Surveys for Closed Roads in the Ochoco National Forest Mill Creek Vegetation Management Project Area: What Did We Learn?

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Abstract

The Great Old Broads for Wilderness (Broads) are concerned about the high density of roads on the Ochoco National Forest (Forest) particularly roads that are designated as Maintenance Level 1 (ML-1) “closed” and “decommissioned” roads but receive unauthorized vehicular use by the public. The Broads conducted road surveys in the Mill Creek Vegetation Management Project Area in the summer and fall of 2021 after surveying the Black Mountain Vegetation Management Project area in 2020. Like the Black Mountain Project area, the Mill Creek Project area will receive extensive vegetation treatments along with new construction and re-construction of temporary and Forest system roads. Roads that are depicted and evaluated as closed or decommissioned on a map but are functionally open, cause the same impacts to fish and wildlife species and their habitats as open roads. Many of the closed and some of the decommissioned roads on the Forest are not physically blocked and the public has no way of knowing the roads are closed unless they use a Motor Vehicle Use Map (MVUM) to determine whether the road is open for public use or not. We located and surveyed 139 ML-1 closed and decommissioned roads designated by Forest Service road number in the Project area from July to December 2021 to determine their status of use. Of the 139 roads we found, 72 roads that were closed, decommissioned, or user created were receiving unauthorized vehicular use, 35 roads were closed and/or decommissioned primarily due to vegetation growth of which some had physical barriers, and 13 roads were not surveyed. We found that 66% of the ML-1 closed roads (71 of 106 ML-1 roads surveyed), 5% of the decommissioned roads (1 of 20), and several user-created roads were documented in the Project area that had unauthorized vehicular use. The latter appeared to be user created roads that were not on any map and were driven by the public.

Introduction

The Forest has a high density of roads across the landscape except in designated Wilderness Areas and some special Management Areas. Most of the extensive road system has been in existence for more than 40-50 years and were generally constructed for access to timber harvest areas (cited from Black Mountain Final Environmental Impact Statement (FEIS) p. 275).

The Mill Creek Project Area encompasses 36,430 acres of which approximately 1/3 is the Mill Creek Wilderness (13,205 acres) (Mill Creek Draft Environmental Assessment). The Forest Service designates areas of the forest by a management area (MA). Much of the Mill Creek Project area is in MA-F22 (General Forest – 14,006 acres) while there are smaller MAs identified as Winter Range (5,928 acres), General Forest Winter Range (208 acres), Steins Pillar Recreation area (981 acres), Summit Trail Visual

Corridor (756 acres), Old Growth (602 acres), and Developed Recreation (Wildcat Campground – 61 acres). Management Area designation determines the type of vegetation management treatments and legally open road densities in each MA (Mill Creek Draft EA, Table 1, p. 4).

The Forest Service under the 2005 Travel Management Rule implemented a new road closure system in 2011 in the Forest. Prior to that all roads were open unless designated closed and Forest users had motorized access to anywhere on the forest that they could drive as long as they did not cause resource damage such as wildlife disturbance, damage to meadows and scablands, and the spread of weeds. Under the 2011 Travel Management Plan (TMP), Forest users are only allowed to use open roads that are designated on the MVUM maps. In addition, under the Forest Land and Resource Management Plan (LRMP) (USDA 1989), the Forest has a standard of a maximum of 3 miles of open road per square mile in General Forest MA (LRMP 4-259) and a maximum of 1 mile of open road per square mile in winter range management areas. This standard is used by forest personnel to determine whether a proposed project complies with or violates the forest standard for road densities.

Forest Service roads are assigned a Maintenance Level (ML) of 1-5 depending on the service level provided and maintenance required for the road (Mill Creek Draft EA p. 214-215). Open roads are defined as all roads that the public can legally drive and are designated ML 2-5 roads. ML 2-5 roads are open to motorized traffic and receive varying levels of maintenance depending on the service provided (FSH 7709.59). The Forest Service states that "Operational Maintenance Levels define the degree of maintenance required for a specific road and the level of service which that road provides, consistent with road management objectives and maintenance criteria (Forest Service Handbook (FSH) 7709.58, Transportation System Maintenance Handbook)." ML 1 roads are considered "closed" which means they are suitable for nonmotorized uses such as pedestrians and equestrians but closed to motorized traffic and receive minimal custodial maintenance (Mill Creek Draft EA, p. 214). Appropriate traffic management strategies are "prohibit" and "eliminate" all traffic (FSH 7709.59_63.32). It is prohibited to possess or operate a motor vehicle on ML 1 roads (36 CFR 261.15) and closed and decommissioned roads are not shown on MVUM maps.

The Mill Creek Draft EA reported pre-project roads in Table 72 (p. 215) of 73.5 miles ML-1, .24 miles of ML-1 (private), 48.37 miles of ML-2, 6.61 miles of ML-3, and 3.13 miles of ML-4. Subtracting the wilderness area, yields a road density of 3.61 miles per square mile outside the wilderness while subtracting the alleged closed roads yields a density of 1.64 miles per square mile of open road density. However, the open road density of only using ML 2-5 designated roads assumes all ML 1 "closed" roads in the project area are not driven, and that there are no additional (i.e., undesignated, temporary hauling roads, user-created routes) roads with the Project area. We know that is not true.

The following two paragraphs enumerate Forest and project specific open road densities as compared to the Project calculated open road densities.

The 2003 Ochoco Forest Roads (Roads) Analysis stated in Chapter 2 that "In most areas [on the forest] existing open road densities are higher than the identified objectives. The Trail System and Off-Highway Vehicle Management and Development EIS completed by the Forest in 1996 found open road densities ranged from 0 to > 12 mi/mi^2. Average road densities in General Forest and Winter Range designations were 4.01 mi/mi^2 and 3.14 mi/mi^2 respectfully" (USDA 2003). The 2003 Roads analysis also reported that roads were constructed in close proximity to or across streams, contributing to sediment instream, and that the current road system has increased the hydrologic network causing water to flow more quickly from most 5th field watersheds.

The Broads surveyed the Black Mountain Project area east of Big Summit Prairie in 2020 and found that numerous closed and some decommissioned roads were in fact open and driven by the public. We surveyed the Mill Creek Project area at the west end of the forest in 2021. The high density of open, closed, and decommissioned roads that are driven by motor vehicles in the Forest impact aquatic and wildlife species and their habitats in a variety of ways. Essentially these "closed" or "decommissioned" roads that are driven by motor vehicles have the same impact as an open road. For wildlife species, impacts from open roads and closed roads that are driven include loss of habitat, habitat fragmentation and reduced connectivity, direct and indirect mortality, increased stress and impaired reproduction, and alteration of habitats by increased invasive plant and animal species.

For streams and aquatic species, forest roads and associated activities (such as logging roads or off highway vehicle trails) increase the hydrologic network connecting uplands with streams, alter peak flows and contribute to increases in sediment and turbidity. Riparian areas, streams and wetlands occupy a small percentage of the landscape but are sensitive and more vulnerable to destruction, and their impairment is critical because of their scarcity and importance to riparian dependent aquatic and terrestrial species.

Similarly, wetlands serve essential functions, such as improving water quality by filtering sediments, nutrients, and contaminants from the water column (US Environmental Protection Agency 2002). Wetlands also provide essential habitat for a wide variety of plants and animals including federally threatened, endangered species, as well as sensitive species. For example, the Columbia spotted frog and redband trout are aquatic federal species of concern in the Mill Creek project area. Riparian areas and wetlands are a small percentage of forest lands but are more productive in plant and animal biomass and higher in species biodiversity than surrounding areas. When the Forest Service underestimates the road density in a project area by only including legally open roads, and discounts vehicle use of unauthorized roads, the Forest underestimates the impact to other forest resources including fish and wildlife species and their habitats, riparian areas and wetlands, and water quantity and quality in streams.

Methods

The Mill Creek Project is located toward the west end of the Ochoco Forest and northeast of the town of Prineville (Figure 1). The purpose of the 36,430-acre Project is to restore characteristic conditions in the Project area, thereby increasing resilience to insects, disease, fire, and drought (Mill Creek Draft EA p. 2). The Project will implement commercial harvest, noncommercial thinning, prescribed burning, hardwood enhancement and stream restoration, new road construction, temporary road construction, and reopen "closed" roads.

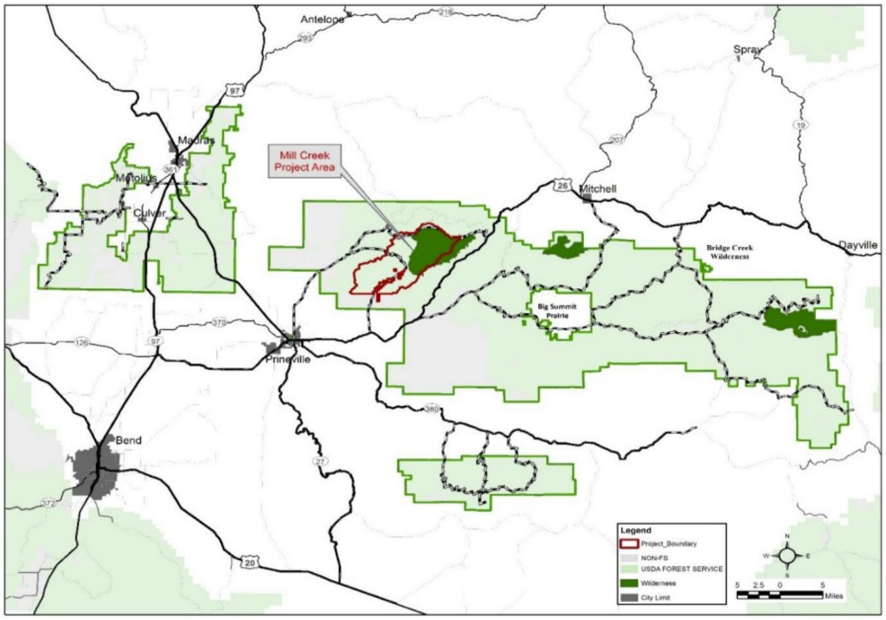

Figure 1. Mill Creek Vegetation Management Project vicinity. The project is located approximately 12 miles northeast of the City of Prineville, Oregon (Source: Mill Creek Draft EA).

The Mill Creek Draft EA and site visits with Ochoco Forest staff provided maps of open and closed roads (Figure 2), with the following map delineating "closed" roads in the thin red lines while "open" roads are black lines. However, the maps in the Draft and Final EA failed to show decommissioned roads on the administrative maps for the Lookout Mountain, or newly discovered roads not represented on any maps, nor any temporary roads and unauthorized routes and user-created trails.

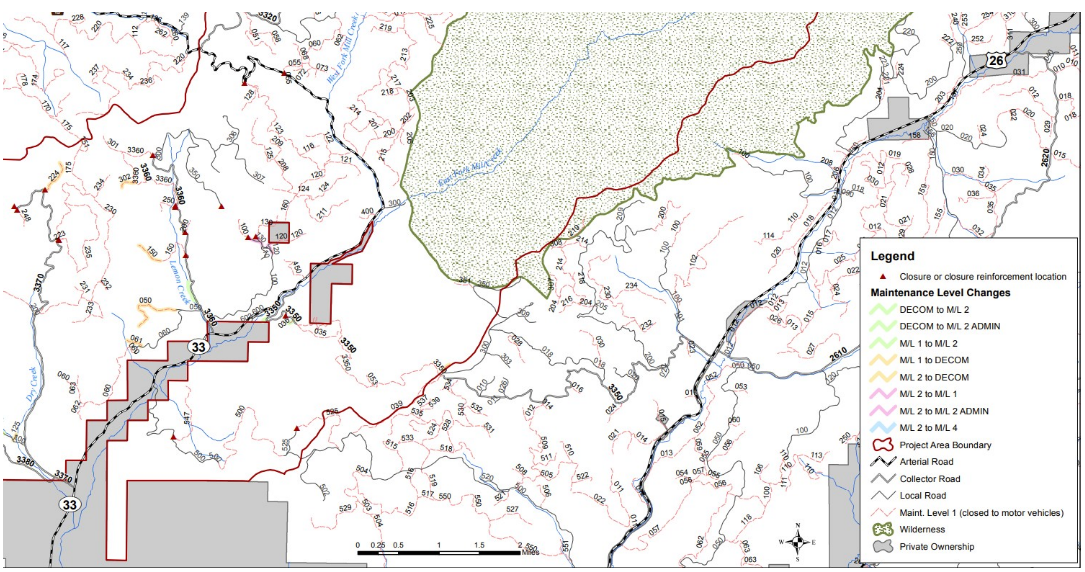

Figure 2. Portion of the Mill Creek Project area with open (black lines) and closed (thin red lines) roads. These maps failed to include roads on the administrative maps or other roads found on the ground.

Many “closed” roads are well driven by members of the public that are indifferent or unaware of legal road closures. All-terrain vehicles (ATVs) and utility terrain vehicles (UTVs) are commonly used by members of the public that disregard motor vehicle use maps (MVUMs). MVUM maps only delineate open roads. Figure 3 is an example of an area between the West Fork of Mill Creek and the Mill Creek Wilderness that is heavily used by ATVs and UTVs in disregard of road closures with access from breached road closures from the 3320-050 road.

Figure 3. The West Fork of Mill Creek bisects the google earth photo from the upper middle to lower right portion. Note the roads and trails throughout most of the picture in an area closed to motorized vehicles.

Members of the Broads surveyed ML 1 “closed” and “decommissioned” roads in the Mill Creek Project area (Figure 1) during the summer through late fall of 2021 to assess the status of closed or decommissioned roads. We evaluated each road to determine if each closed road was physically closed or had a barrier, and/or if they had been driven that year. Open roads were determined using the Forest MVUM maps #2 for the Project area, while closed and decommissioned roads were determined using maps from the Ranger District Administrative Maps available for purchase on Avenza Maps, a mapping application, and the draft map of roads shown in Figure 2. The administrative map used for the project area was the Prineville Ranger District Map (Lookout Mountain) (1983) map. Roads on the Ranger District map and not on the MUVM maps are many closed or decommissioned roads in the Project area. However, because the administrative map is decades old, the Broads found numerous roads on Forest Service lands that were unmarked with any road system number, which were well driven, and not on either MVUM or Ranger District administrative maps. Surveyors documented additional unmarked roads not found on any maps.

The Project area was broken into survey areas based on the main roads accessing the project area and each area was assigned to teams of 1 to 2 people per team. Each survey area encompassed one or more streams in the Forest including the mainstem Mill Creek, the West Fork, Evans Creek, Dry Creek, and others and tributaries. Each team was given a map of their sampling area delineating open and closed/decommissioned roads, and a list of roads to survey.

Each team documented their survey of closed and decommissioned roads determining if they were open and driven, open and driven with a breached barrier such as a log or berm, closed due to a barrier or vegetation growing in and obscuring the road, or not surveyed or found. The surveyors tabulated their observations and took photos of closed or decommissioned roads that were driven.

On the list of roads to survey, many but not all closed and decommissioned roads have a number based on the Forest Service road system with arterial, collector and spur roads having a either a 4-digit or 3-digit number. For example, the 33 (3300 road) is a main arterial road while several roads such as the 3360, 3370, 3380, and 3320 are connector roads. In addition, many roads have a 3-digit road number which can be either a connector road, or a spur road that ends in the forest.

All legally open, closed, and decommissioned roads were identified on maps so that teams could travel to the roads and determine their status. Roads were determined to have been driven by evidence of recent vehicle wheel tracks and current year's vegetation that had been flattened by vehicles. Surveyors took photos of each of the closed or decommissioned roads that had been driven in 2021 to document status of use and barriers. In many cases, the surveyors hiked closed roads that had been driven to determine how far vehicles had traveled on closed roads, and if there were any barriers further on the roadway not visible from the open road. In a few cases, the lower ends of spur roads from a main road are designated open for a certain distance and then legally closed for the remainder.

Some roads have seasonal winter road closures to protect wintering mule deer and elk that use lower elevations of the forest. The 3360, 3370, and 3380 are examples of roads closed with either gates or boulders to block use from December 1 to March 30. The 3360 road had a sign denoting the winter closure and a gate but was well driven by the public during the winter.

<u>Results</u>:

We surveyed 139 closed, decommissioned and user created roads in the Mill Creek Vegetation Project Area in summer and fall of 2021 (Table 1). Of the 139 roads, we did not survey 13 of the roads. We found 71 closed roads that were open and driven, most with no barrier, and extensively used by the public and 35 roads were closed and not driven. Of the 35 closed roads that were unused by the public, some had effective physical barriers (logs that had fallen, boulders that had been placed, or locked metal gates). Of the 71 closed but driven, many had no barrier or ineffective barriers such as small berms that had been breached. Most had no barriers to discourage public use. We did not document all of the user-created roads that we found but noted locations of some well driven user-created roads.

Table 1. Survey results of closed and decommissioned roads in the Mill Creek project area to determine if they were open and driven by the public in 2021. 66% of closed roads and 5% of decommissioned roads were open and driven by the public.

	Closed Roads		Decommissioned Roads		
Survey Results	Close d	Open but driven	Decommissioned	Decommissioned by driven	Total Roads Surveyed
Number of Roads	35	71	19	1	106
% driven by the public	67%		5%		

Many of the closed roads with barriers that had been breached had all-terrain vehicles ATV and UTV tracks. The advent of these vehicles has allowed forest users to successfully travel around or go over what few barriers that had been installed that were intended to eliminate motorized use.

The Mill Creek survey results were remarkably similar to the Black Mountain survey (2020) results for closed roads. In both cases approximately 2/3 of the closed roads were actively driven by motor vehicle drivers. These results are also similar to a survey done by the Oregon Department of Fish and Wildlife (ODFW) in 2016 in the 301,000-acre area (approximately 1/3 of the entire Ochoco Forest) of the "Summit Trail System", a proposed 137 mile Off Highway Vehicle trail system that included the Black Mountain Project area.

ODFW conducted a motorized vehicle survey on randomly sampled closed roads per the 2015 MVUM maps for 3 weeks from mid-May to early June 2016. By June 3, 2016, the last day of the survey, 60% of the closed roads had received motorized vehicle use (Jackle 2016). During the course of the survey, we found user several user-created roads and ATV and UTV trails scattered throughout the project area that were not on any map but were well used.

The following are some of the more egregious examples of roads that were driven and causing damage to natural resources.

*The 3370-230 road is well used and goes to the top of the ridge separating the Mill and McKay creek drainages and connects with the Green Mountain OHV trail. The well used "closed" road connected to the 3300-170 road on McKay Creek.

*The 3360 and 3380 roads are supposed to be closed for big game winter range and have metal gates and boulders. Those sites were visited on January 1, 2022, and found well driven motorized use and a pickup was departing the 3360 road behind the road closure gate.

*The 3360-060 road is legally open 1 mile but the gate at the end of the accessible area was constantly down on multiple site visits and accessed numerous "closed" roads and illegal OHV trails such as in Schoolhouse Creek and across several ridge tops.

*The 3330-050 has a major OHV trail that drops down to the W Fork Mill Creek and accesses numerous "closed roads" and user created OHV trails throughout the entire W Fork Mill Creek area and even more critically between the W Fork Mill Creek and the Mill Creek Wilderness

The following figures are examples of closed roads that were surveyed in 2021 and demonstrate the ineffectiveness of using simply MVUM maps or small berms that are easily breached, to manage road closures (Figures 4-7).

4. 3300-129 road, well driven but not on any administrative or Forest Service map

5. A spur road from the 33 road with no number but a sign indicating closed to motorized use. Likely 132 spur.

6. End of legal portion of 3360-060. Gate was repeatedly taken down and had unauthorized use. The road accesses many miles of closed roads and user created motorized trails.

7. 3330 road along West Fork Mill Creek with fresh ATV tracks.

Discussion

The Ochoco Forest uses historic range of variability (HRV) to describe forest conditions. Historic ranges of HRV for the Forest were developed from the Viable Ecosystem Management Guide and other historic information sources such as USGS land survey notes from the 1870's, fire history records, and the 1907 Forest Establishment Report for the Forest. Historically old forests had several major components that affected the distribution and density of tree species on the landscape including plant association groups, elevation, soil type, soil moisture and geology, seral conditions or structure, and frequency of and resilience to disturbance.

While forest resource managers use historic conditions and HRV to "restore" forest stands to attain resiliency the same attempts to restore riparian areas, streams and fish and wildlife habitats is not given the same effort. Restoration for forest health is focused on managing for tree species, size and density but does not address other aspects of restoration such as reducing and improving road systems, impacts from livestock grazing, and restoring riparian habitats and instream conditions in streams and rivers.

The umbrella of Forest Health guided by HRV is used to pursue vegetation management projects with the purpose of increasing resilience from wildfires. However, the Forest fails to significantly address high road densities that impact a variety of natural resources including water quantity and quality, fish and wildlife habitat, and fragmentation of native plant and wildlife populations. As is true for most vegetation management projects, the Mill Project is largely focused on the forest health component and less so on the fish and wildlife habitats affected by the large amount of roads on the landscape.

For the Mill Creek and Black Mountain Projects, Forest personnel only used roads designated as ML 2-5 "open" in their analyses of road density and failed to include ML 1 "closed" roads and other roads including undesignated roads, temporary hauling routes and user-created motorized trails in the Project area that are driven by the public. Forest personnel are arbitrary in their analyses and calculation of open road density. By using only ML 2-5 roads, the Forest can show compliance with the LRMP standard of less than 3 mi/mi^2 in general forest and 1 mi/mi^2 in winter range. However, it is well documented that all roads, especially those actively driven, have detrimental effects on fish and wildlife, and their habitats.

The Broads' surveys were conducted to determine the number of roads that were physically open and used on the landscape and did not evaluate road densities. However, it is clear from reviewing the project NEPA documents and maps, and administrative maps, that only roads that are considered legally open are evaluated for Forest Service management projects in terms of meeting road density standards. None of the temporary and user-created roads are addressed while typically closed roads are physically closed, but only if funding is available. Often it is considered "mitigation" and completed long after the project areas are harvested, thinned, and burned, if at all.

We support the recent Draft Decision Notice for the Mill Creek project, that states "Closure or decommissioning of about 6 miles of road; opening of 1 mile of road; and reinforcement of road closures at about 26 locations." However, we are concerned that this does not mitigate or even account for the 49 miles of new and existing temporary roads and unknown miles of user-created roads and trails. Once again, while there will be some road closures and decommissioning the large amount of temporary roads, which can often become permanently used by the public as user-created roads, will cause impacts to other natural resources that the public values.

Given that 83% of the Ochoco Forest area outside of wilderness areas are within one-half mile of an open designated road, the addition of even more roads as each vegetation management project is implemented, means long term cumulative impacts to other natural resources. The following review of road impacts to fish and wildlife species summarizes a large body of research that show how roads harm other resources including water quantity and quality, and fish and wildlife species and their habitats.

Impacts to Aquatics**:** Sediment is the greatest pollutant of forest streams, and in the absence of wildfire, forest road networks are the main annual sources of sediment in forest watersheds (Elliot et al. 2011). Numerous authors have reported the impacts of high road densities on streams and aquatic life. Overgrown and revegetated roads that are cleared and used for logging traffic increase erosion rates by 100-fold (Foltz et al. 2009). Years of compaction by vehicles effectively and permanently impacts runoff and sedimentation from lack of infiltration. Stream crossings along with roads are also a major source of sediment to streams (Furniss et al. 1991). There is no “safe” threshold road density for aquatic species because negative impacts begin with the first road segment in a watershed, and highly significant impacts begin at road densities as low as 1 mi/mi^2 (Carnefix and Frissell 2009).

Research has demonstrated increased sediment production by traffic. Roads with heavy traffic generate 4 to 5 times the sediment of roads compared to roads with light traffic (Elliot et al. 2010). One study documented that heavily used roads increase sediment production by 130 times greater than abandoned roads (Reid and Dunne 1984), while another study showed that roads with traffic deliver 2 to 30 times sediment production compared to unused roads (Luce and Black 2001).

Sediment in streams from roads causes filling of pools, enlarged channel widths and widening width-to-depth ratios (Jackson and Beschta 1984; Lisle 1982). As road density increases, pool frequency quantity and quality decline (Lee et al. 1997) which are in turn correlated with declines in native trout such as bull trout, Westslope cutthroat trout, Yellowstone cutthroat trout, and redband trout. All species exist at low population levels in highly roaded areas. Pools filled with sediment support fewer fish and fish suffer higher mortality, while elevated levels of fine sediment adversely affect salmonid embryo survival, decrease fry emergence and juvenile densities, cause loss of winter carrying capacity and increased predation (Bjornn and Reiser 1991; Chapman 1988; Everest et al. 1987; Jensen et al. 2009; Magee et al. 1996; Scrivener and Brownlee 1989; Weaver and Fraley 1993; Young et al. 1991). High sediment load reduces intragravel dissolved oxygen, decreases space for aquatic life, and limits movement of young fry (Bjornn and Reiser 1991; Chapman 1988; Everest et al. 1987; Baird et al. 2012).

Sediment also increases turbidity which reduces aquatic insects and plankton and the foraging efficiency of fish. Sediment fills interstitial spaces in the substrate, reduces habitable area in streams, and when it exceeds 20 percent of the total area on the substrate, smothers fish and frog eggs, increases mortality and reduces aquatic insect and plant production (Bjornn and Reiser 1991). A 20% embeddedness of substrates with sediment fines is a threshold well established in the literature for decline of aquatic habitat (Bjornn and Reiser 1991, Rhodes et al. 2000). While few streams have been measured for embeddedness in the Forest, both Peterson Creek (45%) and Porter Creek (22%) exceeded the 20% embeddedness indicating impairment (USDA Summit OHV FEIS 2016).

Increases in stream temperature are correlated with roads constructed along valley bottoms and next to stream channels that can remove riparian vegetation and canopy cover. Higher stream temperature impacts aquatic species by raising stream temperatures above the tolerable range, increases vulnerability to disease, reduces metabolic efficiency; shifts fish species assemblages, and inhibits upstream migration (Beschta et al. 1987; Hicks et al. 1991). Climate change with warming and drying trends will further impact streams with reduced flows, further fragmenting populations and leading to local extinctions.

Impacts to Wildlife: Roads fragment forests by dissecting large patches into smaller pieces and by converting forest interior habitat into edge habitat (Reed et al. 1996). Habitat fragmentation alters the distribution of wildlife species across the landscape and affects functions such as feeding, courtship, breeding, and migration. Fragmentation from roads and other human infrastructure has been identified as one of the greatest threats to biological diversity worldwide (Noss 1987, Wilcove 1987, Noss and Cooperrider 1994). Climate change further compounds the threats of habitat fragmentation and biodiversity loss. As animals migrate due to changing climate, landscape connectivity will be increasingly important to ensure the survival of many species (Hansen et al. 2001; Kettunen et al. 2007).

Road effects are pervasive and include consequences such as population and habitat fragmentation, accelerated rates of soil erosion, and invasion of exotic plants along roadways (Rowland et al. 2005). Reduced habitat connectivity disrupts plant and animal movement and dispersal, resulting in altered population dynamics and reduced potential for recolonization if a species is extirpated from a given habitat (Haddad et al. 2015). Disturbance from roads can create a range of physiological impacts including stress and mortality such as breaking nest-supporting vegetation, collapsed burrows, inner ear bleeding, and vehicle-animal collisions as well as altered behaviors and population distribution/dispersal patterns, which leads to declines in population size, survival, and productivity.

Elk are a “management indicator species” (MIS) for the Forest. Recent studies of elk in Montana showed that motorized routes were the strongest variable that determined elk movement, even more so than canopy cover during hunting seasons (Proffitt et al. 2012, Ranglack et. al. 2016). Significantly greater habitat protection for elk was recommended in order to maintain elk on public lands including recommendations to manage for areas that are at least 5,000-acre blocks of elk security habitat, have greater than 13% canopy cover, and are greater than 1 mile from motorized routes.

The Ochoco Forest is a mixed conifer forest located generally in canyons and draws associated with riparian areas and, in the western part of the forest, more open timbered ridge tops between forested areas. While the topography in the Ochoco Mountains is gentler compared to areas studied in Montana, it has higher road densities driven by forest users. Leaving large blocks of habitat unfragmented by roads in the Ochoco Forest is particularly important given the gentler topography, high road densities and climate change affecting our environment.

Policy and Implementation**:** As stated above, ML 1 roads are considered “closed” which means they are designated as suitable for nonmotorized uses but closed to motorized traffic and receive minimal custodial maintenance. Appropriate traffic management strategies are "prohibit" and "eliminate" all traffic (FSH 7709.59_63.32). The Forest Service road maintenance guidelines reports the following: ML 1 roads have the following attributes that include but are not limited to: motor vehicular traffic is prohibited, including administrative motor vehicle traffic, and the road entrance is physically blocked or disguised (USDA 2012).

In 1999, the ONF prepared a Final EIS and Record of Decision for the Mill Project Timber Sales (USDA Forest Service 1999). Along with several timber harvest and thinning activities, the project included 56 miles of road closures and decommissioning. However, 25 years later, many of the road closures in the 1999 NEPA planning are open, and in many cases, have been for years. The failure to implement and maintain closed roads by not physically blocking or disguising closed roads and failure to enforce road closures continues to impact and degrade fish and wildlife habitat and is a detriment to fish and wildlife populations.

The high road density from all ML roads, undesignated routes, and unauthorized trails on the landscape, fails to meet LRMP standards and causes ecological harm. There are many roads on the Forest. Unlike forest health, road densities are not evaluated in the context of HRV even though in 1870-80 there were few roads on what was eventually designated as the Ochoco Forest. Motorized roads and trails cause forest fragmentation, destroy habitats, and cause disturbance while also providing avenues for the spread of invasive plants, human-caused fire starts, trash, poaching, and increased stream peak flow events which can result in increased sediment loads and degraded stream channels. Habitat disturbance and destruction is further complicated by the impacts of livestock grazing, particularly in riparian areas. None of these things contribute to a healthy forest ecosystem.

Numerous miles of unauthorized roads and trails in the landscape, whether closed, decommissioned, or user-created, are illegal to drive. When forest users see a road without any noticeable restrictions (i.e., gates, signs, or physical barriers) many people drive these roads in some cases knowing it is illegal and in other cases ignorant of road designation. Many members of the public are unaware of Travel Management rules that limit driving to open roads, or they do not have MVUM maps with them when driving in the forest, or they do not care.

The Forest Service staff completes surveys and analyses of resources such as transportation, forest, soils, wildlife, fish and aquatic resources, botany, recreation, and cultural resources for each project. They are intended to evaluate the “affected environment” and “environmental consequences” of a proposed project. In order to adequately assess the transportation system and its impacts on other resources, it is essential that the Forest personnel physically survey all roads in the proposed Project area, including those designated as closed roads, and over time enforce compliance to deter unauthorized use. In both our study areas in the Black Mountain and Mill Creek project areas, and in a similar study conducted 4 years ago by ODFW, we found that over 60% of the roads are not physically closed and are driven by the public.

Conclusion and Recommendation

We conclude from our road surveys in the Black Mountain and Mill Creek Project areas that the majority of the roads identified as closed are in fact not physically closed and are driven. As shown in Figures 4-7, many of the ML 1 roads are open and the forest users drive them. Road densities including the closed but driven roads likely mean that the project area outside the Mill Creek Wilderness fails to meet the forest standard of 3 mi/mi^2 in General Forest and definitely fails to meet the road density standard of 1 mile/mile^2 in both winter range management areas. Failing to disclose the correct information to the public distorts information and failure to follow through with implementation of maintenance of closures leads to a lack of public trust in the Forest Service and their actions. We hope for a stronger commitment to implement road closures in the Mill Creek project area since road closure and decommissioning is often done long after vegetation treatments. We appreciate that there are new efforts in the Forest to close some roads although we are concerned that it may be based on grant funding. We support this work. It must be done as soon as possible.

The 2011 Travel Management Plan and subsequent MUVM are now in the 13th year of implementation. The Forest must initiate efforts to meet its obligation to manage fish and wildlife populations and their habitats per LRMP standards by effectively managing and enforcing the motor vehicle policy outlined in the TMP and MUVM.

The Broads will continue to monitor ongoing and future Forest projects to determine compliance with LRMP standards for road densities. It is hoped our monitoring efforts will aid the Forest in project planning and implementation and result in many more effective road closures. We are sharing the results of this report to aid in the closure of many of the closed and decommissioned roads that are currently driven by the public.

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