Environmental Assessment

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Chapter 1 – Introduction

Introduction

This Environmental Assessment (EA) has been prepared for the Prineville Field Office's proposed **Road Maintenance**. The EA includes an analysis of potential effects that could result with implementation of a proposed action or alternatives to the proposed action. The EA assists the Bureau of Land Management (BLM) in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a "Finding of No Significant Impact" (FONSI). A FONSI is a document that briefly presents the reasons why implementation of the proposed actions will not result in "significant" environmental impacts (effects) beyond those already addressed in Resource Management Plans (RMPs) for the Prineville District BLM. If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project.

A decision record (DR) may be signed following public comment on the EA to document the decision. Decisions made in this EA do not set priorities or commit funding for maintenance. The District's annual program of work and maintenance operations plan will make those decisions. This EA does not determine the maintenance intensity for any given road or trail. Maintenance intensity is determined through RMPs or associated plans tiered to the RMPs.

Proposed action

The proposed action is to conduct a variety of actions that maintain the transportation system within the Prineville District of the BLM.

Project location

The project area is the existing transportation system throughout the entire Prineville District. The transportation system is defined by existing and future RMPs, RMP amendments, activity plans, wilderness plans, or travel management plans. Various RMPs make allocations of uses for public lands and identify a system or network of roads that provides access to or through public lands for those uses. Various activity level plans are tiered off of RMPs and may further describe intended uses and the transportation system to support those uses.

Need for action

Road surfaces and construction materials deteriorate and maintenance becomes necessary due to aging, weathering and the amount of vehicle use on the roads. Conditions on specific roads can change due to landslides or washouts. Road failure and/or forces of nature can pose a threat to public safety and cause unsafe conditions that need immediate action. Roads that are not properly maintained can contribute to resource degradation.

Purpose of action (objectives)

The purpose of the project is to maintain the existing transportation system so that it provides an integrated, functional, safe, efficient transportation system for the intended uses. The project would:

- Protect the integrity of the road surface and construction materials
- Ensure that the road is performing as intended
- Protect BLM's investment of construction costs
- Protect access to public lands.
- Protect resource values
- Ensure public safety

Transportation System Terminology

Within this EA the "Transportation System" that is being addressed consists of roads, primitive roads, trails, and recreation sites that are defined as follows:

Roads: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

Primitive Roads: A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.

Trails: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

Recreation sites: A linear access route area that leads to campgrounds, trailheads and viewpoints and the associated parking areas.

Other linear transportation features may exist within the projects area but they are not part of the transportation system and are therefore **not included** as part of the proposed action. These other linear features are:

- Linear disturbances not designated as a road, primitive road or trail
- Wilderness study area (WSA) ways
- Routes within areas having wilderness character
- Linear features not assessed

These definitions are from the *BLM Roads and Trails Terminology Report, April 2006.* See Appendix B for additional explanation and definition of terminology used in this document.

Issues

Issues considered in detail

An issue is a point of disagreement, debate, or dispute with an action based on an anticipated effect. While many issues may be identified during scoping, only some are analyzed in the EA. The BLM analyzes issues in an EA when analysis is necessary to make a reasoned choice between alternatives, or

where analysis is necessary to determine the significance of impacts. To warrant detailed analysis, the issue must also be within the scope of the analysis, be amenable to scientific analysis rather than conjecture, and not have already been decided by law, regulation, or previous decision. Significant effects are those that occur in several contexts (e.g., local and regional) and are intense (e.g., have impacts on public health or unique areas). For more information on significance, see pages 70-74 in the BLM NEPA Handbook H-1790-1.

The following issues were raised by the public or BLM staff, or both, and will be considered in detail in this EA:

- *How would access to public lands within the project area be affected by the alternatives?*
- *Would public safety be affected by the alternatives?*
- *How would water quality and aquatic habitat be affected by the alternatives?*

Issues considered but eliminated from detailed analysis

While a number of other issues were raised during the internal and external scoping process, not all of them warranted detailed analysis to make a reasoned choice between alternatives or to determine the significance of impacts. Project design features (PDFs), also known as best management practices, have been incorporated as part of the proposed actions to further mitigate issues so that the issues no longer warrant detailed analysis. The PDFs are included in the description of the proposed action in Chapter 2 and in Appendix A. Included below are issues not analyzed or considered further in this EA.

- *How would the proposed actions affect the spread of noxious weeds?* The transportation system is a primary target area for noxious weed management actions due to vehicles spreading weeds. PDFs are included as part of the proposed actions to ensure that maintenance activities do not spread noxious weeds. Maintenance equipment would be routinely checked for weeds and cleaned. Existing weed inventory information would be used where available to incorporate any needed project design features. Where inventory information is not available roads would be inventoried before and after maintenance actions and weed treatments applied as needed. The source sites for road surface materials would be checked for weeds prior to moving materials. Maintenance disturbance beyond the road bed would be reseeded and monitored for weeds. Integrated weed management actions including the use of herbicides have been addressed in a separate EA. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *Would the proposed actions cause soil erosion?* Maintenance actions can disturb the soil surface and leave materials that are susceptible to erosion. PDFs are included as part of the proposed actions to ensure that disturbed sites are stabilized and water flow concentrations are minimized. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *Would fuel spills from equipment implementing the proposed action affect water quality or contaminate the soil?* PDFs are included as part of the proposed actions requiring having a spill prevention plan in place for the proposed actions. PDFs would require having a spill kit onsite

during heavy equipment operation. PDFs would also require performing refueling and equipment maintenance at locations away from water flow channels and in sites where any spill would be more easily contained. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *Would maintaining the existing roads that go through archeological and paleontological sites affect those resources?* Some roads were constructed prior to knowing of the existence of an archeological or paleontological site. PDFs are included as part of the proposed actions that would protect these sites from any additional disturbance such that there would be no effect on these resources. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *Would botanical sites be affected by the proposed actions?* Some roads were constructed prior to knowing of the existence of a botanical site. PDFs are included as part of the proposed actions that would protect and mitigate these sites from any additional disturbance such that there would no effect on these resources. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *Would wildlife or wildlife habitat be affected by the proposed actions?* Some roads exist that are within important wildlife habitats. As part of the proposed actions, PDFs would not allow maintenance to occur during wildlife seasonal closures and would not allow disturbances to wildlife and seasonally important habitats (winter range, nest sites, roosts, etc.,), such that wildlife habitat would not be effected. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA

- *How does the proposed action affect right-of-ways holders, mining claimants, or other authorized users*? BLM has issued right-of-ways on some roads where BLM or the right-of-way holders may perform maintenance. Some roads or trails within the transportation system may overlap mining claims. BLM has authorized other uses such as grazing or mineral development in areas where BLM would maintain roads. PDFs are included as part of the proposed actions to coordinate maintenance actions with the persons holding interests in roads or areas so that disruption to their authorized use is minimized. The PDFs included in the proposed action would apply to new right-of-ways authorizations and renewals of existing rights-of-ways. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *How would the proposed action affect visual resources*? PDFs are included as part of the proposed actions that address how road maintenance, including the color of road surface materials, need to fit the existing and or natural environment such that there would be no effect on visual resources. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *How would the proposed actions affect dust and air quality*? Creating dust while maintaining dry gravel and native surface roads is an inherent situation. PDFs are included as part of the proposed actions that address when, where and how dust abatement would be used. When water is used for dust abatement the appropriate authorization would be acquired for the use of the

water. Therefore, no potentially significant effects are expected, and this issue is not analyzed in detail in this EA.

- *How would the proposed actions affect Wilderness Study Areas (WSA) and lands with wilderness character*? The interdisciplinary team (IDT) considered including maintenance of WSA ways, but determined that while the type of maintenance actions included in this proposal may be allowed in WSAs, they are only allowed in accordance with the WSA Interim Management Policy (BLM Manual H-8550-1) and requires additional WSA specific analysis. The team decided not to include routes within wilderness inventory units as part of the proposed actions. Maintenance actions within wilderness inventory units are more appropriately analyzed on a site specific basis. Note that roads that are boundaries of wilderness inventory units are not within the units and therefore would be maintained as part of the actions in this proposal.

Chapter 2 - Proposed Action and Alternatives

Alternative A, no-action

No transportation system maintenance would occur under the No Action Alternative. The No Action Alternative provides a baseline for the comparison of alternatives.

Alternative B, Proposed Action

The proposed action is to maintain facilities and assets of the Prineville District transportation system. This includes roads, primitive roads, trails, and recreation sites (roads, access points, parking areas, trail heads). Maintenance intensity would be consistent with intended use as determined by the existing and or future RMPs, RMP amendments, activity plans, wild and scenic river plans, wilderness plans, or travel management plans. The PDFs included in Appendix A are part of the proposed action.

Prineville BLM would maintain 300 to 350 miles of the transportation system and approximately 50 recreation sites annually. Approximately 20 miles of the highest use roads require maintenance twice a year to maintain safe conditions. Maintenance actions are subject to availability of funding.

Road maintenance work may be completed by the BLM, timber sale purchasers, permittees, contractors, cooperators or right-of way, grant and lease holders. PDFs, conservation measures, timing restrictions, and other management direction would be included in all work and communications involving maintenance crews, timber sale purchasers, permittees, contractors, or cooperators involved with any road management or maintenance action. The PDFs would prevent storm water runoff from logging roads being discharged into streams.

Maintenance work during any given year may include but is not limited to, reshaping road surfaces, removing encroaching brush, replacing the road surface, removing and disposing of cut bank slough, removing any ditch blockage, stabilizing eroding banks, removing sediment from existing ditch relief culverts, and replacing drainage structures which become plugged or no longer function (see description of this activity below for design feature and contingency actions). Following are descriptions of each type of maintenance and associated design features described in the written description of the specific action. The PDFs in Appendix A are also part of the proposed actions. New information in the future may provide additional PDFs that would be considered for inclusion as part of this proposed action. Technical terms are described in more detail in Appendix C, Glossary.

Road Reshaping and Blading

Reshaping road surfacing is intended to remove irregularities from the road surface, which can cause the concentration of runoff in amounts, which result in soil and aggregate displacement through rills, ruts, and pot holes.

Road maintenance activities occur primarily from April 15 to November 1, depending on the actual condition of the road and the moisture level. If rutting would occur, the standard practice is to delay maintenance until the road is dry enough to allow equipment to the site without damaging the road.

Side casting (see Appendix C, Glossary) of materials would not occur where these materials could be directly or indirectly introduced into a stream, or where the placement of these materials would contribute to destabilization of the slope. Undercutting of cut slopes would be avoided during ditch maintenance activities. Disposal materials would be deposited in approved disposal areas. Grader operators would back slope away from areas adjacent to streams where there is a potential for sediment delivery into streams. Sediment control devices would be placed to trap sediment in hot spots where sediment could reach a stream. Grassy areas are maintained around culverts to minimize the potential for sediment delivery to streams from road grading. Sloughing material is deposited in a disposal site away from any stream and left to vegetate naturally.

Drainage Structure Maintenance

Drainage structure maintenance includes culverts, water bars, drain dips, and ditches. Actions include removal of coarse and fine materials and brush from catch basins, inlets, outlets, outlet channels, leadoff ditches, trash racks, drop inlets, water bars, open-top culverts, and rolling dips.

Drainage structure work accomplished under maintenance includes opening plugged culverts, adding water bars to road surfaces, maintaining and forming drivable drainage dips into road surface, adding ditch relief culverts, replacing plugged or damaged ditch relief culverts, and cleaning drainage ditches.

Plugged culverts are opened using hand shovels or power equipment. The material removed by hand is spread away from drainage so it would not fall or wash back into the drainage channel or structure. When cleaned with backhoe, the material is hauled to a disposal area, by dump truck, away from areas subject to erosion or discharge into streams.

Roadside ditches and lead off ditches would be cleaned of any material, which would obstruct the flow of water. When possible, grassed ditches are not disturbed, except where necessary to re-establish functional drainage. Water bars are used on roads to disperse water at variable intervals, to slow the velocity and decrease the volume of water traveling on the road prism, thus decreasing the risk of sedimentation due to erosion. These water bars are cut into the road surface at spacing intervals, which control the accumulation of water volumes and velocities. Backhoes and excavators are generally used to perform drainage repair or replacement. Waste materials removed during maintenance activities and cleaned materials from culverts and open tops would be deposited in approved disposal areas outside flood plains in pre-approved disposal sites. Berms, sediment basins, or sediment traps would be constructed where required to contain sediment from the damage/repair site.

Ditch Relief Culvert Replacement, Installation or Removal

Ditch relief culverts remove water from roadside ditches, decreasing sedimentation to streams by reducing the concentration of water exiting roadside ditches. Backhoes and excavators are generally used to perform ditch relief culvert construction activities. Work would be done only during dry conditions. During installation, efforts are taken to prevent the escapement of soil into streams. Sediment filters, certified weed free straw bales, or other devices would be installed at the culvert outlet if natural filters are not present. Culvert work inside riparian management areas (RMA) would be reviewed with engineering and hydrology or fisheries staff and designed to conform the project design feature, standards, guides, and best management practices.

Sign Maintenance and Construction

Sign maintenance includes: straightening rock basket and sign post, cleaning the sign face, brushing for sign visibility, installing hazard markers that denote road hazards, and replacing missing lag screws. When a sign degenerates to an unacceptable degree it would be replaced. When not applicable to the public, signs would be removed, covered, hinged, turned, or supplemented with another sign that indicates periods of time that signing is applicable. When signs are installed in rock baskets, the rock basket would be no less than 113 inches circumference and 32 inches high. For posts twelve feet or higher, baskets would be no less than 151 inches in circumference and 52 inches high. All posts shall be placed to the proper height per the Manual on Uniform Traffic Control Devices (MUTCD) and be thoroughly tamped in. They would in no case be less than two feet or a quarter of the post height in the ground, or which is greater. Multiple post installation would be used on signs 40 inches or more in width. Sign placement on the posts would be per MUTCD. When selecting sign locations, sites adjacent to fish bearing streams would be avoided if at all possible to avoid disturbance and potential for sediment delivery to the stream and to prevent the need for brushing for visibility.

Fallen Tree Removal and Road Snag or Danger Tree Felling

Fallen tree removal is the bucking, removal, and disposal of downed trees, logs, and debris, which have fallen on or across the road bed or lie within the traveled way, thus presenting safety and access concerns. Fallen tree removal is performed to provide safe travel for the road users and provide adequate room to achieve road maintenance activities with maintenance equipment.

Any wood, slash or debris over four inches in diameter and two feet long either existing or created from fallen tree removal operations, would be removed from ditches, drainage channels, traveled way, shoulders, and turnouts and scattered on the scattered on adjacent ground away from drainages away from drainage. Trees within the travel way would be cut, limbed, and placed outside the travel way and turnouts and out of drainages and ditches. Trees standing outside travel way but having branches extending into the area would be limbed to a height of 14 feet. Trees that are blocking ditches or drainage structures may be cut. Some slash may be used as sediment filters at outlets for cross road drainage. Some of the slash may be chipped and placed on cut or fill slopes or disturbed areas. The chipped material provides sediment control, holds in moisture improving sprouting of seed, and is incorporated more rapidly into the duff layer.

Any portion of a tree, which has fallen into a RMA would be left in place outside of the roadway. Merchantable logs outside the RMA would be cut and removed from the traveled way to facilitate safe passage and proper maintenance. Non-merchantable logs may be cut any length to facilitate safe removal. If these logs are decked to provide designated firewood to the public, the deck would not be adjacent to live streams in order to prevent fuel contamination.

An interagency Field Guild for Danger Tree Identification and Response was developed in 2005 and then amended in 2008. The BLM is currently following this direction to comply with OSHA regulations and to maintain safe driving conditions.

Danger trees within a RMA would be felled and left onsite. When removing down logs, which extend into a stream, from a road, any material on the fill slope and in the stream would remain (not be removed)

to provide for woody debris recruitment, except in cases where the retention of this material would result in a safety concern (i.e. downstream facilities).

Roadside Brushing

Roadside brushing is performed to provide visibility, safe stopping distance, clearance for maintenance equipment, unimpeded travel and unobstructed flow of water by the removal of standing vegetation in ditches which may divert water out of the intended course of flow within the clearing limits. Safety and drainage issues would be the primary need for brushing.

On designated open roads, high and medium maintenance intensity, brush is removed when it reaches a damage threshold described below.

The threshold for roadside vegetation is exceeded when:

- Growth hinders ones view of regulatory and warning signs
- Growth interferes with the use of a travel way
- Growth blocks the view of oncoming traffic to the degree that a driver could not determine the speed or existence of an oncoming vehicle thus affecting adequate stopping distance.
- Growth interferes with the steady flow of water in ditches or through drainage structures.

Roadside brushing consists of cutting and disposing of vegetative growth including trees less than six inches in diameter. The area to be brushed includes cut slopes, fill slopes, ditches, roadbed, turnouts and vertical clearance. Additional area would be brushed on the inside of curves as necessary to achieve adequate sight distance. Trees outside the roadbed or ditch, but within the brushing limits, which are over six inches in diameter would be limbed in lieu of cutting. Trimming or limbing may be done with a chainsaw or hand tools. Limbs are cut flush to the tree trunk. Debris from cutting operations would be removed from the brushed area and scattered or chipped. Some slash from cutting operations would be used as sediment filters at outlets for cross road drainage. Some of the slash would be scattered or chipped and placed on cut or fill slopes or disturbed areas. The chipped material provides sediment control, holds in moisture improving sprouting of native seed, and is incorporated more rapidly into the duff layer.

In road segments that parallel stream courses, brushing operations would maintain stream shade along with safety considerations. This may necessitate hand brushing, partial brushing, or limbing, with consideration for providing growth for future shade. Brush removal would occur within RMAs where safety is an issue. Options other than complete "removal" would be considered in order to leave ground cover to help control water and sediment flow off the road surface into the RMA and stream channels on sites where brush removal would cause sediment to be delivered to a stream. When brush cutting is necessary at stream crossings, it would be cut only to a minimum height of six inches above the ground to prevent sediment delivery to a live stream and would be left in ditches. Brush and other standing vegetation provide shade and filtering of dust delivery to streams and would be maintained except where public safety is an issue. Roadside brushing that involves more than minimal removal of vegetation (i.e., limbing of trees or removal of brush) in RMAs would be reviewed by a fish biologist or hydrologist.

Dust Abatement

During the summer months some roads may receive dust abatement treatment. Dust abatement is the application of a product, which either bonds dust particles and fines to larger matter or makes them heavier so they tend not to rise with the passage of vehicles. The purpose of dust abatement is to prevent loss of surface fines, enhance vehicle safety, and in some cases, prevent pollution and provide vehicle occupant comfort. Water is the only agent that would be used for dust abatement within RMAs.

Water source development is not part of the proposed action. Where water can be drafted from designated water sources, it can occur only as long as supply is adequate to provide for both fish and withdrawal. Screens are attached to intake hoses to prevent pulling fish and other small matter. Trucks would be maintained to prevent oil leaks. Loading is done in a manner to minimize overflowing and discharge of wash into stream. Storage water would be pumped or gravity fed into a holding tank or pond, using less than ten percent of the stream volume. All systems would have screened intake pipes and return systems would be designed that prevents sediment from entering the stream.

Water drafting guidelines and fish screen criteria prepared by NOAA Fisheries are included in Appendix D and E of reference document, "2010 Road Maintenance Supporting Documentation for Salmonid Project Design Criteria Compliance Worksheet, Blue Mountain Provincial Expedited Process."

Road Closures

Road closure actions would include the installation of a physical device to restrict vehicle traffic. Roads are most commonly closed with pole gates, steel gates, or closure signs, or earth berms as applicable for effective closure. These roads would be treated to provide self-maintenance prior to closure. Self-maintenance includes a variety of actions. Earth berms would not be used on roads with culverts at channel crossings still installed. Water bars would be installed with appropriate skew, outlet, and spacing. Sediment barriers of available woody material such as slash, brush, etc., would be placed at water bar outlets. Side ditches would be bladed where needed; culverts would be cleaned to drain; catch basins would be functional and free of debris. Drain dips, grade sags, and cross ditches would be reconstructed/rocked as necessary to assure proper functioning. All actions would be considered on a site-specific basis with each road or road segment actions suited to the needs and condition of the road and related resources.

Road closure actions, whether the initial closure or re-closing a breached road would occur only during sufficiently dry conditions to prevent damage and runoff. Road closure actions are also confined to time periods such that key fish or spawning areas are not impacted and soil movement is not likely to occur. All road closure activities adjacent to fish bearing stream channels or crossing live streams would be reviewed by a fisheries biologist or hydrologist.

Bridge Maintenance

Bridges are inspected periodically and include superstructure, substructure, and approaches. Based on the results of the inspection process, necessary bridge maintenance work is scheduled. Bridge maintenance includes: removal of material from the bridge deck surfaces, clearing abutments and piers of accumulated debris outside the wetted channel, replacing lost or damaged hazard markers and delineators and bolt tightening. Less routine work includes: running planks/wearing surface replacement, guardrail repair and

replacement, and riprapping of piers and abutments. Rip-rapping would be done during low water, dry conditions, and would not be placed within the wetted channel.

Deck cleaning and replacement must be done in a manner that would not allow sediment and debris to enter the stream channel. Bridge work exceeding the scope of this analysis and the level of effects determination would be analyzed separately.

Cattle guard Maintenance

Cattle guard cleaning is done primarily with a backhoe. Once the cattle guard deck is removed from the foundation, the backhoe would remove the material between the foundations down to the mudsills or natural ground. If the material removed is road surfacing, it is placed either on the adjacent approaches of the cattle guard or the bypass road. Other material mixed with road surfacing material (referred to as contaminated material by road managers) would be hauled to a waste site. The cattle guard would be checked for drainage. Sometimes it is necessary to run a continuous ditch line past the cattle guard or install a culvert to provide proper drainage. Cattle guard maintenance would be done in a manner that ensures sediment generated from this activity would not reach streams.

Road Realignment (Minor)

Minor road realignment is the lateral shifting the roadway outside of the original construction limits. The length of the minor realignment would be no more than 10% of the road segment's length or ¼ mile (1320 feet) whichever is less. Realignment actions include blocking and decommissioning the old route, signing the new route, shaping or grading the new route surface and installing any needed drainage structures. The realignment is needed to reduce resource damage being incurred from the existing routes, safety concerns and the need to maintain access to public lands. The IDT will determine if the proposed realignment is indeed minor or if the proposal requires additional analysis.

Table 1 lists the proposed actions and the locations where they typically occur.

Table 1, Proposed Actions

Proposed actions include;	Roads	Primitive Roads	Trails	Rec Sites
Repairing a road to its originally constructed condition	X		X	X
Base material additions or replacement	X		X	X
Surface material additions or replacement	X			X
Reestablish original road width	X		X	X
Spot Rocking		X	X	X
Grading	X		X	X
Ditch cleaning within road prism	X			X
Brush removal and tree trimming to improve sight distance	X		X	X
Culvert repair or replacement	X		X	X
New culvert installation	X		X	X
Remove culvert and replace with rolling dip or hardened crossing	X		X	

Install water bars		X	X	
Cattle guard repair, replacement or installation	X	X	X	X
Gate repair, replacement or installation	X	X	X	X
Dust abatement with water or approved chemicals	X			X
Install, repair or replace traffic control barriers	X	X	X	X
Install, repair or replace guard rails	X			X
Sign installation or replacement (traffic, safety or regulatory)	X	X	X	X
Hazard tree and fallen tree removal	X	X	X	X
Clearing debris from landslides, floods, storm deposits, etc.	X	X	X	X
Reconstruct washed out or failed roads (unless permit is required)	X	X	X	X
Minor realignments (10% or less of total route length)	X	X	X	
Barriers for permanent closures (signs, posts, gates, rocks, earthen berms) *	X	X	X	X
Barriers for temporary closures (signs, posts, gates, rocks, earthen berms) *	X	X	X	X
Barriers to deter new user created disturbance	X	X	X	X
Road obliteration for short distances (528 feet or .1 mile or less) *		X	X	X
Stockpiling construction materials and spoil at designated locations	X			X
Applying mulch and or seed to maintenance disturbances	X	X	X	X
** As directed by other specific decisions*				

This proposed action does not include the following types of actions:

1. Road realignment (major): laterally shifting the roadway more than 10% or ¼ mile of its length outside of the original construction limits.

2. Maintenance efforts that result in modifications to any State waters or wetlands.

3. Maintenance that increases the potential use levels from what was intended in the RMPs.

Transportation System Maintenance Examples:

1. A road that is maintained annually has a culvert that always gets plugged with sediment. The culvert would be replaced with an appropriately sized culvert or rolling dip.
2. A road that has not been maintained in 5 years has been covered in a small landslide. The spoil would be removed and stockpiled in a location approved by an interdisciplinary team (IDT). The road surface would be restored back to the originally constructed standards.
3. A primitive road has rills that may develop into a gully that would contribute sediment to a stream. After clearances from IDT water bars or rolling dips would be installed to divert flows from entering into a water course.
4. A trail head parking area barrier has been vandalized/removed and users are driving into a restricted area. The barriers would be replaced and signs installed/replaced.

5. An OHV trail section has been become blocked and OHVs are driving around it creating a new trail. The blocked area would be cleared, the trail surface maintained, barriers/signs placed to stop use on new trail, and the user created trail would be decommissioned.
6. A primitive road that has not been maintained for decades but has evidence of previous construction can be maintained by blading, or other maintenance activities, within the Construction Limits of the original footprint. The IDT process would identify any consequences of this action that may require additional NEPA analysis. In the case where constructed roads have evolved through lack of maintenance into two tracks, documentation with before-and-after photos would help aid in the determination of maintenance widths.

Relevant policies and plans

Resource management Plans

Land Use Plan Name: Two Rivers Resource Management Plan, Record of Decision. Date approved (ROD): June 1986. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 31, Cadastral surveys and engineering activities will continue to be conducted in support of resource management programs. The road maintenance program will continue.*

Land Use Plan Name: John Day Resource Management Plan, Record of Decision. Date approved (ROD): August 1985. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 25, Cadastral surveys and engineering activities will continue to be conducted in support of resource management programs. The road maintenance program will continue.*

Land Use Plan Name: Brothers/LaPine Resource Management Plan, Record of Decision. Date approved (ROD): July 1989. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 126, Cadastral surveys and engineering activities will continue to be conducted in support of resource management programs. The road maintenance program will continue.*

Land Use Plan Name: Baker Resource Management Plan, Record of Decision. Date approved (ROD): July 1989. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 6, Administrative Actions....These actions are in conformance with the plan.....facility maintenance....*

Land Use Plan Name: Upper Deschutes Record of Decision and Resource Management Plan. Date approved (ROD): September 2005. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 159, Operations and Maintenance Actions. Maintenance of existing and newly constructed facilities or projects will occur over time;..... Such activities could include, but are not limited to, routine maintenance of existing roads, ditches, culverts, water control structures, recreation facilities, pipelines, waterholes, fences, cattleguards, seedings, fish and wildlife structures, signs, and other similar facilities and projects.*

Wild and Scenic River Plans

Land Use Plan Name: Middle Deschutes/Lower Crooked Rivers' Wild and Scenic River Management Plan. Date approved (ROD): December 1992. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 29, approximately 9 miles of primary access routes on public and private lands within these segments will be graveled or maintained regularly. Other access routes experiencing resource degradation will be stabilized through occasional maintenance.*

Land Use Plan Name: Lower Deschutes River Wild and Scenic River Management Plan. Date approved (ROD): February 1993. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 71, Existing roads into Mecca Flat and Trout Creek will generally be maintained in their present condition with maintenance and reconstruction as needed to meet safety standards for public access. The access road from Maupin to the Deschutes Club locked gate will be upgraded to meet minimum safety standards .....The primary road from Buck Hollow to Macks Canyon will be maintained....Guard rails will be installed along narrow sections....*

Land Use Plan Name: Record of Decision (ROD) for the John Day River Management Plan, Two Rivers Resource Management Plan Amendment, John Day Resource Management Plan Amendment, and Baker Resource Management Plan Amendment. Date approved (ROD): February 2001. The proposed action is in conformance with the above plan because it is specifically provided for in the following land use plan decisions: *page 20, Public Access.....We have decided to maintain public access at existing levels, ...The BLM will; Grade, surface, or widen roads as needed,.....Improve ditches, culverts, and apply gravel to surface the South Fork Road.*

Alternatives considered but eliminated

Constructing new roads, changing the intended use of a road, removing roads from the transportation system

The purpose of the proposed action is to maintain the existing transportation system. Constructing new roads would be adding to the transportation system and would be ineffective in meeting the project purpose. Changing the intended use of a road is not in conformance with the RMPs. We would take actions to close roads that are not part of the transportation system. No actions would be taken to remove roads from the transportation system, as this would not help meet the purpose of maintaining the existing transportation system. Therefore an alternative including these types of actions and decisions was not considered in this EA.

Chapter 3, Existing environment and effects

Introduction

The project area is the BLM transportation system throughout the entire Prineville District. The current network of roads, primitive roads and trails within the project area came into existence over several decades. The ever evolving uses of public lands and the evolving types and capabilities of motorized vehicles contributed to the location of the roads and trails. People sometimes need access across public lands to reach private property. In the semi-arid environment access to water sources is important. Access to traditional use areas requires roads or trails. Roads are needed for authorized uses such as grazing management, forest management or mining claims. Many types of recreational use need access to public lands. Some of the existing roads were designed, engineered and then constructed. Others were user created with a singular use in mind. Some areas have multiple routes to reach the same location. Some of these roads and trails have been maintained, improved or abandoned. The growing population within the project area and growing recreation use of public lands has increased the use of the transportation system.

The current transportation system within the project area is determined by the existing RMPs, RMP amendments, activity plans, wilderness plans, or travel management plans. The various RMPs make allocations of uses for public lands and then identify a system or network of roads, primitive roads and trails that provides access to or through public lands for the different uses. The various activity level plans that are tiered off of the RMPs may further describe intended uses and the transportation system to support those uses. Future RMPs, activity plans or travel management plans may adjust the transportation system needed for the project area.

Table 2 displays the current Prineville BLM transportation system. The table displays the current amount in miles and types of routes along with maintenance intensity. There are currently 4300 miles of linear routes that have not been assessed or designated as a road, primitive road, or trail. For analysis purposes in this EA we have assumed that half of the not assessed routes are primitive roads and the other half are trails. The table also includes the number of recreation sites that are maintained.

Table 2: Prineville BLM Transportation System in miles:

Maintenance Intensity	Roads miles	Primitive Road miles	Trails miles	Not Assessed miles	Number of Recreation Sites
High	70	0	163	0	0
Medium	118	196	74	0	52
Low	409	20	0	0	0
None	0	2150	2150	(4300)	0
Total	597	2366	2387	(4300)	52

Prineville BLM generally maintains 300 to 350 miles of the 5349 mile transportation system and approximately 50 recreation sites annually. Approximately 20 miles of the highest use roads require

maintenance twice a year to maintain safe conditions. Grading the road surface, removing debris, repairing storm damage and maintaining traffic control signs are part of the current maintenance actions that contribute to the transportation system that help make it accessible and safe.

Access to Public Lands

Existing Environment

The type of access currently provided to and within an area (road, primitive road, or trail) and the maintenance intensity of that access are determined by the RMPs. Roads provide access for low clearance vehicles are generally maintained for regular and continuous use. There are currently 597 miles of roads within the project area. Primitive roads provide access for high clearance four-wheel drive vehicles. Primitive roads are not generally maintained or may require low intensity maintenance to protect adjacent lands and resource values. There are currently 2366 miles of primitive roads within the project area. Trails provide access for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Maintenance of trails is variable depending upon the intended use. There are currently 2387 miles of trails within the project area. There are also over 4300 miles of routes that have not been assessed and or data for these routes has not been entered into automated data bases. It is assumed that most of those are unmaintained primitive roads or trails.

Direct and Indirect effects

The No Action Alternative would result in reduced access over time. This is based on the following assumptions that without maintenance:

- Road surfaces would become rough and or wash boarded,
- Surface materials would wear away exposing large rocks creating vehicle clearance concerns,
- Storm water flows would create rills and gullies washing away the road surface and or road base,
- Native surface roads would become rutted.
- Each year 10% of routes classified as roads would deteriorate to the point that they would no longer be accessible by low clearance vehicles and therefore within ten years all of the routes classified as roads could only be accessed by high clearance vehicles.
- Each year another 5% of the transportation system would become impassable due to land slides or washouts.
- Each year another 5% of trails would become impassable due to washouts or becoming severely wash-boarded.
- The routes leading to the parking areas at trailheads, access points and campgrounds would become rough and less or not accessible to low clearance vehicles.

These assumptions are based on the maintenance history, experiences, observations and opinions of the District Engineer and road maintenance crews. As a result, some roads would no longer be available to low clearance vehicles and some other roads would become impassable and no longer available for any type of vehicle. It would also be expected (from past observation and experience) that if a road became impassable, users would create or attempt to create new unauthorized routes to access areas that they have traditionally used. New route creation without authorization, environmental clearances and design would likely affect other resources such as water quality, wildlife habitat, archeological sites, etc. Over time

the transportation system would fall into disrepair and reduced functionality. The transportation system would no longer provide for the intended uses as described in the RMPs. Access to and within the project area would be reduced. The past investments made by BLM in the transportation system would be foregone.
The Proposed Action would maintain access type and amount at the current levels as directed by the RMPs. This analysis is based on the assumption that funding would continue to be available for transportation system maintenance. The past investments in the transportation system would be retained.

Table 3 compares the miles routes and recreation sites accessible for each alternative. The reducing miles of routes accessible for the no action alternative are based on the assumption that each year another 5% of the routes would become impassable due to landslides, washouts, or road failure.

Table 3: Routes and Recreation Sites Accessible by Alternative

	Existing situation*	No Action in 1 year	No Action in 5 years	No Action in10 years	Proposed action
Routes in miles					
Roads	597	567	448	299	597
Primitive Roads	2366	2248	1775	1183	2366
Trails	2387	2268	1790	1194	2387
Totals	5350	5082	4012	2676	5349
Recreation sites	52	52	57	42	52

* These totals continue the assumption that half of the 4300 miles of not assessed routes are primitive roads and the other half are trails.

Public Safety

Existing Environment

Public safety is an important factor in setting maintenance priorities. For this discussion when we state that a road is safe we mean that a person in a vehicle could use the road for the intended uses, at the intended speeds and be safe. This assumes that a person is driving an appropriate vehicle and following posted traffic rules or following the basic rules of law. An unsafe road would have potential hazards such as large rocks in the roadway or washed out gullies that would cause users to have unexpected stops or changes of direction. Public safety sometimes becomes a concern on roads that do not receive routine maintenance. In some cases a road that becomes unsafe is temporarily closed until it is maintained and in other cases the road is signed warning the users of the hazards. This analysis is based on the assumption that when a road receives a high level of use it generally requires more maintenance to keep safety hazards reduced or eliminated. Some roads can go years without maintenance and still be safe. Sometimes roads become unsafe as a result of natural events like storms and landslides. BLM currently maintains 70 miles of roads that receive high levels of use annually to maintain safe road conditions.

Direct and Indirect effects

The No Action Alternative which does not maintain any roads would result in an increase in unsafe roads. This is based on the following assumptions that without maintenance:

- High use roads can become unsafe within six months to one year without maintenance.
- 70 miles of the transportation system are roads that receive high levels of use year round and are maintained at a high intensity to maintain safe road conditions.
- Approximately 20 miles of the roads with highest use levels require maintenance twice a year to maintain safe road conditions.
- The other 526 miles of the roads within the transportation system that are maintained at medium or low intensity, 95% provide safe road conditions.
- The 163 miles of trails that are maintained at a high intensity are used primarily by motorized off road vehicles and are provide safe trail conditions. Without maintenance the high levels of use would create severe wash boarding and users of these trails would encounter areas where the accustomed speeds would no longer be safe.
- Travel speeds within recreation sites are low and maintenance has a minimal effect on safety

These assumptions are based on the maintenance history, experiences, observations and opinions of the District Engineer, road maintenance crews, and trail maintenance crews. As a result of no maintenance, the 20 miles of high intensity roads that require maintenance twice a year would become unsafe within one year. The remaining 50 miles of the high intensity maintenance roads would be unsafe with 5 years. Of the medium and low maintenance intensity roads, about half of those would become unsafe over the next 5 years and the other half would become unsafe within 10 years.

The Proposed Action Alternative would maintain the transportation system with safety issues as one of the factors for setting maintenance priorities. Action would be taken to remove safety hazards as they are identified, resulting in the safety of the transportation system increasing over time. All of the high and medium intensity maintenance roads would remain safe as annual maintenance is performed. The low intensity roads would remain safe when safety concerns are identified and maintenance completed.

Table 4: Safe Roads and Trails by Alternative

Safe Roads in miles by maintenance intensity	Existing situation*	No Action in 1 year	No Action in 5 years	No Action in10 years	Proposed action
High	70	50	0	0	70
Medium	118	118	59	0	118
Low	409	409	205	0	409
Totals	597	577	264	0	597
Safe Trails in miles with high maintenance intensity	163	163	147	130	163

Water Quality and Aquatic Habitat

Existing Environment

At the time when some of the current transportation system was developed, limited analysis was given to the effects that it would have on water quality and aquatic habitat. Many roads were constructed up

valley bottoms and along constructed benches on hill slopes just above streams. The presence of these roads has led to numerous water quality and aquatic habitat issues throughout the district.

One of the primary water quality impacts resulting from existing roads is the delivery of sediment to the stream channel. Sediment can reduce water quality and aquatic habitat by increasing stream turbidity and smothering redds and other aquatic organisms with excess silt deposits. While sediment is produced on all roads, the delivery of the sediment to the stream is directly related to the distance between the road and the stream. Roads running parallel to a stream channel have the opportunity to discharge sediment laden runoff off the road towards the stream.

The amount of sediment that reaches the stream is a function of the distance, the slope, and the type and amount of vegetation between the road and the stream. The greater the distance between the road and the stream the more opportunity there is for the sediment to be deposited and filtered out by vegetation before the runoff reaches the water course. In addition, any vegetative buffers between the two, especially continuous ground cover and denser riparian vegetation, can act to slow the movement of runoff between the road and the stream. This then allows for suspended sediment within the runoff to be deposited on the floodplain prior to reaching the stream. However, steep hill slopes between roads and streams generate runoff with much greater velocity and make it more difficult to filter out any suspended sediment it may be carrying. In addition, this runoff can actually erode the hill side that it is being discharged on, thus creating more sediment than is generated from the road surface alone.

Roads can also be hydrologically connected to streams through stream crossings. Runoff and sediment trapped on the road surface can have direct access to the channel as the runoff reaches fords or other crossings. These roads can be effective in conveying runoff to the channel from a much greater distance than would normally be expected from overland flow. In addition, especially over native surface roads, as the runoff travels down the road surface and through wheel ruts, additional erosion and ruts occur, generating additional sediment.

Road crossings and culverts can act as a barrier to fish passage and a grade control for a stream channel. As many stream channels within the district have become degraded and have incised, road crossings often serve to form a grade control and prevent the down cutting from continuing upstream. However, this often results in the elevation of the streambed downstream of the crossing being much lower than upstream. This can form a drop that is impassable to aquatic species.

Roads constructed adjacent to a stream generally also result in the removal of riparian vegetation. This vegetation would otherwise act to shade the stream during hot times of the year. The vegetation intercepts the suns energy and thus prevents that energy from being conveyed to the water, which then increases the stream temperature. High summer in-stream temperatures are the primary pollutant of the majority of the streams on the district.

Direct and Indirect effects

The No Action alternative would result in the degradation of the road condition and drainage system, which would lead to increased sediment being delivered stream channels. This would result in increased turbidity within the streams and thus lead to decreased aquatic habitat. As the drainage system fails, the transportation system would no longer be able to disperse road related runoff in an effective manner. This

would result in greater amounts of runoff travelling down the road surface and being discharged toward the stream in a more concentrated fashion. The high volume of water would then be more effective at transporting sediment toward the stream while also generating greater amounts of hill slope erosion along the way. In addition, as weak points in the road surface form, such as wheel ruts or gullies, the degradation of that surface would greatly accelerate, generating even greater amounts of sediment.

Another impact of the failure of the transportation system's drainage network would be the inability of the roads to disperse runoff back into the water table. As more and more water becomes trapped on road surfaces and is discharged directly into stream channels, the amount of runoff that is allowed in infiltrate into the soil profile within a basin and is available to maintain low flows during the summer months becomes reduced (Pike and Scherer, 2003), depending on the density of roads within the watershed. While the lower in-stream flows generally reduce the quality of aquatic habitat within a stream system, it can also leads to increased stream temperatures. Because the depth of the stream is generally more greatly reduced than the width during times of low flows, the percentage of water that is susceptible to solar heating is increased.

In the absence of any road maintenance activities, such as brushing, areas of riparian vegetation that have been degraded in places where the road is located adjacent to a stream channel or within its floodplain would be allowed to recover. This could lead to additional stream shading, which would reduce stream temperatures, and also increased sediment filtration ability, which would decrease sediment delivery to the stream channel. However, the decrease in sediment resulting from the additional filtering of the riparian vegetation would likely not compensate for the additional sediment being produced by the deteriorating road and drainage network.

The Proposed Action would maintain the current conditions of the road network. One emphasis of the maintenance activities would be to maintain features designed to prevent sediment from entering streams. This alternative would also incorporate design features so that the potential for adversely effecting water quality and aquatic habitat during maintenance activities would be reduced. Maintenance of the road prisms and the water flow controls incorporated in the roadways are vital to minimizing the deterioration of the ability of the water controls to keep sediment from entering stream systems. Care would be required when culvert replacement or removal is conducted at all stream crossings to ensure the present grade of the channel is maintained and upstream degradation does not occur.

Cumulative effects

The cumulative effects analysis considers past, present, and reasonably foreseeable future actions that would affect the resources of concern. The analysis includes other BLM actions, other Federal actions, and non-Federal (including private) actions. The analysis of reasonably foreseeable future actions is not limited to those that are approved or funded. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends. The current conditions on the lands affected by the proposed action have resulted from a multitude of natural and human actions that have taken place over many decades. The description of the current state of the environment provided here inherently includes the effects of past actions and serves as an accurate and useful starting point for a cumulative effects analysis. The importance of "past actions" is to set the context for understanding the incremental effects of the proposed action. This

context is determined by combining the current conditions with available information on the expected effects of other present and reasonably foreseeable future actions.

Reasonably foreseeable future actions that would affect access and safety include: future travel management planning on BLM lands and adjacent Forest Service lands would continue the trend of changing large areas being open for off road travel to travel being limited to designated roads and trails. Off highway vehicle use would be limited to designated areas and designated trails, and access routes to those designated areas would receive increased use and require more maintenance. Future travel management planning would close some primitive roads that are duplicative therefore reducing road density while maintaining access. This would result in increased use and increased need for maintenance on the remaining roads and on some of the primitive roads. The current trend of population growth and increased use of public lands within the project area is expected to continue. The growing population and users of BLM transportation system would likely include people who are not accustomed to vehicle travel on primitive roads and expect higher levels of maintenance. It also is reasonable to assume that maintenance costs would continue to increase while budgets are not likely to increase resulting in less roads being maintained.

The No Action Alternative would have the greatest potential for cumulative effects within the project area. The direct and indirect effects for access, safety, water quality and aquatic habitats as described earlier combined with effects of the reasonably foreseeable actions described above would result in increased use levels of the remaining transportation system and speed up the trend of the transportation system falling into disrepair and reduced functionality. BLM's past investments in construction and maintenance would be forgone.

The Proposed Action would have less potential for cumulative effects than the No Action Alternative. As described earlier the direct and indirect effects are less for the Proposed Action. The effects of the reasonably foreseeable actions are similar for both alternatives.

Summary of effects

Table 5: Summary of key effects of issues considered in detail in this EA.

Issue	No Action	Proposed Action
Access to public lands	Reduced over time	No change
Public Safety	Reduced over time	Improved over time
Water Quality and Aquatic Habitat	Reduced over time	Improved over time

Chapter 4, Preparers and Reviewers

Name	Resources represented
Dana Cork	Co-Team Lead, Engineering, FAMS
Dan Tippy	Co-Team Lead, Contractor
Jenni Moffitt	Soil Scientist
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Mike McKay	Hydrologist
Jan Hanf	Wildlife Biologist
Sara Canham	Botanist
Teal Purrington	NEPA coordinator
Pamela Hart	Realty/Lands
Berry Phelps	Recreation, Visuals, Wilderness Character
Claudia Campbell	GIS
Carol Van Dorn	Minerals

Appendices

Appendix A, Project Design Features

The following actions are part of the proposed action alternative. While they are organized below under the main resource for which they are designed to reduce undesirable effects, some of them would reduce impacts to more than one resource.

Noxious Weeds

- Inspect and clean all vehicles, equipment, and supplies prior to moving to new maintenance locations to ensure they are free of noxious weeds.
- Inspect equipment as part of daily walk around for buildup of weed materials and remove if found.
- Inspect all sources of construction materials such as rock and gravel to ensure they are free of noxious weeds.
- Coordinate the annual maintenance operations plan with the weed coordinator so that sites can be inspected and action taken to control noxious weeds if needed prior to maintenance actions.
- Stabilize disturbances outside of the road prism with mulch or seeding to reduce the opportunity of noxious weeds becoming established.
- Locate, create and use weed-free project staging areas. Avoid or minimize all types of travel through weed infested areas or restrict travel to periods when the spread of seed or propagates is least likely.
- Pre-treat high risk sites for weed establishment and spread before implementing projects.

Water Quality and Aquatic Habitat

- Before working in a riparian management area, all heavy equipment or other machinery would be inspected for hydraulic or other leaks. Leaking or faulty equipment would not be used. Equipment with accumulations of oil, grease, or other toxic materials would be cleaned in pre-approved sites outside RMAs.
- Fuel storage and fueling of equipment would not occur within RMAs.
- Side ditches should be maintained adjacent to, and parallel with, the roadway shoulder. The ditch collects runoff from the roadway and from adjacent upslope areas. The shape and dimensions of the ditch are selected to carry adequately the anticipated runoff from a major storm without saturation of the subgrade or surfacing material.
- Where water could flow over the road, a dip or grade roll should be designed to ensure that the overtopping flow crosses the road at a point that minimizes erosion (erodible-resistant surfacing is often added), and so that flow is not diverted along the road or away from its natural flow path.
- Locate cross drains far enough above stream crossings to avoid releasing drainage water directly into stream channels. Wherever possible cross drains should be located to release water on convex slopes or other stable areas that would disperse water rather than channeling it. Surface and ditch water should be diverted and dispersed before it enters streams using lead-out ditches, settlement ponds, ditch dams, surface shaping, or other measures. Cross drains and outlets should

be armored where soils are highly erodible or provide poor traffic support during wet weather use.

- Maintain drainage ditches, water bars, drain dips, culvert placement, etc. in a matter that would disperse run-off and minimize cut and fill erosion. Maintenance of drainage ditches, water bars, etc. would be done in a manner to ensure safety for road users.
- Incorporate road dips into stream crossing design, to ensure catastrophic flood events would transport overflow back into the stream channel instead of onto the road bed.
- Limit activities of mechanized equipment to stream bank areas or temporary platforms when installing or removing structures, unless channel is dewatered.
- Use sediment control barriers immediately adjacent to the stream, between the disturbance areas and the stream as necessary to ensure no visible increase in stream turbidly occurs.
- Space drainage features used for storm-proofing and treatment projects to prevent road surface runoff from entering stream channels.
- During maintenance or repair, place woody debris from the road-crossing inlet downstream of the road crossing.
- Place drainage diversions approximately 50 feet above stream crossings so that water may be filtered through vegetative buffers before entering the stream.
- Include Pollution and Erosion Control Plans (PECP) and Spill Prevention Control and Containment Plans (SPCCP) in contracts, agreements, and project plans when activity proposed to occur within stream channel or RMAs . PECPs would include provisions for minimizing site preparation impacts, minimizing heavy equipment impacts, and site restoration. SPCCP would describe provisions to prevent or reduce impacts from potential spills (fuel, hydraulic fluid, etc.), describe the hazardous materials that would be used, including inventory, storage, handling procedures, and include a description of quick response containment supplies that would be available on site.
- All equipment used instream would be cleaned and leaks repaired prior to entering the project area. Remove external oil and grease along with dirt and mud prior to construction. Thereafter, inspect equipment daily for leaks or accumulations of grease and fix any identified problems before entering streams or areas that drain directly to streams or wetlands. During instream heavy equipment work, consider deploying an oil-absorbing floating boom downstream. Equipment used for instream or riparian work would be fueled and serviced in an established staging area outside of the riparian zone. When not in use, vehicles would be stored in the staging area.
- Instream operations must cease under high flow conditions that inundate the project area, except for efforts to avoid or minimize resource damage and for eminent safety concerns.
- Minimize time in which heavy equipment is in stream channels, riparian areas, and wetlands. Operate heavy equipment in streams only when resource specialists believes that such actions are the only reasonable alternative for implementation, or would result in less sediment in the stream channel or damage (short- or long-term) to overall aquatic and riparian ecosystem relative to alternatives.
- When removing a culvert from a first order, second order, or non-fishing bearing stream, IDT would determine if culvert removal should require dewatering or fish removal, or both. Culvert removal on fish bearing streams requires dewatering and fish removal as described under Monitoring and Other Activities.

- When dewatering is no longer required, slowly release water back into the channel. Prevent loss of surface water downstream as the construction site streambed absorbs water. Prevent a sudden increase in stream turbidity. Monitor downstream during this process to prevent stranding of aquatic organisms below the construction site.
- Space drainage features used for storm-proofing and treatment projects to prevent road surface runoff from entering stream channels.
- Retain adequate vegetation between roads and streams to filter runoff caused by roads.

Soil Erosion

- Re-vegetate disturbed areas with vegetation of similar structure and composition to pre-existing vegetation and ground cover. Conserve on site woody vegetation for rehabilitating disturbed areas (in channel structure, upland down wood, bank erosion control, etc.). Flush cut or remove entire root wad. If wood is kept on site to meet upland down wood objectives, place away from area prone to firewood use. Large woody debris resulting from clearing activities may be placed in the downstream channel to meet aquatic objectives.
- Retain vegetation on cut-slopes unless it poses a safety hazard or restricts maintenance activities.
- Plan rehabilitation of all disturbed areas in a manner that results in similar or better than pre-work conditions through activities such as: spreading of stockpiled materials, seeding, and/or planting. Planting would be completed no later than spring planting season of the year following end of disturbance. Short-term stabilization measures would be maintained until permanent erosion control measures are effective. Stabilization measures would be instigated within three days of construction completion or disturbance. Apply and monitor effectiveness of treatments until success is achieved.
- Erosion control treatments would need to be applied to all land disturbing activities in sensitive soil areas or when erosion is active. Disturbed areas may require mulching and depending on site conditions, the mulch may need to be punched, netted, or blown on with a tackifier to hold it in place. In some cases, erosion control blankets may be cost effective for use.
- Contour and mulch all disturbed areas that would not be utilized for at least 30 days. Place sediment barriers prior to construction around sites where significant levels of erosion may enter the stream directly or through road ditches. Maintain barriers throughout construction or until sites are re-vegetated. Straining or filtration mechanisms may also be employed for the removal of sediment from runoff.
- For road realignments strip and stockpile topsoil ahead of construction of new roads, as necessary to reapply soil to cut and fill slopes prior to re-vegetation.
- Haul all excess material removed by maintenance operations to approved disposal areas. Apply stabilization measures on disposal sites if necessary to assure that erosion and sedimentation do not occur.
- Do not allow culvert out-flow to be discharged onto unprotected fill slopes. Install energy dissipaters at culvert outlets or in half rounds downspouts where needed.
- Reestablish vegetation and reshape the topography in areas where vegetation has been destroyed due to historic side casting.
- Minimize water velocity, and minimize water travel time on roads, road cuts, and road fills, in ditches and in other drainage features containing coarse or fine sediment.

- Road obliteration may include removal of asphalt and gravel, installing drainage culverts, constructing road dips, subsoiling or ripping of road surfaces, outsloping, water barring, fill removal, sidecast pullback, revegetating with vegetation of similar structure and composition to pre-existing vegetation and ground cover and placement of large wood and/or boulders are included. Roadway barricading to exclude vehicular traffic is covered only if the overall road remediation project substantively addresses restoration of hydrologic function. For culvert removals on closed roads, limited cutting or removal of vegetation on the closed road-bed to access the culvert site may be required.
- Limit excavation to the essential amount needed to meet the necessary road standards. Plan for stabilization of exposed soil and for rehabilitation of other environmental damage during construction.
- Perform maintenance to conserve existing surface material, retain the original crowned or out-sloped, self-draining cross section, prevent or remove rutting berms (except those designed for slope protection) and other irregularities that retard normal surface runoff. Do not waste loose ditch or surface material over the shoulder where it can cause stream sedimentation or weaken slump-prone areas. Avoid undercutting back slopes. Do not disturb the toe of cut slopes while pulling ditches or grading roads.

Fuel Spills

- Maintain and refuel all equipment a minimum of 100 feet from water bodies, floodplains, and wetlands.
- Spill Prevention Control and Containment Plan (SPCCP) – maintenance actions would be required to have a written SPCCP, which describes measures to prevent or reduce impacts from potential spills (fuel, hydraulic fluid, etc.). The SPCCP would contain a description of the hazardous materials that would be used, including inventory, storage, handling procedures; a description of quick response containment supplies that would be available on the site (*e.g.*, a silt fence, straw bales, and an oil-absorbing, floating boom whenever surface water is present).
- Have a spill response kit on the project whenever equipment is operating. The spill kit would be sufficient to absorb 34 gallons of oil, and designed to float on the surface while absorbing oil and repelling water. The kit would meet or exceed the physical properties of "new pig products spill kit #408". Oil-absorbing, floating booms would be installed at both sites just downstream of construction activities.
- Establish staging areas (used for construction equipment storage, vehicle storage, fueling, servicing, hazardous material storage, *etc.*) beyond the 100-year floodplain in a location and manner that would preclude erosion into or contamination of the stream or floodplain.

Archeology and Paleontology

- When planned maintenance is proposed in areas where sites are known to exist in or immediately adjacent to ground disturbing activities archaeological or paleontological inventory must be conducted prior to ground disturbing activities.
- When planned maintenance is proposed in areas where no sites have been recorded but site occurrence is considered to be of high probability in or immediately adjacent to the ground

disturbing activities (e.g., at stream/river confluence, along streams/rivers, talus slopes, etc.) archaeological or paleontological inventory must be conducted prior to ground disturbing activities.

- Emergency, unplanned maintenance projects (such as major events that cause degradation or cover existing roads) that have short turn-around times to meet safety and access issues must coordinate with archaeological or paleontological specialists.
- In the event of unexpected discoveries during maintenance actions all activities must cease until consulting with archaeological or paleontological specialists.

Botanical

- Prior to implementing any projects with the potential to affect special status plant species, surveys would be conducted and documented, including any site-specific management mitigations.
- Surface-disturbing activities (i.e. staging areas) would be located outside special status plant habitat.

Wildlife /Fish

- In seasonally important habitats (winter range, nest sites, perches, roosts, etc.) major construction and maintenance work would be scheduled to avoid or minimize disturbance to wildlife.
- Reconstruct road and drainage features that: do not meet design feature or operation and maintenance standards; have been shown to be less effective for controlling sediment delivery; prevent attainment of terrestrial, aquatic, or riparian objectives; or do not protect watersheds from increased sedimentation and peak flows. Prioritize reconstruction based on current and potential damage to terrestrial, aquatic, or riparian resources; ecological value of the resources affected; and feasibility of options such as helicopter logging and road relocation out of riparian conservation areas.
- Restore natural drainage patterns and when possible promote passage of all fish species and life stages present in the area.
- Project activities that have potential to disturb bald eagle winter roosts, would be restricted within 1320 feet of the roosting area from November 1 to April 30.
- In RMAs with Columbia spotted frogs, culvert replacements would be designed to decrease stream sediment input both during and after construction activities (e.g., adequate road ditch relief, cross drains, wing wall rip-rapping).
- Establish staging areas (used for construction equipment storage, vehicle storage, fueling, servicing, hazardous material storage, etc.) beyond the 100-year floodplain in a location and manner that would preclude erosion into or contamination of the stream or floodplain and preferably outside of RMAs.
- Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (such as avoid using excavators for brushing).
- Prior to use of heavy equipment in and around RMAs, flag critical riparian vegetation areas, wetlands, and other sensitive sites to prevent ground disturbance in these areas.

Rights-Of-Ways

- Coordinate with and/or notify right-of-way holders, mining claimants, and other authorized users (e.g. grazing permittees) prior to maintenance actions that are more than routine.
- Coordinate with and/or notify persons who use the road to access residences prior to maintenance actions that are more than routine.

Visual

- All surface disturbing activities would require visual resource analysis using BLM's contrast rating methodology. Visual design considerations would be incorporated into all surface-disturbing projects regardless of size or potential impact. Projects would be designed to resolve and minimize potential impacts and meet or exceed the visual resource management class objectives.
- Roads realignments should fit the topography so that a minimum alteration of natural features would be necessary.
- Closed and obliterated road beds would be re-contoured to match the adjacent natural slope and would be seeded with vegetation of similar structure and composition to pre-existing vegetation and ground cover.

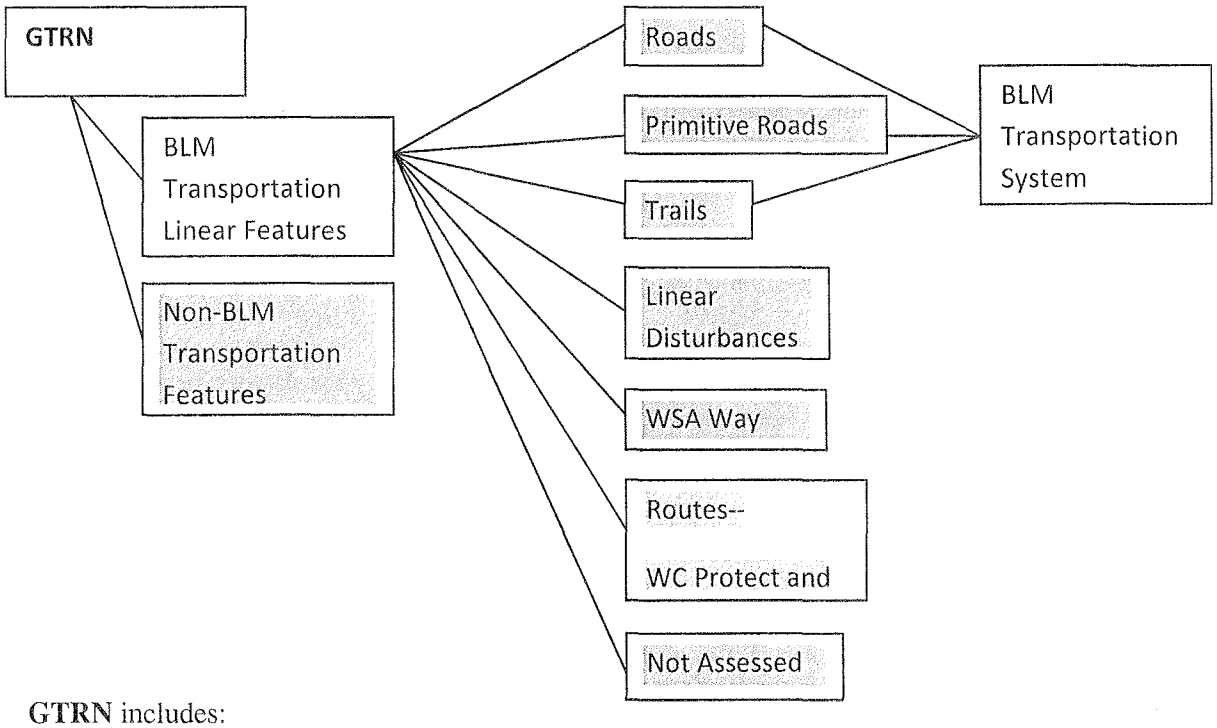
Dust

- Minimize dust impacts along roads to the extent possible.
- Closely control application of dust palliatives and surface stabilizers, equipment cleanup, and disposal of excess material to prevent contamination or damage to water resources.

Appendix B, BLM Transportation System Terminology

Ground Transportation (**GTRN**) is defined as human-made linear physical constructions (facilities) for the purpose of transportation of people, animals, and goods. The Geographic Information System (GIS) representation of GTRN includes **all** transportation features (not just BLM construction) in the realm of current transportation management.

The diagram below shows the categories and relationships of transportation features in GTRN followed by definitions and sources. The goal (of data management) is to have a complete set of choices such that for any linear transportation feature there is one and only one choice (one of the eight shaded boxes).



GTRN includes:

Non-BLM Transportation Features: GTRN features that are not under the purview of BLM including State and U.S. Highways, U.S. Forest Service and other agency roads, county roads, and private roads all of which may incidentally cross BLM lands.

BLM Transportation Linear Features: The broadest category of physical disturbance (planned and unplanned) resulting from public use of BLM land. Definition from *Roads and Trails Terminology Report,* April 2006 *Washington Office* (WO) IM-2006-173.

BLM Transportation Linear Features includes:

- Roads: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use (definition from *Roads and Trails Terminology Report).*

- Primitive Roads: A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards (definition from *Roads and Trails Terminology Report).*

- Trails: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles (definition from *Roads and Trails Terminology Report).*

- Linear Disturbances: Human-made linear features, either planned or unplanned that were identified in the route inventory for a Travel Management Plan (TMP) and not designated as road, primitive road or trail. They are therefore closed to motorized and mechanized travel.

- Wilderness Study Area (WSA) Ways: Transportation features **within** WSAs -- not "cherry-stemmed" out of and not forming the boundary of WSA. Ways were officially recognized and mapped during the 1980s Wilderness Inventory. They are defined as "A trace maintained solely by the passage of vehicles which has not been improved and/or maintained by mechanical means to insure relatively regular and continuous use." Maintenance is allowed only in accordance with the WSA Interim Management Policy (BLM Manual H-8550-1).

- Routes: Transportation features within Wilderness Inventory Units (not "cherry-stemmed" out of and not forming the boundary of a Wilderness Inventory Unit) where the Unit has been found to possess "Wilderness Characteristics." These are routes that have **not** been improved or maintained by mechanical means to insure relatively regular and continuous use" (BLM Manual H-6300-1, draft). They are kept passable solely by the passage of vehicles and no hand or power tools have been applied. A Land Use Plan (Resource Management Plan (RMP)) determines whether to protect the Wilderness Characteristics of the Wilderness Inventory Unit and the disposition of routes. Until an RMP decision is made, routes (WC Interim) can receive road maintenance if needed for safety or resource protection or to provide reasonable access to non-Federal lands and interests in land as long as we (1) clearly and consistently state our intentions to the public, and (2) wilderness characteristics are taken into consideration before doing any road work. If the RMP decision is to protect the Wilderness Characteristics of the Wilderness Inventory Unit, the disposition of the routes (WC Protect) depends on the specific provisions applied to the area via the RMP and any step-down TMP decisions. If the RMP decision was not to protect, the route is reclassified as a "Primitive Road," "Trail" or "Linear Disturbance." (Guidance provided by WO IM 2009-132, Implementation of Roads and Trails Terminology Report – Classification of Primitive Roads).

- Not Assessed: Other routes on BLM land that are not part of the Transportation System, not declared a linear disturbance, not a Way, and not a Route in a Wilderness Inventory Unit. They can be classified as a Road, Primitive Road or Trail and added to Facility Asset Management System (FAMS) even without a TMP as long as the information in FAMS is updated as necessary after a TMP is completed. There are currently many features in this category, but the goal is for this to be a small subset of BLM Transportation Linear Features. These routes can receive road maintenance if needed for safety or resource protection even if not in FAMS.

Travel Management Plans - (from the WO travel management planning IM 2008-014) Comprehensive Travel and Transportation Management (CTTM) is a comprehensive interdisciplinary approach to travel and transportation planning and management that addresses resource uses and associated access to public

lands and waters, including motorized, non-motorized, mechanical, and animal-powered modes of travel. The objectives of BLM's CTTM are to:

- a. Establish a long-term, sustainable, multi-modal transportation system of roads, primitive roads, and trails that address public and administrative access needs to and across BLM-managed lands and waters.
- b. Support the BLM's mission and land use planning goals and objectives to provide for resource management, public and administrative access, and transportation needs.
- c. Manage travel and transportation on public lands and waters in accordance with law, Executive Order, proclamation, regulation, and policy.

Districts may complete CTTM plans at the scale of an entire district or field office or sequence these plans by specific areas or OHV designations as needed to address complex or controversial management areas (see IM OR-2010-009). BLM policy states that CTTM plans should be developed within five years of completing an RMP. CTTM plans define designated motorized and non-motorized transportation networks. Appropriate activity level planning and NEPA compliance should be completed for these plans. See the CTTM WO IM 2008-014 for further guidance on travel management planning.

BLM Transportation System: Includes "Designated Routes" that are the subject and result of TMPs. Information about these routes is input and maintained in FAMS. The Transportation System includes designated Roads, Primitive Roads, and Trails. Ways and Routes are not part of BLM's transportation system and not entered into FAMS. Designation is here defined as the formal recognition of a route as a Road, Primitive Road or Trail in an implementation level plan (i.e., TMP). Not all designations made by a TMP, however, are necessarily in FAMS. Assets in FAMS have an assigned "Maintenance Intensity" (new attribute replacing "Maintenance Level") which provides guidance for appropriate "standards of care." Maintenance Intensity can change (even year to year) except where the maintenance level/intensity is set by the TMP or other decision document.

Road maintenance is dependent upon and affected by the above defined road categories within the BLM's GTRN system as well as the assigned Maintenance Intensity.

Maintenance Intensities for BLM Transportation System Assets are defined in the *Roads and Trails Terminology Report* and established by the revised 9113 BLM Roads Manual and Handbook.

Maintenance Intensities provide guidance for appropriate "standards of care" to recognized routes within the BLM. Recognized routes by definition include; Roads, Primitive Roads, and Trails. Maintenance Intensities set a standard of care: 1 Low, 3 Moderate, and 5 High.

Maintenance Intensity 1, Low - Routes where minimum (low intensity) maintenance is required to protect adjacent lands and resource values. These roads may be impassable for extended periods of time (roughly comparable to Maintenance Level 2).

Maintenance Intensity 3, Moderate - Routes requiring moderate maintenance due to low volume use. Maintenance Intensities may not provide year-round access but are intended to generally provide resources appropriate to keep the route in use for the majority of the year (roughly comparable to Maintenance Level 3).

Maintenance Intensity 5, High - Routes for high (maximum) maintenance due to year-round needs, high volume of traffic, or significant use. Also may include routes identified through management objectives

as requiring high intensities of maintenance or to be maintained open on a year-round basis (roughly comparable to Maintenance Level 5).

Maintenance Intensities:

- Are consistent with land-use planning management objectives.
- Replace the former terminology "Maintenance Level."
- Are integrated into the FAMS database.
- Need to be determined at the road segment level.
- Provide operational guidance on the appropriate intensity, frequency, and type of maintenance activities.
- Provide guidance for the minimum standards of care for the annual maintenance of a route.
- Can be updated/revised/modified within the context of current RMP language.
- Maintenance Intensity would likely be used as a means of determining funding allocation.

Background information:

BLM ROAD MAINTENANCE LEVELS - The following information on maintenance levels is for information only since it has been replaced by the previous discussion of maintenance intensities.

The five road maintenance levels are:

Level 1 – This level is assigned to roads where minimum maintenance is required to protect adjacent lands and resource values. These roads are no longer needed and are closed to traffic. The objective is to remove these roads from the transportation system.

> Minimum Standards for Level 1 – Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Grading, brushing, or slide removal is not performed unless roadbed drainage is being adversely affected, causing erosion. Closure and traffic restrictive devices are maintained.

Level 2 – This level is assigned to roads where the management objectives require the road to be opened for limited administrative traffic. Typically, these roads are passable by high clearance vehicles.

> Minimum Standards for Level 2 – Drainage structures are to be inspected within a 3-year period and maintained as needed. Grading is conducted as necessary to correct drainage problems. Brushing is conducted as needed to allow administrative access. Slides may be left in place provided they do not adversely affect drainage.

Level 3 – This level is assigned to roads where management objectives require the road to be open seasonally or year-round for commercial, recreational, or administrative access. Typically, these roads are natural or aggregate surfaced, but may include low use bituminous surfaced road. These roads have a defined cross section with drainage structures (e.g., rolling dips, culverts, or ditches). These roads may be negotiated by passenger cars traveling at prudent speeds. User comfort and convenience are not considered a high priority.

> Minimum Standards for Level 3 – Drainage structures are to be inspected at least annually and maintained as needed. Grading is conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing is conducted as needed to improve sight

distance. Slides adversely affecting drainage would receive high priority for removal, otherwise they would be removed on a scheduled basis.

Level 4 – This level is assigned to roads where management objectives require the road to be open all year (except may be closed or have limited access due to snow conditions) and which connect major administrative features (recreational sites, local road systems, administrative sites, etc.) to County, State, or Federal roads. Typically these roads are single or double lane, aggregate, or bituminous surface, with a higher volume of commercial and recreational traffic than administrative traffic.

Minimum Standards for Level 4 – The entire roadway is maintained at least annually, although a preventative maintenance program may be established. Problems are repaired as discovered.

Level 5 – This level is assigned to roads where management objectives require the road to be open all year and are the highest traffic volume roads of the transportation system. Road segments assigned this maintenance level are **double lane**, paved roads that are open year-round. These roads intersect County, State and Federal roads and are functionally classified as a collector or arterial road.

Minimum Standards for Level 5 – The entire roadway is maintained at least annually and a preventative maintenance program is established. Problems are repaired as discovered. These roads may be closed or have limited access due to snow conditions.

Appendix C, Glossary

Berms- Curb or dike constructed to control or direct surface drainage.

Catch basins - Catchment area constructed at the inlet of ditch relief culverts for the purpose of preventing sediment and debris plugging of the culvert. -

Cross ditches - This is a synonym for waterbars/drainage dips.

Cross drains - culverts installed strategically to handle springs, spring seeps or ditch runoff flowing perpendicular to the road, carrying the flow under (through) the road to the other side of the road prism. (Often called relief culverts).

Ditch—A channel installed to control and direct the flow of road surface drainage. A ditch may be located at the toe of the cut slope past the uphill shoulder of the traveled way, past both shoulders if the road is in flat terrain, or located away from the road itself.

Drainage dips – (drain dips, grade sags, rolling dips) Roll or undulation in the road's vertical alignment to facilitate surface drainage across the road in the direction of water flow.

Inslope—Traveled way surface shaping with the high point on the downhill shoulder causing surface runoff to flow towards the ditch or uphill shoulder.

Leadoff ditches, (ditch turnout, ditch outlets, tail ditch, bleeders): A formed channel that diverts ditch water away from the road, usually angled in the direction of water flow and placed at locations to empty into a vegetative filtering area.

Outsloping - Sloping the entire surface of the road toward the downhill side with a normal cross slope, applied when the road crosses a gentle sloping terrain. Outsloping is similar to superelevation or banking of a curve, but on a straight section of road and with no ditching. The outsloped road blends into the gentle slope of the terrain with no ditching or cross pipes, allowing the natural sheet flow conditions to prevail.

Road prism - The portion of a road within limits of construction. Usually from the toe of the fill slope to a point where the cut slope intersects natural ground line.

Rock basket (gabion basket): Wire baskets that hold rock and are stacked or placed to form erosion resistant structures. or used to retain adjacent earth.

Sediment filters - (silt fence barrier, filter fabric fence): A temporary sediment control measure used to intercept sediment-laden runoff from disturbed earth areas, typically made of a porous geotextile fabric and supported by wood or metal posts.

Sediment traps - Natural or constructed structures that store or restrict the free movement of sediment. Used downstream of erodible soil sites, such as cuts and fills, to keep sediment from flowing downstream and entering water bodies. Examples include sediment basins, brush barriers, silt fences, and filter strips.

Shoulder—The portion of the roadway contiguous to the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of pavement structure.

Side casting – excess material from road construction that is wasted along the fill slope of the road. This material is typically not compacted and not needed to structurally support the traveled way or shoulders.

Sidecast pullback – Removal of side casted materials.

Spot Rocking – Placing rock in localized areas of the traveled way.

Subgrade—The layers of roadbed that bring it up to the top surface, upon which subbase, base, or surface course is constructed. For roads without base course or surface course, that portion of roadbed prepared as the finished wearing surface.

Subsoiling - The process of loosening or breaking up of the surface layer of soil or road, usually to a specified depth.

Tackifier – Stabilizing emulsions used to adhere grass seed to road way side slope for revegetation purposes.

Trash racks, - Manmade structures (typically made from steel) that are placed upstream of a culvert to prevent the culvert from being plugged by debris.

Traveled way - The portion of the roadbed used for the movement of vehicles, exclusive of shoulders.

Turnout - Extra widening of the roadbed at appropriate intervals on single-lane roads for passing purposes.

Water bars, - —Combination of ditch and berm installed perpendicular or skew to road centerline to facilitate drainage of surface water, sometimes non drivable and used to close the road.

Wetted channel– the portion of the stream channel that is wet at the time of the action. During the normal instream work window period of late summer the wetted channel is below the ordinary high water level.

Appendix D, References

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Appendix E, Implementation Procedures for Road Maintenance

Each year as the District program of work (POW) and maintenance operation plan (MOP) are compiled, a list of proposed projects would be distributed to the IDT.

The IDT would provide feedback identifying which projects require on-site visits, inventories or special mitigations.

The IDT would also identify proposed maintenance projects that are beyond the scope of this EA and would require additional NEPA analysis.

Members of the IDT would follow and complete appropriate protocols, agreements, and consultation requirements as needed for the proposed projects.

When considering implementation actions in years to come, the IDT will review this EA and subsequent Decision Record to ensure the analysis remain valid, and all relevant PDFs are followed.

The District Management Team would approve the final MOP prior to implementation.

Notifications will be made to affected people and authorized users prior to implementation.

Unplanned and emergency maintenance would follow a similar process.

Finding of No Significant Impact

District Road Maintenance Environmental Assessment
NEPA Register Number DOI-BLM-OR-P000-2011-0018-EA
US Department of the Interior, Bureau of Land Management
Prineville Field Office, Oregon

Introduction

The Bureau of Land Management (BLM) has completed an Environmental Assessment (EA No. DOI-BLM-OR-P000-2011-0018-EA) that analyzes the effects of maintaining the transportation system throughout the entire Prineville District. The purpose of the project is to maintain the existing transportation system so that it provides an integrated, functional, safe, efficient transportation system for the intended uses. This includes roads, primitive roads, trails, and recreation sites (roads, access points, parking areas, trail heads). BLM would maintain 300 to 350 miles of the transportation system and approximately 50 recreation sites annually. The EA is incorporated by reference in this Finding of No Significant Impact (FONSI).

The Council on Environmental Quality (CEQ) regulations state that the significance of impacts must be determined in terms of both context and intensity (40 CFR 1508.27).

Context

The Proposed Action would occur throughout the Prineville District and would have local impacts on affected interests, lands, and resources similar to and within the scope of those described and considered in the following Resource Management Plans (RMP):
Two Rivers Resource Management Plan, Record of Decision, June 1986.
John Day Resource Management Plan, Record of Decision, August 1985.
Brothers/LaPine Resource Management Plan, Record of Decision. July 1989.
Baker Resource Management Plan, Record of Decision. July 1989.
Upper Deschutes Resource Management Plan. Record of Decision, September 2005

The actions described represent anticipated program implementation within the scope and context of the RMPs. The maintenance of up to 350 miles of the transportation system and 50 recreation sites annually would not have international, national, regional, or state-wide importance not previously considered in the NEPA analysis for these RMPs.

Intensity

We have considered the potential intensity and severity of the impacts anticipated from implementation of a Decision on this EA relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

1. **Would any of the alternatives have significant beneficial or adverse impacts (40 CFR 1508.27(b)(I)?** No.

   Rationale: The propose action would impact resources as described in the EA. Mitigations to reduce impacts to the ground were incorporated in the design of the proposed action. These project design

features are outlined in Chapter 2 Alternatives and Appendix A of the EA. None of the environmental effects discussed in detail in the EA are considered significant, nor do the effects exceed those described in the RMPs.

2. **Would any of the alternatives have significant adverse impacts on public health and safety (40 CFR 1508.27(b)(2)?** No.

   Rationale: The proposed action is designed to maintain the existing transportation system so that it provides an integrated, functional, safe, efficient transportation system for the intended uses. There are no known affects to public health or safety.

3. **Would any of the alternatives have significant adverse impacts on unique geographic characteristics (cultural or historic resources, park lands, prime and unique farmlands, wetlands, wild and scenic rivers, designated wilderness or wilderness study areas, or ecologically critical areas (ACECs, RNAs, significant caves)) (40 CFR 1508.27(b)(3)?** No.

   Rationale: All maintenance activities will be reviewed by required specialists and reports completed prior to activities being implemented. Any recommendations therein will be followed. Project design features have been incorporated in the proposed actions to mitigate any effects to resources. Any resource of concern identified to be at risk from the project activities will be protected from damage or disturbance. There are no effects on park lands, prime farm lands, wetlands, wild and scenic rivers, or ecologically critical areas.

4. **Would any of the alternatives have highly controversial effects (40 CFR 1508.27(b)(4)?** No.

   Rationale: There are no effects which are expected to be highly controversial.

5. **Would any of the alternatives have highly uncertain effects or involve unique or unknown risks (40 CFR 1508.27(b)(5)?** No.

   Rationale: There are no unique or unusual risks. The BLM has implemented similar actions in similar areas. The environmental effects are fully analyzed in the EA. There are no predicted effects on the environment that are considered to be highly uncertain or involve unique or unknown risks.

6. **Would any of the alternatives establish a precedent for future actions with significant impacts (40 CFR 1508.27(b)(6)?** No.

   Rationale: Similar maintenance projects have occurred numerous times for many years throughout BLM. There is no evidence that this action has potentially significant environmental effects. This management activity does not commit the BLM to pursuing further actions, and as such would not establish a precedent or decision for future actions with potentially significant environmental effects.

7. **Are any of the alternatives related to other actions with potentially significant cumulative impacts (40 CFR 1508.27(b)(7)?** No.

   Rationale: The actions considered in the proposed action were considered by the interdisciplinary team within the context of past, present, and reasonably foreseeable future actions. Significant cumulative effects are not predicted. An analysis of the effects of the proposed action is described in the EA.

8. **Would any of the alternatives have significant adverse impacts on scientific, cultural, or historic resources, including those listed or eligible for listing on the National Register of Historic Resources (40 CFR 1508.27(b)(8)?** No.

   Rationale: The project will not adversely affect scientific, cultural, or historic resources, including those eligible for listing in the National Register of Historic Places. An analysis of the effects of alternatives is described in the EA.

9. **Would any of the alternatives have significant adverse impacts on threatened or endangered species or their critical habitat (40 CFR 1508.27(b)(9)?** No.

   Rationale: Mitigations to reduce impacts to special status species have been incorporated into the design of the proposed action. These project design features are outlined in Appendix A of the EA. A fisheries, wildlife and botanical clearance will be completed prior to any restoration activities. Any recommendations therein will be followed. Any resource of concern identified to be at risk from the project activities will be protected from damage or disturbance.

10. **Would any of the alternatives have effects that threaten to violate Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(lO)?** No.

    Rationale: The project does not violate any known Federal, State, Local or Tribal law or requirement imposed for the protection of the environment. State, local, and tribal interests were given the opportunity to participate in the environmental analysis process.

Finding

On the basis of the information contained in the EA, the consideration of intensity factors described above, all other information available to us, it is our determination that: (1) implementation of the alternatives would not have significant environmental impacts beyond those already addressed in the RMPs; (2) the proposed action would not constitute a major federal action having a significant effect on the human environment. Therefore, an EIS or a supplement to the existing EIS is not necessary and will not be prepared.

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H.F. "Chip" Faver
Field Manager Central Oregon Resource Area

_____

Molly M. Brown
Field Manager, Deschutes Resource Area