

Draft Assessment Forest Plan Revision

Infrastructure Detailed Report

Prepared by:

Mandy DeCroo, Recreation Management Specialist
David Hatfield, Oregon State University Forest Planning Specialist

Contributions by:

Dean Schlichting, Pacific Planning Service Group

for:

Malheur, Umatilla, and Wallowa-Whitman National Forests

February 6, 2024

Infrastructure	2
Introduction	2
Scale	3
Existing Information Sources.....	3
Current Management Direction.....	3
Existing Condition	3
Transportation Infrastructure	3
Recreation Infrastructure.....	6
Administrative Infrastructure	6
Key Benefits to People	7
Risks and Stressors	8
Trends and Drivers	8
Information Needs	8
Key Findings	8
Literature Cited	8

Infrastructure

Introduction

Infrastructure is the built property created to support the management and utilization of National Forest System lands. Infrastructure in the plan area includes the transportation system (such as forest roads open to public travel, maintenance levels, bridges, and air strips); recreation infrastructure (such as developed facilities, trails, resorts, and recreation residences); and administrative infrastructure (such as administrative facilities, dams, water diversions, fences, and communication towers within the plan area).

Infrastructure via roads and trails to and across the national forests has a long history in the Blue Mountains. Trails and migration routes date back to prehistoric times. American Indian migration routes are well documented through the stories of the Confederated Tribes of the Umatilla, Nez Perce, Warm Springs, and others. Many ancient routes are the basis for roads, portions of roads, or trails that are in use today. Trails within the national forests also contributed to 1800s western migration as expeditions passed through the Blue Mountains. One of the most notable routes is the original Oregon Trail.

The history of transportation and facilities development on national forests in the Blue Mountains is primarily related to extractive resource management activities such as mining and logging. Many roads were located directly adjacent to streams and rivers for ease of construction and to provide access for land use activities associated with water such as placer mining, cattle watering, water diversion, and log floating to sawmills. Lode mining necessitated the construction of roads and railroads to haul ores. Logging operations provided the necessary building materials for mining activities and often required additional roads.

Prior to the development of an extensive state highway road system, railroads provided primary access into the plan area. Railroad logging can be traced as far back as 1901, and signs of this activity remain today, as evidenced by the numerous railroad grades throughout the area. Some railroad grades were later converted to vehicle roads. Additional roads were constructed to connect communities and for fire management and administrative access to the national forests.

Once constructed, roads provided access for other uses, including viewing scenery, camping, hunting, grazing, and gathering forest products, such as berries and firewood. Many trails within the national forests evolved from game trails, early American Indian hunting trails, and livestock herding trails, or those that were constructed by early recreation users. These trails were constructed to access and connect remote features and destinations, such as remote lakes, hunting and fishing areas, and scenic viewpoints. Most national forest trails are in dispersed and backcountry recreation areas.

Forest Service administrative buildings were initially constructed to house employees in remote locations and provide administrative ranger stations for the public to contact their local forest ranger. Later campgrounds were constructed for public benefit. Utility corridors and federal and state highway systems were constructed to meet society's needs.

Scale

The geographic scale for assessing infrastructure assets in the Blue Mountains is at a forest-level scale.

Existing Information Sources

- INFRA database that holds corporate data on infrastructure.
- Spatial information in the geographic information system (GIS) data and feature class.
- Facilities Master Plans for Malheur, Umatilla, and Wallowa-Whitman National Forests.
- Travel Analysis Plans for Malheur, Umatilla, and Wallowa-Whitman National Forests.
- Travel Management Plan for the Umatilla National Forest.

Current Management Direction

The 1990 forest plans for the Malheur, Umatilla and Wallowa-Whitman National Forests provide forest wide and management area specific goals, objectives, and standards related to infrastructure.

Generally, is summarized as follows:

Transportation: Provide and manage a safe and economical road and trail system and facilities needed to accomplish the land and resource management and protection objectives of the forest

Recreation and Administrative: Provide and manage recreation and administrative facilities sufficient to serve the public and accomplish land and resource management and protection objectives of the forest.

Existing Condition

Transportation Infrastructure

The transportation system for the plan area is defined as the system of National Forest System roads, trails, and airfields located on National Forest System lands (36 CFR 212.1). The ground transportation system is made up of a network of roads and trails that provide access throughout the forests.

National Forest System roads are those roads the Forest Service has determined necessary for the protection, administration, and utilization of National Forest System land and the use and development of its resources. National Forest System roads are under the jurisdiction of the Forest Service and are located on or provide access to National Forest lands. These roads are a part of a network of an overall transportation system that is managed jointly with other public road agencies such as states, counties, and municipalities. This network, when combined, provides access to National Forest System lands.

National Forest System roads are designated, constructed, and maintained for their intended use. Identification of intended use of a road helps to define the road design and maintenance standards for each road. Roads are generally constructed and maintained wide enough (greater than 12 feet) for

typical cars and trucks. Roads are built to grades usually less than 12 percent to allow grade-ability for most highway vehicles. The Forest Service uses five maintenance levels to define the general use and type of maintenance. In general, the five maintenance levels can be described as:

- ML 1. These are roads that have been placed in storage between intermittent uses. The period of storage must exceed 1 year. Basic custodial maintenance is performed on ML 1 roads to prevent damage to adjacent resources and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level.
- ML 2. These are roads that are open for use by high clearance vehicles. ML 2 roads are not designed for passenger car traffic, user comfort, or user convenience, and warning signs and traffic control devices are generally not provided on these roads. Motorists should have no expectations of being alerted to potential hazards while driving ML 2 roads. Traffic is normally minor and usually consists of a combination of administrative, permitted, dispersed recreation, or other specialized uses.
- ML 3. These are roads that are open and maintained for travel by a prudent driver in a standard passenger car; however, user comfort and convenience are not considered priorities in maintenance of the road. ML 3 roads are typically designed for low vehicular speed and are relatively narrow with single lanes and turnouts to provide passage of cars.
- ML 4. These are roads that provide a moderate degree of user comfort and convenience when traveling at moderate speeds. These roads are generally designed as double lane with an aggregate surface; however, some ML 4 roads may be single lane. Some ML 4 roads may be paved and/or treated with dust abatement.
- ML 5. These are roads that provide a high level of user comfort and convenience. ML 5 roads are normally double lane, paved facilities; however, some may be aggregate surfaced and treated with dust abatement.

Table 1. presents the miles of National Forest System roads by operational maintenance level by Forest and the total miles on each forest.

National Forest	ML 1	ML 2	ML 3	ML 4	ML 5	Total¹
Malheur	3888	5203	327	0	0	9420
Umatilla	2176	1821	268	61	68	4396
Wallowa-Whitman	4255	3513	231	6	73	8079
Total Miles	10,320	10,538	827	67	141	21,895

All road mileages are approximate.

On the Malheur, Umatilla, and Wallowa Whitman National Forests there are 38, 26, and 50 bridges and 0, 1, and 3 air strips, respectively.

New, permanent road construction has markedly declined, and road system condition has deteriorated. Full maintenance of the transportation system has not been sustainable at the current funding level of the Forest Service. Consequently, the road maintenance budget has been prioritized for double-lane passenger vehicle roads, which are typically the most expensive and most highly traveled portions of the road system.

With the focus shifting to maintaining higher-level roads for passenger car use, the deferred maintenance backlog for the remainder of the road system continues to grow. As the condition of the road system has deteriorated, concerns for public safety and resource damage have increased.

The allocated annual road maintenance budget for national forests in the Blue Mountains provides approximately 20 percent of the required annual maintenance funds needed to adequately maintain the current open road system. The annual shortfall adds to an already substantially deferred maintenance backlog. Given the priority of maintaining passenger vehicle access roads, much of the deferred maintenance falls on level 1 (maintenance) and 2 (high clearance vehicles) roads, which represent 93 percent of the road network in the national forests of the Blue Mountains.

Many of these roads are decades old with aging infrastructure that may require complete reconstruction to meet established standards, especially when considering they have not had maintenance for years due to the increasing maintenance intervals and growing backlog issues. The continued maintenance of an extensive road system creates many challenges. Roads in disrepair create safety issues and conflicts with protection for natural resources, especially for those such as water quality, aquatic species, and functioning wetland processes. Erosion from roads is known to be one of the largest contributors for degradation to water quality as well as a source of degradation to fish habitat and spawning areas.

The need for the roads and trails within the transportation system is determined through processes outlined in the Travel Management: Designated Routes and Motor Vehicle Use, Final Rule (36 CFR Parts 212, 251, 261, and 294). Implementation of the Travel Management Rule is outlined in Forest Service Manual (FSM) 7700 -Transportation System, Chapter 7730 – Transportation System Operation and Maintenance and in Forest Service Handbook (FSH) Handbook 7709.59 Road System Operations and Maintenance Handbook.

Motorized access to the national forests is regulated by the Travel Management Rule (36 CFR 212). The first of three steps is Subpart A – Administration of the Forest Transportation System. Travel Analysis Reports (TAR) were completed in 2015 for all three Blue Mountains national forests. These reports assess the current national forest transportation system and identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of NFS lands. The report also identifies opportunities for the national forest transportation system to meet current and future management objectives, and provides information that allows integration of ecological, social, and economic concerns into future decision making.

Subpart B requires the designation of roads, trails, and areas for motor vehicle use. The Umatilla National Forest completed this step, and the Malheur and Wallowa-Whitman National Forests deferred this step until forest plan revision is completed.

The purpose of Subpart C is to provide for regulation of use by over-snow vehicles on National Forest System roads, trails and in areas on National Forest System lands. Over-snow vehicles are defined as a motor vehicle that are designed for use over snow and that run on a track or tracks and/or a ski or skis, while in use over snow. While Umatilla National Forest has completed Subpart B and has produced a current motor vehicle use map, it has yet to complete an over snow motor vehicle use map, under Subpart C. Malheur and Wallowa-Whitman National Forests are deferring travel management planning until after plan revision is complete.

Recreation Infrastructure

Recreation infrastructure, such as developed facilities, trails, resorts, and recreation residences are described in detail in the Recreation Report. Due to the recreation emphasis of the national forests, there are considerable numbers of recreational and historic facilities. Many of these are in remote locations. Some are only accessible by horseback, foot, or boat. This section presents a general summary of the types and quantity of recreation related infrastructure. Table 2 displays the recreation infrastructure by national forest.

Table 2. Infrastructure related to recreation by Forest. All road mileages are approximate.

National Forest	Developed Campgrounds	Trails (miles)	Ski Areas	Recreation Residence Tracts
Malheur	41	1276	0	0
Umatilla	38	1350	2	8
Wallowa-Whitman	54	2331	1	3

Administrative Infrastructure

Administrative infrastructure includes master plans to align changing budgets, administrative, and workforce needs. The long-term goal identified in the Facility Master Plan is to reduce the amount of facilities space to affordable levels while meeting administrative needs. The current master plan outlines which buildings will be disposed or retained for future use.

Several buildings and sites are eligible for or listed on the National Register of Historic Places. Section 106 of the National Historic Preservation Act of 1966 requires Federal agencies to consider the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. An undertaking such as removal of an eligible or potentially eligible historic building would require compliance with Section 106 of the Act.

Table 3. Administrative infrastructure (administrative sites, dams, fences, and communication towers) by Forest. Source INFRA database.

National Forest	Administrative Sites (INFRA EDW)	Dams	Fences (miles)	Communication Sites	Utility Corridors (miles)
Malheur	37	2	2475	9	67
Umatilla	36	6	918	15	52
Wallowa-Whitman	36	35	1395	9	107
Totals	109	43	4,788	33	216

Key Benefits to People

National forest infrastructure provides administrative, Tribal, and public access. Infrastructure supports the Forest Service in caring for the land and serving people. Management of the many resources found throughout the three forests helps the agency maintain healthy ecosystems and sustainable flows of goods and services to Tribal members, local communities, businesses, and those that choose to travel to and enjoy their national forests.

Infrastructure also that contribute to things such as recreation opportunities, providing and maintaining wildlife habitat, and ecosystem restoration projects. These programs also include activities to restore the national forests to improve fire resiliency near communities. Managing these wildland-urban interface areas in a condition that prevents the spread of unwanted fire into adjacent lands and communities is a key contribution of the national forest to local communities.

Infrastructure on the national forests include National Forest System roads, trails, bridges, public utilities, private infrastructure, recreation facilities, drinking water systems, dams, and administrative facilities. This infrastructure is an essential input in economic activity in the region. Recreational use of the national forests relies on accessible roads, trails, and developed sites. Households and industries rely on cellular towers, water developments, pipelines, and transmission lines to conduct their business. Like water, forest infrastructure is not a separate category in the economic contribution analysis because it is embedded in nearly all market transactions associated with forest uses. Timber cannot be removed from the forest for processing without National Forest System roads. Recreational visitors will not spend money in communities near the national forests if they cannot access preferred recreational sites. New families and businesses will not move to the communities surrounding the forest if they lack access to infrastructure essential to modern life.

The road system on the national forests contributes to connecting people and communities to the national forest and to each other. The Blue Mountains national forests' road systems support numerous recreation opportunities. Road mileage can be used as an indicator of recreation opportunities, including driving for pleasure, which is one of the more popular outdoor recreation activities on the national forests. Roads provide access to dispersed recreational opportunities such as hiking, camping, hunting, and fishing. Roads also serve as recreation sites for individuals who use off-highway vehicles and bikes on National Forest System roads.

Risks and Stressors

Funding reductions result in reductions in infrastructure quality. For example, fewer miles of road maintained or maintenance occurring every five or ten years. An indirect impact of this situation may contribute additional sediment into some streams compared to roads that are well maintained or properly placed in long-term storage. Human comfort levels are reduced due to the increased number potholes and ruts.

Trends and Drivers

Since the 1990 plans were approved, the funding to maintain existing infrastructure has decreased. The total number of miles of National Forest System roads within the Blue Mountains has decreased. The Forest Service has not paved new roads for many years and struggles to patch existing paved roads. Reduced budgets have resulted in reducing maintenance levels to lower the backlog of deferred maintenance needs. Today funds are focused on infrastructure that is used the most often. Less traveled roads and trails, campgrounds receive inconsistent maintenance. Reduced funding trends and impacts are similar for facilities and other structures.

Information Needs

Updates to infrastructure databases and GIS is a continuing need.

Key Findings

Forest infrastructure provides administrative, Tribal, and public access. Funding to maintain existing infrastructure has decreased since the 1990 plans were approved. Funding reductions result in reductions in infrastructure quality. Available funds are focused on priority infrastructure; roads, trails, buildings, etc. that are used most often. Less traveled roads and trails, campgrounds, and cabins receive inconsistent maintenance.

Literature Cited

Travel Management; Designated Routes and Areas for Motor Vehicle Use, 36 C.F.R § 212, 251, 261, 295 (2005)

Forest Service Manual (FSM) 7700 -Transportation System, Chapter 7730 – Transportation System Operation and Maintenance.

Forest Service Handbook (FSH) Handbook 7709.59 Road System Operations and Maintenance Handbook.