainage.								
13N13	0.60	2	Remove from System; Remove culvert and associated fill. Outslope as needed and barricade.	Deco							T13NR3E
13N26	2.31	2	Maintain, repair, or replace each culvert; improve surface drainage. POC Mitigation - Seasonal Closure - Gate at beginning of road.	2		x			x		T13NR3E
13N26D.100	0.25	UAR	Barricade.	Restore							T13NR3E
13N27A.1	0.25	UAR	Add to road system. OML 2; Delineate route.	2	x						T13NR3E
13N34	2.49	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR3E
13N34A	0.72	1	Maintain, repair, or replace each culvert and improve surface drainage. Upgrade to OML 2.	2					x		T13NR3E
13N34B	0.08	1	Remove from System; Remove culvert and associated fill. Barricade.	Deco							T13NR3E
13N35.1	0.25	UAR	Barricade.	Restore							T13NR3E
13N35.5	0.14	UAR	Barricade.	Restore							T13NR3E
13N35K	0.10	2	Remove from System.	Deco							T14NR3E
13N37	2.00	2	Remove all culverts and associated fill. Outslope or waterbars/rolling dips as needed and barricade. Downgrade to OML 1.	1				x	x		T13NR3E
13N37.1	0.11	UAR	Barricade.	Restore							T14NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
13N37A	0.77	2	Remove from System; Remove culverts and associated fill as needed. Outslope as needed and barricade.	Deco							T13NR3E
13N37B	0.27	2	Remove from System; Remove culverts and associated fill as needed. Outslope as needed and barricade.	Deco							T13NR3E
13N41	4.30	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR2E
13N41.100	0.10	UAR	Barricade.	Restore							T13NR2E
13N41.101	0.08	UAR	Barricade.	Restore							T13NR2E
13N42	1.61	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR3E
13N42.100	0.08	UAR	Barricade.	Restore							T13NR3E
13N42A	0.70	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T13NR3E
13N44	5.90	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR3E
13N44.100	0.26	UAR	Add to road system. OML 2	2						x	T13NR3E
13N44.101	0.39	UAR	Barricade.	Restore							T13NR3E
13N44D	1.13	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR3E
14N01.1	0.17	UAR	Barricade.	Restore							T14NR3E
14N01B	0.50	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as	Deco							T14NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delineation	Seasonal Closure - Gate	Gravel	Barricade	Storm-proof	Speed Limit & Sign for NOA	
			needed and barricade.								
14N01D**	1.80	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR2E
14N01G	1.60	1	Remove all culverts and associated fill. Outslope or waterbars as needed and barricade.	1					x		T14NR3E
14N08T	0.11	1	Remove from System; Remove all culverts and associated fill. Outslope or waterbars as needed and barricade.	Deco							T14NR3E
14N10	0.50	1	Remove from System; Remove all culverts and associated fill. Barricade.	Deco							T13NR3E
14N15	0.50	2	Maintain, repair, or replace each culvert; improve surface drainage.	2					x		T13NR2E
14N15.1	3.80	UAR	Add to road system. OML 2. Replace culverts and repair road surface. POC mitigation - gravel near POC.	2			x		x	x	T13NR2E
14N29A	0.80	2	Remove from System; Remove all culverts and associated fill. Outslope or waterbars as needed and barricade.	Deco							T13NR3E
14N32.1	0.26	UAR	Barricade.	Restore							T14NR3E
14N33	1.60	2	Remove from system. Remove culverts and associated fill from stream channels. Outslope and barricade.	Deco							T14NR3E
14N33.1	0.09	UAR	Barricade.	Restore							T14NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
14N33.2	0.07	UAR	Barricade.	Restore							T14NR3E
14N33.3**	0.52	UAR	Remove culverts and associated fill from stream channels as on 14N33. Outslope as needed.	Restore							T14NR3E
14N33A	0.22	1	Remove from System; Remove all culverts and associated fill. Outslope or waterbars as needed and barricade.	Deco							T14NR3E
14N38	0.60	2	Improve surface drainage and maintain as OML 2. Seasonal closure to protect POC. Gate mid-October through early June.	2		x			x		T14NR3E
14N46	2.70	1	Remove 2 culverts and associated fill. Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T14NR3E
14N46.1	0.08	UAR	Barricade.	Restore							T14NR3E
14N46.2	0.13	UAR	Outslope and barricade.	Restore							T14NR3E
14N46B	0.37	1	Remove from System; Outslope as needed and barricade.	Deco							T14NR3E
15N01.102	0.48	UAR	Add to road system. OML 2. POC mitigation - Gravel at low point near mp 0.14	2			x				T15NR3E
15N01.2	0.14	UAR	Barricade.	Restore							T14NR3E
15N01.3	0.15	UAR	Add to road system. OML 2	2							T14NR3E
15N01.4	0.35	UAR	Remove all culverts and associated fill. Outslope or waterbars as	Restore							T14NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			needed and barricade.								
15N01A.1	0.10	UAR	Barricade.	Restore							T15NR2E
15N01A.2	0.05	UAR	Barricade.	Restore							T15NR2E
15N01A.4	3.84	UAR	Replace culverts and repair road surface. Manage as OML1.	1					x		T15NR2E
15N01P	0.12	1	Remove from System; Remove all culverts and associated fill. Outslope or waterbars as needed and barricade.	Deco							T14NR3E
15N01R	0.10	1	Outslope or waterbars as needed and barricade.	1				x	x		T14NR3E
15N01S	0.10	1	Outslope or waterbars as needed and barricade.	1				x	x		T14NR3E
15N01U	0.70	1	Remove from System; Remove all culverts and associated fill. Outslope or waterbars as needed and barricade.	Deco							T14NR3E
15N01U.1	0.58	UAR	Barricade.	Restore							T14NR3E
15N01-x.100	0.13	UAR	Add to road system. OML 2	2							T14NR3E
15N02**	11.10	2	Replace 3 priority culverts.	2					x		T15NR2E
15N02.101	0.80	UAR	Add to trail system. Motorized trail. POC mitigation - Barricade at mp 0.8	M. Trail				x		x	T15NR2E
15N02.103	0.58	UAR	Add to trail system. Motorized trail	M. Trail						x	T15NR2E
15N02.104	1.14	UAR	Add to trail system. Motorized trail	M. Trail						x	T15NR2E
15N02.106	0.48	UAR	Add to trail system. Motorized Trail.	M. Trail						x	T15NR2E
15N02.107	0.42	UAR	Add to trail system.	M. Trail						x	T15NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			Motorized trail								
15N02.2	0.24	UAR	Barricade	Restore							T15NR2E
15N02.4	0.49	UAR	Add to trail system. Motorized trail	M. Trail							T15NR2E
15N02.5	0.90	UAR	Outslope or rolling dips as needed and barricade.	Restore							T15NR2E
15N11.2	0.32	UAR	Barricade.	Restore							T15NR2E
15N11A**	1.70	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR2E
15N11A.1**	0.25	UAR	Remove all culverts and associated fill from stream channels. Outslope as needed.	Restore							T15NR2E
15N11B	1.39	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope and barricade.	Deco							T15NR2E
15N13**	3.80	2	Improve maintenance or repair/replace all culverts and drainage structures as needed. Manage as OML 2.	2					x		T14NR2E
15N33	0.90	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N35A	0.24	2	Remove from System; Remove culverts and associated fill from stream	Deco							T15NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			channels. Outslope as needed and barricade.								
15N35B	0.57	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N35C	0.57	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N36.1**	0.62	UAR	Remove 3 culverts and associated fill from stream channels. Outslope as needed and barricade.	Restore							T15NR3E
15N36C	0.55	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N36N**	1.30	2	Keep first 1.3 miles; Maintain, repair, or replace each culvert. Improve surface drainage with outsloping and rolling dips as needed.	2					x		T15NR3E
15N36N	1.30	2	Decommision from 1.3 to 2.6	Deco							T15NR3E
15N36N.1	0.90	UAR	Add to road system as OML 2. Access to Blackhawk Bar. Keep; Maintain, repair, or replace each culvert. Improve surface	2			x		x		T15NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			drainage with outsloping and rolling dips as needed. Rock/gravel.								
15N38	2.90	2	Improve surface drainage and install culvert at stream ford on road near private land.	2					x		T15NR3E
15N39A	1.20	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N39A.1	0.18	UAR	Barricade	Restore							T15NR3E
15N39B	0.50	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N42	1.06	2	Remove all 3 culverts and associated fill. Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T15NR3E
15N42A	0.44	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
15N45	1.13	1	Excavate culverts and associated fill. Outslope roadbed and barricade.	1				x	x		T15NR3E
15N45.100	0.22	UAR	Barricade.	Restore							T15NR3E
15N45.101	0.12	UAR	Barricade.	Restore							T15NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
15N63	0.30	1	Upgrade to OML 2.	2							T15NR3E
16N02.1	0.10	UAR	Add to road system. OML 2; Bear Basin water source	2							T16NR4E
16N02.2	0.87	UAR	Barricade.	Restore							T16NR4E
16N02.5	0.21	UAR	Outslope or rolling dips as needed and barricade.	Restore							T16NR4E
16N02D	0.61	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR4E
16N02H	0.40	1	Outslope or rolling dips as needed.	1					x		T15NR3E
16N02L**	1.70	2	Upsize culverts, install waterbars or rolling dips.	2					x		T16NR4E
16N02S	1.20	1	Remove from System; Remove culverts and associated fill as needed. Outslope as needed and barricade.	Deco							T15NR3E
16N02S.1	0.21	UAR	Barricade.	Restore							T15NR3E
16N02T	0.50	1	Remove from System; Remove culverts and associated fill as needed. Outslope as needed and barricade.	Deco							T15NR3E
16N02T.1	0.12	UAR	Barricade.	Restore							T15NR3E
16N03.100	0.10	UAR	Barricade.	Restore							T15NR3E
16N03.2**	0.87	UAR	Remove 3 culverts and associated fill from stream channels. Outslope as needed and barricade.	Restore							T15NR3E
16N03D	0.63	1	Outslope or waterbars as needed and	1				x	x		T16NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			barricade.								
16N03F	0.70	2	Remove all 4 culverts and associated fill. Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T16NR3E
16N03G	0.08	1	Remove from System; Outslope landing as needed and barricade.	Deco							T15NR3E
16N03H	0.30	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR3E
16N03K**	1.50	2	Repair culverts at mp 1.08 and 1.14.	2					x		T16NR3E
16N03L	0.20	1	Remove from System; Remove culverts and associated fill as needed. Outslope as needed and barricade.	Deco							T16NR3E
16N10.1	0.14	UAR	Barricade.	Restore							T16NR4E
16N15A	0.17	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N16**	1.50	2	Repair or replace plugged culverts.	2					x		T16NR4E
16N16	0.60	2	Remove all 4 culverts and associated fill and outslope and barricade. Downgrade to OML 1.	1				x	x		T16NR4E
16N18.1	1.04	UAR	Barricade.	Restore							T15NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
16N18.3	0.49	UAR	Barricade.	Restore							T15NR3E
16N18.4	0.67	UAR	Barricade.	Restore							T15NR3E
16N18A**	1.35	2	Repair or replace 8 culverts on section up to MP 1.35 at bridge.	2					x		T15NR4E
16N18A**	0.95	2	Remove 5 culverts; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR4E
16N18B.1	0.66	UAR	Barricade.	Restore							T15NR4E
16N18C	0.39	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR4E
16N18E**	0.96	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR4E
16N18K	1.10	1	Outslope or rolling dips as needed.	1					x		T15NR3E
16N19**	8.28	2	Improve maintenance on, repair, or replace each of the 17 culverts.	2					x		T16NR2E
16N19.1	0.05	UAR	Add to road system. OML 2; water source; POC mitigation - Gravel length of road.	2			x				T16NR2E
16N19.2**	0.08	UAR	Outslope or rolling dips as needed and barricade.	Restore							T16NR2E
16N19.3	0.30	UAR	Barricade.	Restore							T16NR2E
16N19.4	0.87	UAR	Barricade.	Restore							T16NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
16N19.5**	0.19	UAR	Remove fill from culvert. Outslope as needed and barricade.	Restore							T16NR2E
16N19A	0.23	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N19B	1.40	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T16NR2E
16N19E	0.95	2	Remove all 7 culverts and associated fill. Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T16NR2E
16N19E.1	0.41	UAR	Barricade.	Restore							T16NR2E
16N19F**	0.76	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N19G	0.23	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N21.1	0.15	UAR	Outslope or rolling dips as needed and barricade.	Restore							T16NR2E
16N21.2	0.10	UAR	Barricade.	Restore							T15NR2E
16N21F.1	0.09	UAR	Barricade.	Restore							T16NR2E
16N23**	7.40	2	Improve road drainage at all	2					x		T15NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			culverts.								
16N23.100	0.64	UAR	Add to trail system. Motorized trail	M. Trail						x	T15NR2E
16N23.2	0.22	UAR	Add to trail system. Motorized trail	M. Trail						x	T15NR2E
16N23.4	0.69	UAR	Add to trail system. Motorized trail	M. Trail						x	T15NR2E
16N23A.1	1.90	UAR	Add to trail system. Motorized trail	M. Trail						x	T15NR2E
16N24A	0.65	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T15NR3E
16N27	0.50	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR4E
16N30	0.24	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR3E
16N31A.1	0.22	UAR	Barricade.	Restore							T16NR3E
16N31B.2	0.13	UAR	Barricade.	Restore							T16NR3E
16N32**	3.94	2	Improve maintenance, repair, or replace each of the 16 culverts.	2					x		T16NR3E
16N32A	0.08	1	Remove from System; Remove culverts and associated fill from stream channels . Outslope as needed and barricade.	Deco							T16NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
16N32C**	0.47	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR3E
16N33**	0.70	2	Downgrade to OML 1.	1							T16NR3E
16N34**	0.90	2	Add culvert at mp .34. Remove last culvert at mp .9 switchback.	2					x		T16NR2E
16N34A	0.50	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T16NR2E
16N35A	0.14	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR3E
16N35C	0.12	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR3E
16N36	1.20	2	Improve maintenance, repair, or replace each of the culverts.	2					x		T16NR2E
16N36.1	0.11	UAR	Barricade.	Restore							T16NR1E
16N36B**	0.80	2	Clean blocked culverts and install 2 additional culverts.	2					x		T16NR2E
16N37**	1.20	2	Improve maintenance, repair, or replace each of the 6 culverts.	2					x		T16NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
16N37B	0.17	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N39A	0.22	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR4E
16N41**	1.43	2	Replace culvert at mp .56.	2					x		T16NR2E
16N41A	0.17	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N41B	0.09	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
16N55	0.50	1	Upgrade to OML 2	2							T16NR3E
16N55.1	0.16	UAR	Barricade.	Restore							T16NR3E
17N01.1	0.21	UAR	Add to road system. OML 2. POC mitigation - Gravel near POC.	2			x				T17NR3E
17N01.100**	2.49	UAR	Remove all culverts and associated fill from stream channels. Outslope and barricade.	Restore							T17NR4E
17N01.2	0.30	UAR	Barricade.	Restore							T17NR3E
17N03	1.20	1	Outslope or waterbars as needed and barricade.	1				x	x		T16NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delineation	Seasonal Closure - Gate	Gravel	Barricade	Storm-proof	Speed Limit & Sign for NOA	
17N04.1	0.12	UAR	Barricade.	Restore							T17NR3E
17N04.3**	0.97	UAR	Remove culvert and associated fill. Outslope or rolling dips as needed and barricade.	Restore							T16NR3E
17N04S	1.80	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
17N05.100	0.88	UAR	Barricade.	Restore							T17NR4E
17N05.101	0.06	UAR	Barricade.	Restore							T17NR4E
17N05.4	0.32	UAR	Barricade.	Restore							T17NR3E
17N05.4A	1.36	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR4E
17N05.5	0.14	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR4E
17N05C	0.97	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
17N05G	0.67	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
17N05U	0.28	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
17N07.1	0.25	UAR	Outslope or rolling dips as needed and barricade.	Restore							T16NR2E
17N07.102*	3.07	UAR	Road not stable; failing. Remove all culverts and associated fill from stream channels. Outslope as needed and barricade.	Restore							T16NR2E
17N07.2	0.51	UAR	Outslope or rolling dips as needed and barricade.	Restore							T16NR2E
17N07.4	0.21	UAR	Outslope as needed.	Restore							T16NR2E
17N07.5	0.32	UAR	Barricade.	Restore							T16NR2E
17N07.5A	0.15	UAR	Barricade.	Restore							T16NR2E
17N07.6	0.75	UAR	Barricade.	Restore							T16NR2E
17N07.7	0.30	UAR	Barricade.	Restore							T16NR2E
17N07J	1.64	2	Repair culvert at mp 1.25	2					x		T16NR2E
17N07K	0.80	2	Remove all 3 culverts and associated fill. Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T16NR2E
17N07Q	0.22	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
17N07R	0.44	2	Remove from System; Remove culvert and associated fill. Barricade.	Deco							T16NR2E
17N07R.1	0.16	UAR	Barricade.	Restore							T16NR2E
17N07R.1A	0.25	UAR	Barricade.	Restore							T16NR2E
17N08.3	0.30	UAR	Barricade.	Restore							T17NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
17N08A	0.50	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
17N13A	0.38	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T17NR2E
17N15	0.90	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T18NR3E
17N15A	0.13	1	Remove from System; Outslope as needed and barricade.	Deco							T18NR3E
17N16	0.65	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T17NR2E
17N16.1	0.17	UAR	Barricade.	Restore							T17NR2E
17N16.100	0.07	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR2E
17N17**	0.60	1	Remove from System; Remove culvert and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR1E
17N17.1	1.98	UAR	Add to trail system. Motorized trail	M. Trail						x	T17NR1E
17N18.2	0.39	UAR	Remove 2 culverts and associated fill from stream channels. Outslope as needed and barricade.	Restore							T17NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
17N18.3	0.74	UAR	Barricade.	Restore							T17NR3E
17N18.4	0.15	UAR	Barricade.	Restore							T18NR3E
17N18A	0.94	1	Upgrade to OML 2.	2							T17NR3E
17N18C**	0.67	2	Improve maintenance, repair, or replace each of the 3 culverts.	2					x		T17NR3E
17N18E	0.42	1	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T18NR3E
17N18F	0.07	1	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T18NR3E
17N20**	0.19	2	Improve maintenance, repair, or replace each of the 3 culverts.	2					x		T17NR1E
17N21.1	0.41	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR1E
17N22A	0.79	2	Improve maintenance on, repair, or replace culvert at mp 0.7.	2					x		T17NR1E
17N22A.1	0.21	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR1E
17N22A.2	0.25	UAR	Barricade.	Restore							T17NR1E
17N22D	0.08	2	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR1E
17N22J	0.12	2	Outslope or	2					x		T17NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delineation	Seasonal Closure - Gate	Gravel	Barricade	Storm-proof	Speed Limit & Sign for NOA	
			rolling dips as needed.								
17N22W	0.15	2	Outslope or rolling dips as needed.	2					x		T17NR1E
17N22W.1	0.46	UAR	Add to system as OML 1. Outslope or rolling dips as needed.	1					x		T17NR1E
17N23	1.15	1	Remove from System.	Deco							T17NR1E
17N23	1.30	1	Remove from System; Outslope as needed, remove culverts, barricade. Remove from MP .42 to end.	Deco							T17NR1E
17N23C.1	2.23	UAR	Add to road system. OML 1.	1							T17NR1E
17N23C.2	0.59	UAR	Add to road system. OML 1.	1							#N/A
17N25A	0.49	1	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							0
17N27B	0.40	1	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR3E
17N27C	0.40	1	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR3E
17N27D.1	0.36	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR4E
17N28	0.20	1	Remove from System; Remove culverts and associated fill	Deco							T17NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			from stream channel. Outslope as needed and barricade.								
17N29	1.00	2	Pull fill back from landing.	2							T17NR4E
17N29B	0.20	2	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR4E
17N30**	0.80	2	Remove all culverts and associated fill. Outslope or waterbars as needed. Downgrade to OML 1.	1					x		T17NR4E
17N30	0.50	2	Remove all culverts and associated fill. Remove from system. Outslope or waterbars as needed and barricade.	Deco							T17NR4E
17N30A	0.40	2	Downgrade to OML1	1							T17NR4E
17N31	1.60	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T17NR4E
17N31.3	0.17	UAR	Barricade.	Restore							T17NR4E
17N31A.1	0.36	UAR	Barricade.	Restore							T17NR4E
17N32.1	0.31	UAR	Barricade.	Restore							T17NR4E
17N32B	0.80	2	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
17N32F	1.00	2	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR4E
17N32G	1.20	2	Improve maintenance, repair, or replace culverts.	2					x		T17NR4E
17N35**	0.50	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR4E
17N35.100	0.35	UAR	Barricade.	Restore							T17NR4E
17N36**	2.50	2	Improve maintenance, repair, or replace each of the 14 culverts.	2					x		T17NR3E
17N36B.1	0.26	UAR	Barricade.	Restore							T17NR3E
17N36C**	0.43	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
17N36F	1.20	1	Upgrade to OML 2.	2							T17NR3E
17N39**	2.19	2	Improve maintenance, repair, or replace each of the 25 culverts.	2					x		T17NR2E
17N39A	0.95	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
17N39B	0.51	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR2E
17N39C	0.12	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T16NR2E
17N40	0.35	2	Outslope or waterbars as needed, barricade, and downgrade to OML 1.	1				x			T16NR2E
17N40B	0.53	2	Outslope or waterbars as needed and barricade. Downgrade to OML 1.	1				x	x		T17NR2E
17N40B.1	0.19	UAR	Barricade.	Restore							T17NR2E
17N40C.1	0.20	UAR	Barricade.	Restore							T17NR2E
17N40D	0.18	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR2E
17N41	1.60	2	Improve maintenance on, repair, or replace/upgrade each of the 13 culverts and Outslope or waterbars as needed.	2					x		T17NR2E
17N41G.1**	0.17	UAR	Outslope or rolling dips as needed and barricade.	Restore							T16NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
17N46A	0.16	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR2E
17N48.1	0.33	UAR	Barricade.	Restore							T17NR2E
17N48.3	0.16	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR2E
17N48.4**	0.46	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR2E
17N48**	1.7	2	Stormproof	2					X		T17NR2E
17N48C**	0.47	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR2E
17N49	3.91	3	Designate as mixed use.	Mixed-Use							T17NR2E
17N49.100	0.12	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR1E
17N49.100	3.88	UAR	Barricade.	Restore							T17NR1E
17N49.100A	0.21	UAR	Barricade.	Restore							T17NR1E
17N49.101	1.17	UAR	Add to trail system. Motorized Trail; Delineate route. POC mitigation - Seasonal Closure - Gate near mp 0.88	M. Trail	x	x				x	T17NR2E
17N49.102	0.87	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.102A	0.71	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.102B	0.17	UAR	Add to trail system.	M. Trail	x					x	T17NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			Motorized Trail; Delineate route.								
17N49.102C	0.20	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.103	0.26	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR2E
17N49.104	3.82	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR1E
17N49.104	1.05	UAR	Barricade.	Restore							T17NR2E
17N49.104A	0.05	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.104B	0.08	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.105	1.43	UAR	Barricade.	Restore							T17NR2E
17N49.105A	0.12	UAR	Barricade.	Restore							T17NR2E
17N49.106	0.32	UAR	Barricade.	Restore				x			T17NR1E
17N49.107	0.64	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.108	0.31	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.4	2.04	UAR	Add to trail system. Motorized Trail; Delineate route. POC mitigation - Gravel two POC creek crossings west & south of 17N49.101 junction.	M. Trail	x		x			x	T17NR2E
17N49.4A	1.06	UAR	Barricade.	Restore							T17NR2E
17N49.7	3.06	UAR	Add to trail system. Motorized trail; repair road drainage at spring area and 2 culverts;	M. Trail	x	x			x	x	T17NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			Delineate Route. POC mitigation - Seasonal Closure - Gate near mp 0.95, just north of 17N49.15 junction								
17N49.7	0.29	UAR	Barricade.	Restore							T17NR1E
17N49.7A	0.82	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR1E
17N49.8	0.39	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.11	4.49	UAR	Add to trail system. Motorized Trail; Delineate route. POC mitigation - Seasonal Closure - Gate mid-slope near longitude 124.0119W and latitude 41.88593.	M. Trail	x	x				x	T17NR1E
17N49.11M	0.17	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR1E
17N49.11N	0.23	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR1E
17N49.11P	0.21	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR1E
17N49.12	2.10	UAR	Barricade.	Restore							T17NR1E
17N49.13	0.30	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T18NR1E
17N49.14	0.54	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N49.15	0.62	UAR	Add to trail system. Motorized Trail; Delineate route. POC mitigation - Seasonal closure - gate before	M. Trail	x	x				x	T17NR2E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			junction with 17N49.15A (mp 0.51)								
17N49.15A	0.24	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T17NR2E
17N69.100	0.18	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T17NR2E
17N69.2	0.16	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR2E
17N69.4	0.26	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T17NR2E
18N01**	0.10	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
18N03**	1.91	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N04E	0.21	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope or rolling dips as needed and barricade.	Deco							T18NR4E
18N05*	2	1	Remove all culverts. Outslope or waterbars/rolling dips as needed	1					X		T18NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			and barricade.								
18N05.1	0.20	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR4E
18N05.100*	2.16	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR4E
18N05.2*	0.53	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR4E
18N06A	0.18	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
18N07.1	0.16	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR4E
18N07.2	0.13	UAR	Add to road system. Manage as OML 2	2							T18NR4E
18N07.3	0.08	UAR	Add to road system. Manage as OML 2.	2							T18NR4E
18N07.6	0.25	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR4E
18N07.8*	0.38	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR4E
18N08.2	0.03	UAR	Add to road system. OML 2	2							T17NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delineation	Seasonal Closure - Gate	Gravel	Barricade	Storm-proof	Speed Limit & Sign for NOA	
18N08G	1.12	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR4E
18N09.100	0.27	UAR	Outslope or rolling dips as needed and barricade.	Restore							T19NR2E
18N09.100A*	0.16	UAR	Outslope or rolling dips as needed and barricade.	Restore							T19NR2E
18N09.101	0.16	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
18N09.102**	1.84	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
18N09.103	0.04	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
18N09.104	0.05	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
18N09.105	0.12	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR2E
18N11**	1.92	2	Replace culvert at mp 5.78.	2					x		T18NR5E
18N11A**	0.80	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N11B	0.19	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
18N11C	0.20	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N11D**	0.46	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR5E
18N11D.1	1.75	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR5E
18N11D.2**	0.25	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR5E
18N11D.3**	0.29	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR5E
18N11D.4A	0.73	UAR	Barricade.	Restore							T18NR5E
18N11D.5**	2.11	UAR	Remove culverts and fill from stream channels. Outslope as needed.	Restore							T18NR5E
18N12A**	0.43	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR4E
18N13.100*	0.21	UAR	Remove culverts and fill from stream channels. Outslope as needed.	Restore							
18N15	1.20	2	Upsize culverts,	2					x		T18NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			install waterbars or rolling dips.								
18N15D	0.23	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR3E
18N16**	1.2	2	Stormproof or replace 2 culverts.	2					x		T18NR3E
18N16.100	2.60	UAR	Barricade.	Restore							T18NR3E
18N16E	0.38	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
18N16F.1	0.16	UAR	Barricade.	Restore							T17NR3E
18N16W	0.17	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR3E
18N17**	8.10	2	Improve maintenance on, repair, or replace/upgrade each of the 19 culverts and Outslope or waterbars as needed.	2					x		T18NR3E
18N17.100	1.01	UAR	Barricade.	Restore							T18NR3E
18N17.100A	0.08	UAR	Barricade.	Restore							T18NR3E
18N17.103	0.21	UAR	Barricade.	Restore							T18NR3E
18N17.104	0.20	UAR	Barricade.	Restore							T18NR3E
18N17B	0.87	2	Install culvert at mp 0.5	2					x		T18NR3E
18N17C**	1.18	2	Replace culverts at mp 0.35 and 0.77; and maintain, repair or upgrade remaining 4	2					x		T18NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
			culverts and improve surface drainage.								
18N17G	0.12	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR3E
18N17H**	0.15	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR3E
18N18A	0.20	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N18B	0.15	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N18C	0.08	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N18D	0.13	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
18N19A	0.22	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N19B	0.20	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N19C	0.17	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N20**	1.00	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E
18N20.100	0.28	UAR	Barricade.	Restore							T18NR1E
18N20.100A	0.08	UAR	Remove culverts and associated fill from stream channels. Outslope as needed.	Restore							T18NR1E
18N20.101	0.12	UAR	Barricade.	Restore							T18NR1E
18N20.102	0.47	UAR	Remove culverts and associated fill. Outslope as needed.	Restore							T18NR1E
18N20A	0.40	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
18N22**	2.00	2	Remove all culverts. Outslope or waterbars/rolling dips as needed and barricade. Downgrade to OML 1.	1				x	x		T18NR1E
18N22D	0.62	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E
18N22E	0.14	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E
18N23	0.10	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E
18N24	1.10	1	Remove all culverts. Outslope or waterbars/rolling dips as needed and barricade.	1				x	x		T18NR1E
18N26	1.75	1	Remove all culverts. Outslope or waterbars/rolling dips as needed and barricade.	1				x	x		T18NR3E
18N26A	0.15	1	Remove all culverts. Outslope or waterbars/rolling dips as needed.	1					x		T18NR3E
18N26B	0.08	1	Remove all culverts. Outslope or waterbars/rolling dips as needed and barricade.	1				x	x		T18NR3E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
18N30A	0.28	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N30B	0.46	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR4E
18N31	0.60	1	Remove from System; Remove culverts and associated fill from stream channel. Outslope as needed and barricade.	Deco							T17NR5E
18N31.2	0.23	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR5E
18N31.3C	0.18	UAR	Outslope or rolling dips as needed and barricade.	Restore							T18NR5E
18N31.4	1.25	UAR	Outslope or rolling dips as needed and barricade.	Restore							T17NR5E
18N46	0.39	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E
18N47	0.44	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T19NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
18N48	0.31	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T19NR1E
18N51	0.27	1	Upgrade to OML 2	2							T18NR1E
18N51.100	1.45	UAR	Add to trail system. Motorized Trail; Delineate route.	M. Trail	x					x	T18NR1E
18N51.100A	0.46	UAR	Barricade.	Restore							T18NR1E
18N56**	0.88	2	Replace culverts; install rolling dips as needed.	2					x		T18NR3E
18N57*	0.56	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR3E
18N58.1	0.13	UAR	Barricade.	Restore							T18NR3E
18N58B	0.25	1	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T17NR3E
19N34	1.95	2	Remove from System; Remove culvert and associated fill as needed. Outslope as needed and barricade.	Deco							T19NR1E
19N34A	0.28	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T19NR1E

Route / Road Number	Total Miles	Existing OML / Route Type	Proposed Action	Proposed OML / Route Type	Mitigations on National Forest Transportation System (NFTS)						Location: Township & Range
					Route Delinea-tion	Seasonal Closure - Gate	Gravel	Barri-cade	Storm-proof	Speed Limit & Sign for NOA	
19N34B	0.29	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T19NR1E
19N34C	0.08	2	Remove from System; Remove culverts and associated fill from stream channels. Outslope as needed and barricade.	Deco							T18NR1E

Appendix C

Routine Road Maintenance Specific Activities

Routine Road Maintenance comprises of the following activities. Many activities incorporate mitigation guidelines and BMPS as standard practice. Each activity description references pertinent BMPs that are described above. The numbers in parentheses (e.g. 811) at the end of each activity description refer to the R5 Forest Service Specifications for Maintenance of Roads (USDA, 1992), which guides the development and administration of FS road maintenance contracts. All of the items listed below do not necessarily occur each year, but are implemented under the established routine road maintenance contract as conditions warrant at locations throughout the Forest.

1. Blading - This work consists of surface blading native or aggregate roadbeds to a condition to facilitate traffic and provide proper drainage. Blading includes shaping the crown or slope of the traveled way, berms, and drainage dips. Excess roadbed width shall be shaped only as needed to provide drainage away from the traveled way. The work would be generally be accomplished by a motor grader. BMPs 2-4, 2-7, 2-11, 2-19, 2-22, and 2-23 will be implemented with this action. (811)

2. Dust abatement - This work consists of applying dust palliatives to native and aggregate-surfaced roads. It includes standard material specifications for applying non-petroleum products; however, petroleum products can be added. Care will be taken to limit petroleum-based products to the travel way, especially at channel crossings. The authorized work is not intended to provide a bituminous running surface. Bitumen is the asphaltic residue in the distillation of coal tar, wood tar, petroleum, etc. This work would generally be accomplished with a water truck. To prevent impacts to riparian resources, water will be drawn from designated drafting sites with a screened intake. BMP 2-21 will be applied with this activity.

3. Spot surfacing - This work consists of placing surface aggregate as designated. It includes preparing the area, and furnishing, hauling, and placing all necessary materials to blend with the adjacent road cross-section. This work would generally be accomplished with a dump truck, motor grader, and a small roller. BMPs 2-22 and 2-23 will be applied during spot surfacing. (813)

4. Asphalt pavement patching - This work consists of patching potholes, skin patching of asphalt surfaces, and patching asphalt berms. Generally this work will be accomplished using a grader, dump truck, small paver, and small roller. A backhoe will be used if the damaged area requires digging out. BMPs 2-22 and 2-23 will be implemented with this activity. (814)

5. Paved surface cleaning - This work consists of removing loose material from a paved traveled way, including bridge decks and paved shoulders. Use of hydraulic flushing will not be permitted within a horizontal distance of 200 feet of a live stream, unless approved by the government. Other cleaning should be accomplished using power broom or blowers, truck with rock blade, and grader. BMPs 2-11, 2-19, 2-21, 2-22, and 2-23 will be implemented during this activity. (815)

6. Surface treatment - This work consists of treating the surface of asphalt concrete or chip seal-surfaced roads with a seal coat, a chip seal, or an asphalt concrete overlay. The purpose of this

work is to rejuvenate the road surface, seal hair-line cracks, or to replace a worn surface that has become unsafe. Equipment that may be used includes power brooms, dump trucks, paving machines, chip spreaders, and oil distributor trucks. Surface treatment work is performed at the rate of 4 to 8 MPH. BMPs 2-11, 2-19, 2-21, 2-22, and 2-23 will be implemented during this activity.

7. Maintenance of unpaved shoulders - This work consists of reshaping unpaved shoulders adjacent to a paved traveled way to their original configuration. This work would generally be accomplished with a motor grader with attachments. There will be no sidecasting anywhere that there is a likelihood that the sidecast material will reach a channel. BMPs 2-7, 2-11, and 2-19 will be applied as part of this activity. (816)

8. Asphalt crack cleaning and repairing - This work consists of cleaning and filling cracks in existing asphaltic concrete (AC) surfaces that are 1/4 inch or wider. Cleaning is usually accomplished with compressed air, and the AC is applied using a propane-heated double-boiler unit with a wand attachment. BMPs 2-22 and 2-23 will be implemented with this action. (818)

9. Ditch maintenance - This work consists of removing rock, wood, soil, and other materials and re-shaping all types of drainage ditches to provide a waterway which is unobstructed. During the operation, care shall be taken to retain existing low growing vegetative cover in the ditches. This work would generally be accomplished with a motor grader and/or backhoe. BMPs 2-2, 2-4, 2-6, 2-7, 2-19, and 2-22 apply to this action. (831)

10. Remove and end haul materials - This work consists of loading, hauling, and placing slide debris or excess materials (such as rock, soil, and vegetation) to designated disposal sites. This work would normally be accomplished with a wheel loader and dump truck when excess materials are hauled to a disposal site. If materials are used to fill slumps in the road compaction will be required. Generally a wheel loader, dump truck, compacter, motor grader, and backhoe would be used. BMPs 2-3, 2-7, 2-11, 2-19, and 2-22 will be applied with this activity. (832)

11. Drainage structure maintenance - This work consists of cleaning and reconditioning culverts and other drainage structures such as catch basins, inlet and outlet channels, and ditch line transition areas. This work is usually accomplished by hand, or in extreme cases, with a backhoe. Work does not include cleaning totally plugged culverts or replacing all or part of the drainage structure. Hydraulic flushing of drainage structures is not a standard practice of this activity, and will only be designated by FS when all potential impacts are addressed and minimized. BMPs 2-7, 2-11, 2-19, and 2-22 are a part of this activity and will be implemented. (834)

11. Culvert replacement – In areas that meet the wildlife operating procedures, this work includes removal of existing culverts, bed preparation, installation and backfill of new culverts of the size and length specified as part of routine road maintenance. Excavation shall be at least as wide as three pipe diameters. The culvert shall be installed to maintain auniform flow line from inlet to outlet channel. Culverts up to 48 inch diameter may be replaced. Work would generally be accomplished with a backhoe, tractor, and compactor. BMPs 2-2, 2-3, 2-10, 2-14, 2-17 and 2-22 will apply to this activity. (833)

12. Drainage structure maintenance - This work consists of cleaning and reconditioning culverts and other drainage structures such as catch basins, inlet and outlet channels, and ditch line

transition areas. This work is usually accomplished by hand, or in extreme cases, with a backhoe. Work does not include cleaning totally plugged culverts or replacing all or part of the drainage structure (see #11 Culvert Replacements). Hydraulic flushing of drainage structures is not a standard practice of this activity, and will only be designated by FS when all potential impacts are addressed and minimized. BMPs 2-7, 2-11, 2-19, and 2-22 are a part of this activity and will be implemented. (834)

13. Roadway drainage maintenance - This work consists of providing drainage on roads that have been physically closed to traffic. At completion of drainage work the road will not necessarily be passable to vehicles. BMPs 2-2, 2-4, 2-6, 2-7, 2-11, 2-19, and 2-22 will be applied with this activity. (835)

14. Drainage dip maintenance - This work consists of maintenance of existing drainage dips, including rolling dips on native, aggregate, and paved roads, and maintenance of special outlet structures to provide for a smooth flow of water from the traveled way. Generally, this work would be accomplished with a motor grader with attachments. BMPs 2-2, 2-4, 2-7, 2-11, 2-19, and 2-22 will be implemented with drainage dip maintenance. (837)

15. Vegetation establishment - This work consists of applying seed, fertilizer, and mulch, and planting roadways and disposal areas that have been disturbed by maintenance activities. This work would usually be accomplished by hand. BMPs 2-2, 2-4, and 2-22 will be implemented.

16. Cutting roadway vegetation - This work consists of cutting all vegetation, including trees, less than 6" in diameter at six inches above the ground in order to improve sight distance and provide overhead clearance. This work would be performed by hand using chainsaws or with a mechanical brush cutter. The objective is to manage roadside vegetation over time to maintain slope stability through vegetation cover while providing for sight distance and drainage needs. All of the work would occur within the road prism. BMPs 2-3, 2-4, 2-5, 2-11, 2-19 and 2-22 will be applied with this action.

17. Logging out - This work consists of ordered removal of fallen trees and snags which encroach into the roadway and within 4 feet of the roadbed (right-of-way for berm and road maintenance practices). This work is intended to open roads closed by minor windstorm debris or other natural occurrences, and pertains to unmerchantable material. Some chainsaw and mechanical work may be necessary. Logging out that occurs on Level 2 roads to gain access will meet the short duration criteria specified above at the beginning of the project list. BMPs 2-3, 2-19, and 2-22 will be applied with logging out actions.

18. Hazard removal and cleanup - This work consists of removing and disposing of marked hazards such as trees, rocks, stumps and fallen trees that will create traffic safety problems. Woody debris and slash in excess of 1 foot in length or 3 inches in diameter shall not remain in ditches. All work will be within the road prism. Removal of standing roadside hazard trees is addressed in the Forest-wide Hazard Tree Removal Biological Assessment/Evaluation (March 5, 1997), and such projects may be tiered to that document. BMPs 2-3, 2-7, 2-11, 2-19, and 2-22 will be implemented with this activity. (854)

19. Maintenance of cattle guards - This work consists of cleaning and restoring cattle guards and appurtenances. Work would normally be accomplished by hand, although a backhoe may be used to raise the deck grid. BMPs 2-2, 2-3, and 2-22 will be implemented. (861)

20. Sign maintenance - This work consists of cleaning, replacing, and reconditioning signs, posts, and markers. This work would normally be accomplished by hand by Forest Service personnel. BMPs 2-3 and 2-22 will apply here.