

Appendix M - Transportation Plan

Appendix M describes how routes within the Steens Mountain Cooperative Management and Protection Area (CMPA) will be managed. The transportation plan (TP) provides details on the various components of the transportation management system. The TP identifies the current route system (See Map 2.18.2) and outlines the various route categories and road maintenance levels. Best Management Practices (BMPs) for route management and a glossary of transportation terms are also attached.

Transportation and Roads

Goal 1- Provide travel routes to and through BLM managed lands as appropriate to meet resource objectives while providing for private and public access needs.

Management Framework

A major element of a TP is the management and protection of the basic resources of water, soils, fish, wildlife, and vegetation while providing a route system that accommodates public, private, and administrative access needs. Numerous federal laws and internal regulations give the Bureau of Land Management (BLM) the authority and guidance to develop and manage transportation systems. For a list of authorities, see the Draft Washington and Eastern Oregon Transportation Management Plan (USDI 2000c). Section 112 of the Steens Act prohibits off-road motorized travel within the CMPA and also identifies exceptions to the off-road vehicle travel prohibition. Criteria for the Section 112 exceptions are included at the end of this appendix. Section 112 also calls for the development of a comprehensive TP for the CMPA. This section of the Proposed RMP/FEIS meets this legislative requirement. Routes specifically addressed by name will need no further analysis. An Environmental Assessment (EA), based on specific field inventories and need determinations of all other routes within the CMPA, will complete the comprehensive requirements and be completed by December 31, 2005. In the interim, the open roads and ways shown on Map 2.18.1 in the Proposed RMP/FEIS represent the routes historically available for motorized use and shall remain available for such use unless changed through the development of the updated TP mentioned above.

Objective 1. Manage roads and ways within the CMPA consistent with the Route Management Categories and Maintenance Levels.

Routes within this TP are either roads or ways. Ways are routes within WSAs that can be repaired in accordance with the Wilderness Study Area Interim Management Plan (WSA IMP). Ways fall under one or more of the Route Management Categories depending upon their particular purpose and need. Roads also fall under one or more Route Management Categories and their condition varies based substantially on their assigned Maintenance Level. The open roads and ways currently shown on Map 2.18.1 in the Proposed RMP/FEIS represent the current BLM recognized motorized routes within the CMPA. Management actions within this TP pertain only to the currently mapped routes. Other routes are known to exist; however, the exact location and uses of most of these routes are not currently known. Once these unmapped routes are inventoried, an EA would be conducted to determine if they should be added to the transportation system, converted to hiking trails, or closed and rehabilitated. Routes currently mapped may also be reevaluated through an EA process and closed or upgraded, if needed, to meet resource objectives. Public input to the EA(s) would be sought.

The The Steens Mountain Cooperative Management and Protection Act of 2000 (Steens Act) closed approximately 104 miles of motorized routes upon designation of the Steens Mountain Wilderness. These routes would remain closed. This TP and subsequent EAs may also prescribe other routes for closure within the CMPA as needed to meet resource objectives or protect persons and property. Examples of routes that may be closed include those with redundancy of purpose or which are causing environmental damage. Closed routes will be signed or otherwise physically obstructed as necessary to accomplish permanent closure. Some routes closed to the public may still need to be used by private landowners to access private land within the CMPA or by livestock operators to administer their grazing permits.

Route Management Categories describe the primary purposes and uses for the routes. Many routes fall under more than one management category. Most use by private landowners, grazing operators, and the public occurs on Common Use Routes and is provided under casual use; therefore a formal use authorization is not required. Maintenance levels outline the degree of maintenance to be performed, dependent on funding levels. Maintenance of routes with limited or no public access may be the responsibility of the landowner. Private landowner maintenance of routes on BLM administered land would be supervised by the BLM. Route maintenance is generally prioritized, based on safety concerns and degree of use. Inadequate funding may preclude the BLM from maintaining routes at levels assigned in this TP. Route Management Categories and Maintenance Levels are monitored and may be modified as needs and conditions change. Minimal use of traffic control signs will continue along the Steens Loop Road as needed to mitigate safety concerns. Other routes within the CMPA will not be signed.

Route Management Categories

Common Use Routes: Routes that are open to the public but may be closed, or have seasonal use restrictions during certain sensitive periods, to protect resource values such as road conditions. These include routes on BLM managed lands and private lands where public access easements have been acquired.

Cooperatively Managed Routes: Routes across private, state, BLM administered, or other agency lands that are cooperatively administered and maintained. Routes may have specified levels of public use, season of use, and type of use. Administration and maintenance may be facilitated through a cooperative agreement.

Service/Permit Use Routes: Routes used only for administration, facility service, property maintenance, or those associated with an authorized permit. Motorized public use is not allowed.

Private Property Access Routes: Routes across public land used to access private property. Motorized use allowed only for private property interests and BLM administration.

Private Routes: Routes across private lands that are not open for use by the public.

Note: Access descriptions within the above Route Management Categories may be subordinate to other rights, agreements, or privileges as provided by law, policy, or other legal instrument.

Maintenance Levels

Level 1: This level is assigned to roads where maintenance is limited to protecting 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. At a minimum, drainage and runoff patterns will be maintained as needed to protect adjacent lands. Grading, brushing, or slide removal will not be performed unless roadbed drainage is being adversely affected or is causing erosion. Closure and traffic restrictive devices will be maintained.

Level 2: This level is assigned to roads open seasonally or year round and uses may include commercial, recreation, private property access, and administration purposes. Typically, these roads are passable by high clearance vehicles and are maintained, as needed, depending on funding levels. Seasonal closures or other restrictions may be needed to meet resource objectives or because of snow levels or other weather conditions. At a minimum, drainage structures will be inspected within a three year period and maintained as needed. Grading will be conducted as necessary to correct drainage problems. Brushing will be conducted as needed and slides may be left in place provided they do not adversely affect drainage.

Level 3: This level is assigned to roads open seasonally or year round and uses may include commercial, recreation, private property access and administrative purposes. Typically, these roads are natural or have an aggregate surface, but may include bituminous surface roads. These roads have a defined cross section with drainage structures such as rolling dips, culverts or ditches that may normally be negotiated by passenger cars driving cautiously. User comfort and convenience are not considered a high priority. At a minimum, drainage structures will be inspected annually and maintained as needed. Grading will be conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing will be conducted as needed to improve sight distance. Slides adversely affecting drainage will receive high priority for removal and other slides will be removed on a scheduled basis.

Level 4: This level is assigned to roads open seasonally or year round. Uses include commercial, recreation, private property access, and administrative purposes. Typically, these roads are single or double lane and have an aggregate or bituminous surface. This maintenance level provides access for passenger cars driven at prudent speeds. At a minimum, the entire roadway will be maintained at least annually, although a preventive maintenance program may be established. Major problems will be repaired as discovered.

Level 5: This level is assigned to roads open seasonally or year round that carry the highest traffic volume of the transportation system. Uses include commercial, recreation, private property access, and administrative purposes. Typically, these roads are single or double lane and have an aggregate or bituminous surface. This maintenance level provides access for passenger cars traveling at prudent speeds. The entire roadway will be maintained at least annually and a preventive maintenance program will be established. Problems will be repaired as discovered.

Ways within WSAs are not maintained other than by the passage of vehicles, with certain exceptions. Exceptions are limited to the minimum mechanical maintenance necessary to provide access as follows: 1) for emergencies such as suppression activities associated with wildfire or search and rescue; 2) to grandfathered grazing uses and facilities as defined by the WSA IMP; 3) to sites where reclamation or stabilization is needed to protect or improve the lands' wilderness values; and 4) to private inholdings. In these exceptions, maintenance would occur using the "minimum tool concept" described in the WSA IMP. An EA is required to analyze maintenance alternatives except in the case of emergencies.

BMPs for the construction, maintenance, and general management of the transportation system are attached.

Easements across nonfederal lands, both public and administrative, will be sought as needed to meet resource objectives.

Management directions include the following:

- Keep the entire Steens Loop Road, including the routes to the overlooks, open to motorized use at Maintenance Level 5, except the Rooster Comb section, which would be upgraded to Maintenance Level 3.
- Keep the Fish Creek, Cold Springs, Grove Creek, Big Alvord Creek, Indian Creek and Three Springs routes open where bounded on both sides by wilderness.
- Consider closing a portion of the Bone Creek route, in the transportation route inventory EA, as recommended by the Steens Mountain Advisory Council (SMAC).
- Keep open all cherry stem roads and ways associated with WSAs except as shown on Maps 2.18.3 and 2.19.1 in the Proposed RMP/FEIS.
- Retain Maintenance Level 3 as currently prescribed for the Moon Hill Road system.
- Close specific routes as shown on Map 2.19.1 in the Proposed RMP/FEIS. Approximately seven miles of routes would be closed.
- Assign Maintenance Level 3 to the Kiger Wild Horse Overlook Road; the Witzel/Yriarte access road; the road to Riddle Brothers Ranch; the Virginia Valley Road to its junction with the private land in Section 9, Township 30 South, Range 35 East; the Kiger Ridge Road between Fred Otley's driveway and the junction with the private land in Section 16, Township 32 South, Range 33 East; and a portion of the Fence Creek Roads.
- Assign Maintenance Level 4 to the road into Fred Otley's ranch.
- Use the existing gate and permit system to close the Steens Loop Road to public motorized use from approximately November 15 to May 15 each year except to access the snowline on the North Steens Loop Road for motorized and nonmotorized forms of winter recreation.
- Assign Maintenance Level 2 to all remaining open roads within the CMPA unless otherwise prescribed under a Cooperative Management Agreement. Consider seasonal closures and road upgrades as needed to reduce damage to road surfaces, protect resources, or provide for public safety.
- Install a gate to seasonally close the Moon Hill Road near the Diamond Grain Camp Road from February 1 to May 15 each year to protect road surfaces and improve natural values. Install an additional gate on the Moonhill Road near the base of Moon Hill to protect higher elevation road surfaces. Closure of the Moon Hill gate would correspond with the closure of the lower gate on the North Steens Loop Road.
- Develop Cooperative Road Management Agreements or acquire voluntary easements with private land owners and other entities that provide recreation opportunities, improve natural values, or otherwise improve access.
- Allow motorized access to existing dispersed campsites unless precluded by special designation or other resource concerns.
- Allow the parking of motorized vehicles within 100 feet of centerline along many of the open routes unless precluded by special designation or other resource concerns.
- Limit motorized traffic and vehicle parking to existing disturbed areas adjacent to the Steens Loop Road and the overlook roads from Jackman Park to the Rooster Comb.
- Allow permitted motorized access along the Riddle Brothers Ranch segment of the Cold Springs Road.

BEST MANAGEMENT PRACTICES

- 1) Design roads to minimize total disturbance, to conform with topography, and to minimize disruption of natural drainage patterns.
- 2) Base road design criteria and standards on road management objectives such as traffic requirements of the proposed activity and the overall TP, economic analysis, safety requirements, resource objectives, and minimizing damage to the environment.
- 3) Locate roads on stable terrain such as ridge tops, natural benches, and flatter transitional slopes near ridges, and valley bottoms, and moderate sideslopes and away from slumps, slide prone areas, concave slopes, clay beds, and where rock layers dip parallel to the slope. Locate roads on well-drained soil types; avoid wet areas.
- 4) Construct cut and fill slopes to be approximately 3 horizontal (h):1 vertical (v) or flatter where feasible. Locate roads to minimize heights of cutbanks. Avoid high, steeply sloping cutbanks in highly fractured bedrock.
- 5) Avoid head walls, midslope locations on steep, unstable slopes, fragile soils, seeps, old landslides, sideslopes in excess of 70 percent, and areas where the geologic bedding planes or weathering surfaces are inclined with the slope. Implement extra mitigation measures when these areas cannot be avoided.
- 6) Construct roads for surface drainage by using outslopes, crowns, grade changes, drain dips, waterbars and insloping to ditches as appropriate.
- 7) Sloping the road base to the outside edge for surface drainage is normally recommended for local spurs or minor collector roads where low volume traffic and lower traffic speeds are anticipated. This is also recommended in situations where long intervals between maintenance will occur and where minimum excavation is wanted. Out-sloping is not recommended on steep slopes. Sloping the road base to the inside edge is an acceptable practice on roads with steep sideslopes and where the underlying soil formation is very rocky and not subject to appreciable erosion or failure.

- 8) Crown and ditching is recommended for arterial and collector roads where traffic volume, speed, intensity and user comfort are considerations. Recommended gradients range from 0 to 15 percent where crown and ditching may be applied, as long as adequate drainage away from the road surface and ditch lines is maintained.
- 9) Minimize excavation, when constructing roads, through the use of balanced earthwork, narrowing road widths, and end hauling where sideslopes are between 50 and 70 percent.
- 10) If possible, construct roads when soils are dry and not frozen. When soils or road surfaces become saturated to a depth of three inches, BLM-authorized activities should be limited or ceased unless otherwise approved by the authorized officer.
- 11) Consider improving inadequately surfaced roads that are to be left open to public traffic during wet weather with gravel or pavement to minimize sediment production and maximize safety.
- 12) Retain vegetation on cut slopes unless it poses a safety hazard or restricts maintenance activities. Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (i.e., avoid using excavators for brushing).
- 13) Retain adequate vegetation between roads and streams to filter runoff caused by roads.
- 14) Avoid riparian/wetland areas where feasible; locate in riparian/wetland areas only if the roads do not interfere with the attainment of resource objectives.
- 15) Minimize the number of unimproved stream crossings. When a culvert or bridge is not feasible, locate drive-through (low water crossings) on stable rock portions of the drainage channel. Harden crossings with the addition of rock and gravel if necessary. Use angular rock if available.
- 16) Locate roads and limit activities of mechanized equipment within stream channels to minimize their influence on riparian areas. When crossing a stream is necessary, design the approach and crossing perpendicular to the channel, where practicable. Locate the crossing where the channel is well-defined, unobstructed, and straight.
- 17) Avoid placing fill material in floodplain unless the material is large enough to remain in place during flood events.
- 18) Use drainage dips instead of culverts on roads where gradients would not present a safety issue. Locate drainage dips in such a way so that water would not accumulate or where outside berms prevent drainage from the roadway. Locate and design drainage dips immediately upgrade of stream crossings and provide buffer areas and catchment basins to prevent sediment from entering the stream.
- 19) Construct catchment basins, brush windrows, and culverts in a way to minimize sediment transport from road surfaces to stream channels. Install culverts in natural drainage channels in a way to conform with the natural streambed gradients with outlets that discharge onto rocky or hardened protected areas.
- 20) Design and locate water crossing structures in natural drainage channels to accommodate adequate fish passage, provide for minimum impacts to water quality, and to be capable of handling a 100-year event for runoff and floodwaters.
- 21) Use culverts that pass, at a minimum, a 50-year storm event or have a minimum diameter of 24 inches for permanent stream crossings and a minimum diameter of 18 inches for road crossdrains.
- 22) Replace undersized culverts and repair or replace damaged culverts and down spouts. Provide energy dissipators at culvert outlets or drainage dips.
- 23) Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as head walls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Culverts should be placed on solid ground to avoid road failures.
- 24) Proper sized aggregate and riprap should be used during culvert construction. Place riprap at culvert entrance to streamline water flow and reduce erosion.
- 25) Establish adapted vegetation on all cuts and fill immediately following road construction and maintenance.
- 26) Remove berms from the down slope side of roads, consistent with safety considerations.
- 27) Leave abandoned roads in a condition that provides adequate drainage without further maintenance. Close abandoned roads to traffic. Physically obstruct the road with gates, large berms, trenches, logs, stumps, or rock boulders as necessary to accomplish permanent closure.

- 28) Abandon and rehabilitate roads that are no longer needed. Leave these roads in a condition that provides adequate drainage. Remove culverts.
- 29) When plowing snow for winter use of roads, provide breaks in snow berms to allow for road drainage. Avoid plowing snow into streams. Plow snow only on existing roads.
- 30) Maintenance should be performed 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. Avoid wasting loose ditch or surface material over the shoulder where it can cause stream sedimentation or weaken slump-prone areas. Avoid undercutting back slopes.
- 31) Do not disturb the toe of cut slopes while pulling ditches or grading roads. Avoid sidecasting road material into streams.
- 32) Grade roads only as necessary. Maintain drain dips, waterbars, road crown, in-sloping and out-sloping, as appropriate, during road maintenance.
- 33) Maintain roads in special areas according to special area guidance. Generally, retain roads within existing disturbed areas and sidecast material away from the special area.
- 34) When landslides occur, save all soil and material usable for reclamation or stockpile for future reclamation needs. Avoid sidecasting of slide material where it can damage, overload, and saturate embankments, or flow into down-slope drainage courses. Reestablish vegetation as needed in areas where vegetation has been destroyed due to side casting.
- 35) Strip and stockpile topsoil ahead of construction of new roads, if feasible. Reapply soil to cut and fill slopes prior to revegetation.

GLOSSARY OF TERMS

Access Agreement - (a) Generally construed to mean a Reciprocal ROWs agreement. It is an exchange of grants between the United States and a Permittee that provides for each party using the other's roads or constructing roads over the other's lands; (b) the rights granted to the United States through the purchase of a ROWs easement.

All Terrain Vehicle (ATV) Route - A route reserved for ATVs or other mechanized transport not normally suitable for full size four wheeled vehicles.

Back Country Byway - A road segment designated as part of the National Scenic Byway System. (These roads may or may not be BLM controlled roads).

Best Management Practices (BMPs) - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls, and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Casual Use - Activities ordinarily resulting in negligible disturbance of federal lands and resources.

Construction - In general, building something new.

Cultural Resource - Any definite location of past human activity identifiable through field survey, historical documentation, or oral evidence. This includes archaeological and architectural sites or structures and places of traditional cultural or religious importance to specific groups whether or not represented by physical remains.

Decommission - An indeterminate term commonly used in the context of closing roads, obliterating roads, or the rehabilitation of roads.

Developed Recreation - Recreation that requires facilities, resulting in concentrated use of an area. An example of a developed recreation site is a campground. Facilities might include roads, parking lots, picnic tables, restrooms, drinking water, and buildings.

Dispersed Recreation - A general term referring to recreation use outside developed recreation sites. This includes activities such as scenic driving, hiking, bicycling, backpacking, hunting, fishing, snowmobiling, horseback riding, cross-country skiing, and recreation in primitive environments.

Drainage Structure - Culvert, arch pipe, pipe arch, bridge (over a water way), or similar structure.

Easement - The rights granted to the United States through the purchase of a ROW.

Easement (Exclusive) – A right acquired by the United States to use land of another for a particular purpose, such as a physical access corridor, which **may** allow the United States to set rules of use and authorize third-party use (i.e., public use).

Easement (Nonexclusive) – A right acquired by the United States to use land of another for a particular purpose, such right not granted exclusively to the United States and not excluding others from enjoying the same privilege. Use is allowed to the United States, its agents, and those authorized to do business on U.S. Government lands. The underlying land owner retains control of the land use, subject to the terms of the rights granted to the United States.

Environmental Assessment (EA) - A systematic analysis of site specific activities used to determine whether such activities have a significant effect on the quality of the human environment and whether a formal Environmental Impact Statement (EIS) is required. Also used to aid an agency's compliance with the NEPA when no Environmental Impact Statement is necessary.

Feasible -An alternative that, when considered in a comprehensive context, is functionally suitable, physically viable, sociologically and economically reasonable, and biologically sound.

Harm - An appreciable or significant adverse impact to the environment.

Long Term - In context of these guidelines, ten years and beyond.

Maintenance - In general, taking care of what already exists.

Manual on Uniform Traffic Control Devices (MUTCD) - Standards for signing of streets and highways as approved by the Federal Highway Administration as the National Standard in accordance with Title 23, U.S. Code. These standards usually apply to roads subject to the Highway Safety Act, Maintenance levels 3-5.

Monitoring - The process of collecting information to evaluate whether the objective and anticipated or assumed results of a management plan are being realized or whether implementation is proceeding as planned.

Partnership - In the context of these guidelines, partnerships are those alliances between individuals, groups and the Burns District that enable road and trail maintenance or monitoring activities beyond those required for resource management access. Partnerships: 1) Foster good stewardship within the land management plan; 2) Are not exclusive but serve publics at large; and 3) Benefit all parties involved.

Passive Closure: A transportation facility closure technique where ongoing processes continue unabated to render the facility unusable and revert the facility to a more natural state.

Permittee - (a) The cooperating party to a reciprocal agreement (some early agreements refer to such a party as Applicant); (b) A third party using a road controlled by the United States and constructed over lands belonging to the Permittee in a reciprocal agreement; and (c) A party authorized to use roads controlled by the United States under the terms of Unilateral ROWs, mining, or grazing permit, etc.

Project - Actions such as route use restrictions and ownership adjudication; and facility closure, new construction, reconstruction, maintenance, betterment, reconfiguration, or site rehabilitation.

Public Involvement - A process designed to broaden the information base upon which agency decisions are made by (1) informing the public about District activities, plans, and decisions, and (2) encouraging public understanding about and participation in the planning processes leading to final decision-making.

Reconstruction -In general, a construction activity involving an existing route such as removing a corrugated metal culvert and installing a concrete arch.

Resource Management Plan (RMP) - A land use plan prepared by BLM Districts or Resource Areas under current regulations in accordance with the FLPMA.

Riparian Area - A geographic area containing an aquatic ecosystem and adjacent upland areas that directly affect it. This includes floodplains, woodlands, and all areas within a specified distance from the normal line of high water of a stream channel or from the shoreline of a standing body of water.

Road - Constructed or evolved transportation route that is normally maintained for regular use (except during periods of closure) and that can be reasonably and prudently driven by motorized or mechanized motorized vehicles.

Road Density - A ratio of the cumulative horizontal length (miles) of all roads within a planning boundary, to the horizontal projection of the land area (measured in square miles) within the Planning Area boundary deemed most

appropriate for the road density goal being considered, such as the land within the boundaries of a critical/sensitive habitat area, watershed, or the actual land area within a map section.

Roadbed - The graded portion of the road within the top and side slopes, prepared as a foundation for the surface structure and shoulders.

Route - A linear ground transportation feature such as way or road.

Stabilization - A process to reduce risk of erosion and landslides by constructing drainage structures such as dips and waterbars. This also includes seeding, planting other vegetation, or mulching on slopes. Unstable fill embankments that exceed the required road/trail width may be partially or fully removed.

Trail Density - A ratio of the cumulative horizontal length (miles) of all trails within a planning boundary, to the horizontal projection of the land area (measured in square miles) within the Planning Area boundary deemed most appropriate for the trail density goal being considered, such as the land within the boundaries of a critical/sensitive habitat area, watershed, or the actual land area within a map section.

Transportation Management Objectives - Written route-specific prescriptions developed by an ID team that detail the parameters for construction, use, maintenance, and site rehabilitation.

Watershed - The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.

Way - A route maintained solely by the passage of vehicles which has not been improved or maintained by mechanical means to ensure relatively regular and continuous use. Ways may be repaired consistent with the exceptions identified in the Interim Management Policy for Lands Under Wilderness Review (see H-8550-1).

Steens Act Sec. 112 Exception Criteria

1. Emergencies:
 - A. Search and Rescue: Motorized travel allowed anywhere and in any manner that benefits the search and rescue efforts.
 - B. Fire Suppression:
 - a) Wilderness – as per district policy. ¹
 - b) WSAs – as per Fire Mgt. Plan. ²
 - c) Other CMPA public lands – currently no restrictions.
2. Administration:
 - A. Administration of authorized uses (grazing permits, landowner access etc.): Refer to authorizations for OHV allowances.
 - B. BLM administration: Case by case as authorized by the Field Manager.
3. Construction and maintenance of facilities or restoration projects outside Wilderness and WSAs: Case by case as authorized by the Field Manager.

¹ Preauthorizes helicopter landings and bucket work for initial attack but chainsaws, engines, etc., must be specifically approved.

² Preauthorizes all initial attack fire suppression tactics except cat work.

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