Darren Cross, District Ranger
Willamette National Forest - McKenzie Bridge Ranger District
57600 McKenzie HWY,
McKenzie Bridge, OR 97413

September 14, 2018

**Re: Flat Country Project**

Dear Mr. Cross,

WildEarth Guardians respectfully submits these comments to the U.S. Forest Service in response to the agency's Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the proposed 74,063 acre Flat Country Project. The NOI states that the project purpose is: "to provide a sustainable supply of timber products, actively manage stands to improve stand conditions (density, diversity, and structure), increase vegetative habitat complexity and hardwood composition along streams, and sustainably manage the network of road systems in the project area" (Department of Agriculture, Forest Service, Willamette National Forest, Flat Country Project notice of intent to prepare an environmental impact statement, August 2018). The project is located eight miles east of McKenzie Bridge and extends from Scott Mountain to the upper reaches of the McKenzie River. Please add our name and organization to the contact list to receive any future public notices regarding this project and please use standard mail (not certified) if sending items via the Postal Service.

We are encouraged to see the Willamette National Forest recognize that sustainably managing the road network is one of the purposes of this project and pleased to see some activities identified that could more the forest further towards achieving that objective namely:

- decommissioning 11 miles of road
- maintaining and/or reconstructing 146 miles of road (including replacing nearly 200 culverts)

Additional project activities listed in the NOI include:

- forest management treatments across approximately 5,001 acres (4,039 acres of forest thinning including 767 acres of riparian reserve thinning) and 962 acres of regenerating harvests
- temporary road construction (16 miles)
- creation of fuel breaks along 57 miles of road (totaling 2597 acres)
- meadow enhancements (365 acres).

We know others have expertise in the proposed logging components of this project so we are particularly interested in the components that address water quality, aquatic habitat, improve watersheds and ensures forest resiliency in a changing climate. An overly large, costly and

deteriorating road system is a key contributing factor to many of these problems. We also know that many people, like us and our members, use roads to access recreational areas. Reducing the road system, reducing impacts from the road system and retaining access are not mutually exclusive goals. We believe it is possible to improve watershed conditions while also improving access, but it takes thoughtful planning, clear communication and true commitment to achieve these results on the ground.

As you embark on the next step – preparing a detailed draft Environmental Impact Statement (DEIS) – we wish to call attention to a few items that we expect to see in the analysis.

1. **As part of the analysis of the Flat Country Project, the Willamette National Forest must consider the Road Investment Strategy and identify the Minimum Road System.**

We are encouraged to see the Willamette National Forest express a desire to sustainably manage the road network in the project area (and across the forest). An excessively large road-system is a financial liability for an agency that continues to see its budget reduced by Congress. This is why it's important to focus limited maintenance dollars towards roads that people use for recreational access and decommission roads that are no longer needed and causing harm to natural resources. We urge the project team to consider what is really needed as the minimum road system to:

- "meet resource and other management objectives adopted in the relevant land and resource management plan";
- "meet applicable statutory and regulatory requirements";
- "reflect long-term funding expectations"; and
- "ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance." 36 C.F.R. §212.5(b)(1).

With a project-level analysis leading to the identification of the minimum road system, the Willamette National Forest would move forward in their efforts to comply with the Roads Rule. The Roads Rule created two important obligations for the agency. One obligation is to complete a Travel Analysis Report and identify unneeded roads to prioritize for decommissioning or to be considered for other uses. 36 C.F.R. § 212.5(b)(2). The Willamette National Forest completed this obligation in 2015 with their Roads Investment Strategy. Another obligation is to identify the minimum road system needed for safe and efficient travel and for the protection, management, and use of National Forest system lands. *Id.* § 212.5(b)(1). This project could fulfill this second obligation for this project area and build off the recommendations of the Willamette's Road Investment Strategy. This would be consistent with directive memoranda from the Forest Service's Washington Office[1] and Region 6 guidance directing forests to identify the minimum road system for precisely this type of project.[2]

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[1] *See, e.g.*, Memorandum from Leslie Weldon to Regional Foresters *et al.* on Travel Management, Implementation of 36 CFR, Part 212, Subpart A (Mar. 29, 2012) ("The next step in identification of the [minimum road system] is to use the travel analysis report to develop proposed actions *to identify* the [minimum road system].")
[2] Pacific Northwest Region Memorandum, *Monitoring Travel Management NEPA Decisions for the Minimum Road System* (Sept. 6, 2016).

We expect that the project team will use the Road Investment Strategy along with updated location-specific information to identify the minimum road system and outline implementation actions to achieve these obligations.

**2. Identify additional unneeded roads for decommissioning or other uses.**

The 2015 Willamette National Forest Road Investment Strategy (RIS, 2015) stated that there are about 6,550 miles of road throughout the Willamette National Forest (RIS, 2015, p. 3). That's more then enough miles to drive from Salem, OR to New York, NY and back again. Yet, on average, only $1.48M is allocated to maintain the roads in this forest – only allowing for 20-25% of the roads to receive very minimal maintenance on an annual basis (RIS, 2015, p. 6). This does not even begin to address the over $90M maintenance need that keeps getting deferred each year – increasing costs and fiscal liabilities. When projects are pursued in the forest, it is imperative that a range of options be analyzed to address the overwhelming costs of an aging road system. Does a reduction of 11 miles of roads reduce the overall financial burden in this forest? Are there opportunities that were missed and could do more to achieve goals from the Road Investment Strategy? Could there be road-trail conversions that make sense from a recreation use/economic standpoint?

The impacts from roads to water, fish, wildlife, and ecosystems are well documented in scientific literature. The following is just a small list of examples:

- Increased sedimentation in stream beds has been linked to decreased fry emergence, decreased juvenile densities, loss of winter carrying capacity, and increased predation of fishes, and reductions in macro-invertebrate populations that are a food source to many fish species (Rhodes et al. 1994, Joslin and Youmans 1999, Gucinski et al. 2000, Endicott 2008).
- Roads can act as barriers to [fish] migration (Gucinski et al. 2000). Culverts in particular often interfere with sediment transport and channel processes such that the road/stream crossing becomes a barrier for fish and aquatic species movement up and down stream.
- Where both stream and road densities are high, the incidence of connections between roads and streams can also be expected to be high, resulting in more common and pronounced effects of roads on streams (Gucinski et al. 2000).
- Roads and trails impact wildlife through a number of mechanisms including: direct mortality (poaching, hunting/trapping) changes in movement and habitat use patterns (disturbance/avoidance), as well as indirect impacts including alteration of the adjacent habitat and interference with predatory/prey relationships (Wisdom et al. 2000, Trombulak and Frissell 2000).
- Forman and Hersperger (1996) found that in order to maintain a naturally functioning landscape with sustained populations of large mammals (such as elk), road density must be below 0.6 km/km$^2$ (1.0 mi/mi$^2$).

In order to eliminate or reduce the impacts to fish and wildlife, the Forest Service needs to take adequate steps related to its road system that truly do result in a measurable change.

Based on current natural resource conditions, assessed risks from the existing road network, road densities across the landscape, the agency's limited resources, and long-term funding expectations, additional road decommissioning is warranted. The Forest Service should

prioritize road decommissioning to enhance landscape connectivity and ecological integrity based on benefit to species and habitats, addressing impaired or at-risk watersheds, and achieving road density standards.

The NOI for this project area identified one of the purposes as "sustainably manage the network of road systems in the project area". The road-related actions include:

- decommissioning 11 miles of road
- maintaining and/or reconstructing 146 miles of road (including replacing nearly 200 culverts)
- constructing 16 miles of temporary roads
- creating fuel breaks along 57 miles of road (totaling 2597 acres)

We understand that there is not much information available in a NOI, but in the DEIS, we will expect to see much more detailed information on how these particular actions will meet the stated purpose of the project. What is the current condition of the watershed, aquatic health, terrestrial health and what will be the future condition, based on the proposed actions? More road actions, such as decommissioning, should be taken, if the project goal of a sustainably managed road system are not being met.

Decommissioning treatments have been analyzed and proven to be more effective than closing treatments. The USFS Rocky Mountain Research Station has monitored road decommissioning and road storage projects since 2009 across sites in the west. For example, in the Skokomish watershed (Olympic National Forest) measurements were taken before/after road treatments and the improvements were significant:

- 70% reduction in road/stream connectivity
- 81% reduction in sediment delivery to streams (from 27.1 tons/year to 5.2 tons/year)
- completely eliminated risk of stream crossings becoming plugged
- 98% reduction in drain point problems[3]

Other studies also show significant improvements with road decommissioning:

- **hydrologic recovery is speedier.** Lloyd et. al. (2013)[4] discovered that when a road is recountoured and the surface is adequately treated, rainwater infiltrates quicker than when a road is simply abandoned. (Above ground recovery is about the same but below ground is very different.) Kolka & Smidt (2004)[5] also discovered that there is less erosion/runoff on treated roads.
- **reduced sediment delivery to streams.** Nelson et. al. (2012)[6] compared sediment delivery rates on decommissioned roads and stormproofed roads. After storms, the decommissioned roads had 80% less sediment delivery while stormproofed roads had 67% less sediment delivery.

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[3] Legacy Roads and Trails Monitoring Project - Road decommissioning in Skokomish River watershed, Olympic National Forest. USFS Rocky Mountain Research Station and USFS Pacific NW Region. September 21, 2009.
[4] Influence of road reclamation techniques on forest ecosystem recovery. Lloyd, Rebecca A., Kathleen A. Lohse and TPA Ferre. Frontiers in Ecology and the Environment. March 2013.
[5] Kolka, R., and M. Smidt. 2004. Effects of forest road amelioration techniques on soil bulk density, surface runoff, sediment transport, soil moisture and seedling growth. Forest Ecology and Management 202: 313–323.
[6] Nelson, N., T. Black, C. Luce, and R. Cissel. 2012. Legacy Roads and Trails Monitoring Project Update. US Forest Service, Rocky Mountain Research Station, Boise, ID. 5 p.

- **results in higher watershed condition scores.** An Aquatic Conservation Strategy analysis completed in 2006 showed that the watersheds that had condition scores that increased the most were the ones that had the most extensive road decommissioning.
- **increased wildlife benefit**. Extensive studies show that wildlife (particularly elk, bear, lynx) avoid roads. Switalski et. al. (2011)[7] published a study showing that black bears are going to areas where roads were decommissioned in significantly higher numbers than areas where roads were simply closed (with gates or barriers).

Given these significant benefits from road decommissioning, the stated purpose of this project and the economic liability of an overly large road system, we ask that additional decommissioning treatments be considered in this project area.

**3. We expect the DEIS to describe how aquatic risks will be reduced with proposed actions associated with the project.**

The 2015 RIS analyzed risks to local fisheries and area hydrology from the road system across the entire forest. A metric was developed to determine the level of risk from chronic and acute sources. From this analysis, 537 miles of road posed the highest risks to aquatics (8% of the Willamette's road system) and an additional 3,765 miles (57%) posed a medium to medium-high risk to aquatic resources (RIS, 2015, p. 19).

This project proposes to do some road decommissioning as well as heavy maintenance work on over 146 miles of road, including replacing culverts. We assume this work is being proposed to not only fix roads to support the haul trucks for timber activities, but also to reduce impacts from roads to rivers, streams, and aquatic species. If this assumption is valid, then in the DEIS, we will look to see how the entire suite of proposed road activities will reduce the specific aquatic risks identified in your RIS.

The Willamette National Forest staff should consider using the GRAIP-lite tools developed by the Rocky Mountain Research Station as a way to compare different road activities for the alternatives analyzed. This tool has some limitations, but can provide additional information to understand where more intensive treatments might yield greater benefits to aquatics (in terms of sediment inputs). It can also be used as an effective way to communicate with stakeholders why some roads may have little impact and some have much greater impact.

**4. The Forest should not construct temporary roads. If avoidance is impossible, a minimal amount of roads should be used and the roads should be immediately reclaimed after use.**

We encourage the Forest to take a hard look at the proposed temporary roads (16 miles) in order to be certain that they are needed. Though we understand that USFS policy states that road beds be restored to natural condition after the project, there is still an impact when temporary roads are developed. In addition to their hydrologic impact, roads fragment habitat, disturb wildife, support more noxious weeds and increase fire danger. Additionally, if

[7] Switalski, T.A. and C.R. Nelson. 2011. Efficacy of road removal for restoring wildlife habitat: black bear in the Northern Rocky Mountains, USA. Biological Conservation 144: 2666-2673.

they are not properly rehabilitated post-project, they can invite illegal incursions and more damage to natural resources. It is hard to comprehend that more miles of road will be "temporarily" added then roads decommissioned (16 v. 11). This does not fit the "sustainable road system" framework. We ask that the Willamette National Forest reconsider this need. If avoidance is impossible, then we expect to see how the Forest will ensure that these segments are restored as soon as the project activities are completed. In addition, we ask that the segments are monitored and enforcement actions taken to ensure proper closure.

5. **The Willamette National Forest should take this opportunity to do a robust analysis, use best available science, and fully address the issues in this area.**

The Forest Service has limited capacity to complete a DEIS or an EA multiple times in a watershed, thus we ask that the agency really take a hard look at current conditions, identify future desired conditions, and identify a suite of road-related actions that truly will achieve those goals. Several different alternatives could be developed – including a watershed health alternative – that takes advantage of this process to understand and address the needs in this area. Using best available science and considering future changes (such as those being experienced with climate change scenarios impacting hydrologic regimes) can help the forest achieve its goals.

Lastly, we also offer the following suggestions:

- Avoid harvesting in riparian reserves where soils would be disturbed - increasing the likelihood of sediment inputs to streams. Erosion, compaction, and other alterations in forest geomorphology and hydrology associated with activities in riparian reserves seriously impair water quality.
- Avoid constructing or reconstructing temporary roads, which can serve as conduits for sediment transport until they are decommissioned, which can sometimes be years later.
- Clearly explain road terminology ("reconstructing"?) and the activities associated with those terms. What is reconstructing? How many miles fall in the "maintenance" category and how many in "reconstruction"? What is the objective of the various road activities? Do the road maintenance and reconstruction activities minimize adverse environmental impacts?
- Use GRAIP-lite to determine which road segments are the greatest contributors of sediment to streams. With the roads that are essential and must be kept on the system, specific Best Management Practices can then be implemented with the goal of protecting water quality and aquatic species and also reduce sediment loads to the streams. Roads that are not needed should be decommissioned in a manner that improves watershed condition. Are the aquatic risks identified with these project roads in the Willamette's Road Investment Strategy addressed with these road-related actions? If so, how?
- Identify problem culverts that either serve as impediments to aquatic organism passage or may fail during winter storms. Reducing risk of culvert failure also reduces risk of excess sediment inputs and retains access. It appears that 200 culverts may be replaced but it would helpful to know if replacement is for driveability, stormproofing or for improvements to aquatic systems.
- Explain how logging 2597 acres along 57 miles of road will achieve the proposed purpose of "fire breaks". Can this be achieved by other means?

- Identify the minimum road system, based on the RIS, for this project area.
- And what is the net improvement on the ground that really meets the project purpose of "sustainably managing the road network"?

**Conclusion**

As conservationists and visitors to the Willamette National Forest, we use the roads and trails but also recognize the harm that aging and unmaintained roads cause. The Forest Service's current road system is oversized for current uses, unaffordable with current budgets and causing significant harm to wildlife (such as elk) and aquatic species (such as steelhead, Chinook and bull trout). In addition, unmaintained roads are impacting access when storms destroy roads. A road system that it too large for current budgets can lead to unplanned road closures, often to key recreational destinations, because of lack of road maintenance.

We are pleased to see that the Willamette National Forest noted that sustainably managing the road network is one of the key purposes of this project. We are certain that when staff take a hard look at the road system and integrate thoughtful planning and clear communication, the Willamette National Forest staff can identify a minimum road system that is balanced. This endeavor to identify and manage a sustainable road network is one of the most important efforts the Forest Service can undertake to restore aquatic systems and wildlife habitat, facilitate adaptation to climate change, ensure reliable recreational and community access, and lower operating expenses. The actions proposed and decided upon will chart the direction of this watershed for several decades thus we strongly encourage you to do this well.

If you have questions, please contact me.
Sincerely,

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