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November 1, 2007

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RE: Bark's scoping comments on Mt. Hood OHV Management Plan

Dear Jennie and ID Team:

Introduction

Bark has been working with Oregonians living on and around Mt. Hood for over ten years. Our mission is to bring about a transformation of Mt. Hood National Forest into a place where natural processes prevail, where wildlife thrives and where local communities have a social, cultural, and economic investment in its restoration and preservation. As of writing these comments, we represent over 1,700 Oregonians who believe in our mission.

Creating a vision for travel in Mt. Hood National Forest

Bark believes that Mt. Hood National Forest cannot afford to further delay the creation of a true vision for travel within the forest. Such a vision does not currently exist nor is one found in the proposed action. Bark respectfully request that the Forest Service expand the scope of the OHV Plan (Plan)to simultaneously address the impacts of off-highway vehicle (OHV) use AND the crumbling road system on ecosystem health and quiet recreation opportunities. The result will be a stronger Mt. Hood recreation community, a better recreation infrastructure, and healthier ecosystems.

The Travel Management Rule (TMR) states that we "must strike an appropriate balance in managing *all types* of recreational activities. To this end, a designated system of roads, trails, and areas for motor vehicle use established with public involvement will enhance public enjoyment of National Forests while maintaining other important values and uses of NFS [National Forest

Systems] lands." 70 F.R. 68264, 68265 (emphasis added). Bark has asked the Forest Service on numerous occasions that the Travel Plan adhere to the comprehensive future described in the TMR and the draft directives for implementing the Rule, and have offered our human and cash resources to help accomplish this goal (see Appendix A). We are disappointed that the purpose and need statement as described in the NOI inappropriately constrains travel planning within Mt. Hood National Forest. We request that it be withdrawn and re-issued consistent with our comments below.

Bark is a member of the Restore Mt. Hood Coalition, which has submitted a proposal to the Forest Service outlining a plan for achieving this balance between *all* recreation and ecosystem health. The plan details the resources that the Coalition can provide to move beyond the constraints for creating a Travel Plan vision. Bark would like to incorporate by reference the comments of the Restore Mt. Hood Coalition. These comments are also found in Appendix A.

Background

Established in 1910, Mt. Hood National Forest is one of only 14 Urban National Forests in the country. It is well known for its complex relationship with nearby communities, including Oregon's largest city, Portland, and the greater Portland-metropolitan area. The Bull Run Management Unit is one such example. In 1892 President Harrison identified the watershed as the permanent source of drinking water for Portland.

Until the early '50s this included restrictions on timber harvest and public entry into the watershed. Then the Forest Service built roads into the watershed for fire suppression and proceeded to move forward with commercial timber harvest. Decades later, armed with new information on the impacts of logging on drinking water and having received pressure from citizens, the Forest Service and the City of Portland signed a memorandum of understanding which permanently protects the watershed.

As population has increased, so have the demands on Mt. Hood. Mt .Hood National Forest provides drinking water to no fewer than 12 towns and unincorporated communities. In addition, it receives over 4 million visits every year. Compared to these demands, excluding logging in the drinking watershed for Portland-area residents may not seem like such a complex decision. Regardless, it took decades for scientific evidence to reach "critical mass" in determining the harmful impacts of logging on water quality. And even when it did, it took decades of public pressure for the agency to act accordingly.

> *"It is the purpose of this order to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands."*
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> -Executive Order 11644, signed by President Richard Nixon February 8, 1972

"Unneeded roads and roads that are currently or potentially damaging to riparian and aquatic resources should be removed or restored to control ongoing erosion and eliminate the potential for catastrophic failure. . . .These roads are 'loaded guns' waiting for the next large storm to fail and damage streams."

-Jack Ward Thomas, before becoming Chief of the U.S. Forest Service, in the 1993 Forest Service "FEMAT Report," which provided the basis for the Northwest Forest Plan

At this time, scientific consensus on the damage of motor vehicle use (including roads and off-road "routes") in the forest has been reached, and has prompted the formation of regulatory direction for the Forest Service (36 CFR Parts 212, 251, 261, and 295 and Executive Orders Executive Orders 11644 and 11989. Thirty-one years after President Nixon identified off-road vehicles as a threat to our public forests, then Forest Service Chief, Dale Bosworth, re-emphasized his concerns by naming unmanaged recreation (primarily motorized) as one of the "four threats" to our National Forest System[1].

Mt. Hood National Forest needed a comprehensive travel plan years ago. The serious detrimental impacts of the surplus road system have been identified by Mt. Hood National Forest, and the agency has had the tools to implement solutions to these problems for years. A chronology of Mt. Hood National Forest and road planning is contained in Appendix B. Bark believes that delay is not an option. The current Plan is not an acceptable substitution for true travel planning and should be withdrawn to allow for a more appropriate purpose and need and proposed action.

Purpose and Need

We are concerned that the Purpose and Need statement is not sufficiently broad to set up a proper analysis in this planning effort. The Forest's Purpose and Needs statement includes some good elements, but it fails to address the full suite of issues that need be addressed if this effort is going to be successful:

Such needs include, at a minimum:

• the need to eliminate cross-country travel and move to a system of designated roads, trails, and areas consistent with the Travel Management Rule;

• the need to address degradation of environmental and cultural resources associated with both user-created routes and currently designated roads, trails, and areas, as identified through Travel Analysis;

[1] Dale Bosworth. "Forging a Sustainable System of Routes and Areas for Motorized Use"OHV Collaborative Summit San Diego, CA (April 12, 2005) Retrieved on October 31, 2007. For more information, see http://www.fs.fed.us/projects/four-threats/index.shtml

• the need to provide opportunities for motorized and non-motorized recreation within the carrying capacity o the land;

• the need to adjust both the core transportation system and recreation travel network in light of funding limitations for maintenance, monitoring, and enforcement; and

• the need to address safety concerns, user conflicts, and lost quiet recreational opportunities that have arisen or might be expected to arise given recent trends in motorized use.

We recommend that you adjust the Purpose and Need statement accordingly.

Legal Framework for Travel Management

Travel Management planning direction as found in the regulations and agency directives includes the entire motorized travel system and the process must provide for a comprehensive transportation plan that applies both Subparts A and B of the Rule.

The regulations require the agency to determine the "minimum road system needed for safe and efficient travel and for utilization, and protection of National Forest System lands." 36 CFR § 212.5(b)(1). In addition, each forest supervisor, "must review the road system on each National Forest and Grassland and identify the roads on lands under Forest Service jurisdiction that are no longer needed to meet forest resource management objectives and that, therefore, should be decommissioned or considered for other uses, such as for trails." 36 CFR § 212.5(b)(2).

2005 saw the promulgation of the Travel Management Rule. 70 Fed. Reg. 68264 (November 9, 2005) ("Travel Management; Designated Routes and Areas for Motor Vehicle Use.") ("Travel Management Rule" or "TMR"). The TMR revised portions of an earlier rule issued in 2001. The relevant sections of 36 CFR 212 and 36 CFR 295 were combined, clarifying the two parts into the final rule 212. 70 Fed. Reg. 68264. In the 2005 final rule, the FS promulgated and revised section 212.1 – 212.21 (Subpart A), and simultaneously promulgated section 212.50 – 212.57 (Subpart B). Overall, the new regulations amended part 212, subpart B of part 251, subpart A of part 261, and removed part 295 of title 36 of the Code of Federal Regulations (CFR). These three regulations are now referred to collectively as the "Travel Management Rule." The Agency indicated that the revision was necessary to provide a "national framework" to reach overall FS goals for resource management. 70 Fed. Reg. at 68265. The stated purpose of the Rule is to designate a socially, economically and environmentally sustainable forest transportation system that will accommodate motorized access needs in NFS lands. 36 CFR 212.5; *see generally,* 70 Fed. Reg., at 68264-65.

The Agency indicated that the purpose of subpart A, *see, e.g.*, 36 CFR § 212.5 "Road System Management," is for each unit of the National Forest System, to determine a minimum road system in order to establish the means for "safe and

efficient travel . . . [the] administration, utilization . . . and protection the natural resources ("National Forest System Lands")" as well as to meet "resource and management objects pursuant to 36 CFR 219." 36 CFR 212.5(b). Further, section 212.5(b)(2) requires Forests to identify and decommission unneeded roads.

The complimentary purpose of subpart B, e.g., 36 CFR § 212.50 "Designation of Roads, Trails, and Areas for Motor Vehicle Use," is to provide for a system of roads, trails, and areas on National Forest System lands that are designated for motor vehicle use. After these roads, trails, and areas are designated, motor vehicle use outside designated areas is prohibited by 36 CFR 261.13.

To comply with the TMR, a Forest must address and implement the Rule as a unitary whole; both subparts A and B must be implemented simultaneously. As an initial matter, the text and context of the regulatory scheme make clear that both subpart A (minimum road system analysis), and subpart B (motorized use designation), must comply with the applicable Forest Plans. The Forest Service must integrate transportation planning regulations "into an interdisciplinary effort that produces Regional, forest, and sites specific-project plans." FSM 7712.03. The site-specific travel management planning for NFS lands must be implemented in compliance with the particular Forest Plan. 16 U.S.C. § 1604(i). Forest Plan's are promulgated pursuant to "National Forest System Land and Resource Management Planning" requirements. 36 CFR § 219. The Rule requires that the minimum road system must be determined to effectively administer NFS lands, and to "meet resource and other management objectives adopted in the relevant land and resource management plan." 36 CFR § 212.5. Additionally, the road designations required under § 212.50 must also "be consistent with the applicable land management plan." 70 Fed. Reg. at 68268.

Consequently, the minimum road system (subpart A) must be determined in concert with the process of designating a motorized vehicle system (subpart B) in order to assure conformity with applicable Forest Plans, and to comply with the objectives of both the TMR (36 CFR § 212 *et seq*.) and Forest planning rules (36 CFR § 219 *et seq*.). Initiating subpart B independent of the minimum road system may conflict with the applicable Forest Plan's resource management objectives in regards to (1) environmental objectives for ecosystem sustainability such as road density standards, wildlife habitat, species diversity, soils, watersheds; and (2) fiscal resource objectives, such as economic sustainability. 36 CFR 219.10(a)(b).

First, 36 CFR § 212.5 requires that the minimum road system determination "must incorporate a science-based roads analysis." The science based analysis applies to all system roads, and road management decisions, [2] "to ensure that the identified system minimizes adverse environmental impacts" *Id.* Science-based assessments are needed to address the specific criteria for roads designation under section 212.55, and are required for the minimum road system determination under section 212.5.

[2] Including "road construction, reconstruction, decommissioning, and maintenance." 36 CFR 212.5.

A comprehensive science-based determination of a minimum road system must be implemented in coordination with the motorized use designation process to assure the travel plan meets applicable Forest Plan's resource management objectives. The Agency recognizes the proliferation of un-inventoried and unnecessary roads has damaging environmental implications. 70 Fed. Reg., at 68265. Unauthorized user created roads may increase the overall number of roads and increase road density in some areas. Accordingly, a minimum footprint must be identified as required by Executive Order 11644 (which demands that the designation of areas and trails must "minimize damage to soil, watershed, vegetation, or other resources of public lands" and, "minimize harassment of wildlife or significant disruption of wildlife habitats.") to assure that designated roads do not exceed the minimum road system pursuant section 212.5, or conflict with resource and management objectives, such as road density standards and habitat protection.

Second, road maintenance is expensive. A minimum road system analysis integrated with a travel management process will reduce the costs of duplicating the planning process, and prevent unnecessary road maintenance costs. NFS lands for all states have a total road maintenance backlog of more than $8.4 billion.[3] Reducing the backlog of redundant routes that are unstable, eroding, located in sensitive habitat areas, or contributing to watershed degradation will diminish additional maintenance and environmental mitigation expenses in the near future. The USDA reports only 21 percent of the unclassified roads in the national forest system are adequately maintained, compared to 37 percent as recently as the late 1990s.[4] In addition, many classified roads in the road system are not adequately maintained to meet basic safety standards and to prevent road degradation, improper drainage, and soil erosions.[5]
Accordingly, failing to implement subpart A and subpart B as a comprehensive and unified regulatory scheme will undoubtedly lead to likely conflicts with Forest Plan economic objectives. The maintenance of unnecessary roads that are designated prior to the determination of a minimum road system will result in the unnecessary wasting of fiscal resources. The FS requires the minimum road analysis to "reflect[s] long-term funding expectations." 36 CFR 212.5. If roads are first designated, maintained and then later closed once the minimum footprint is determined, the result will be conflict with Forest Plan fiscal management objectives, which must mandate fiscal sustainability. 36 CFR 219.10(a).

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[3] "Road Maintenance Backlog." Taxpayer for Common Sense. October 30, 2007. www.taxpayer.net/forests (citing U.S. Department of Agriculture: U.S. Forest Service, *FY 2000 Proposed Budget Explanatory Notes for the Committee on Appropriations*. Washington, DC, 1999).
[4] *Id.*
[5] Road maintenance standards are set by the National Highway Transportation Safety Administration (NHTSA), the Environmental Protection Agency, and specific Forest Service road management plans. "Road Maintenance Backlog." Taxpayer for Common Sense. October 30, 2007. www.taxpayer.net/forests (citing, U.S.D.A.: U.S. Forest Service, *Public Forest Service Roads*, Washington, DC, 2000.)

Thus, each forest administrative unit or district ranger must necessarily initiate a forest-wide travel analysis. This analysis includes the identification of a minimum road system as required under Subpart A, integrated with the designation of roads and trails, pursuant Subpart B. Failure to determine the minimum road system analysis needed to administer the National Forest System lands, in concert with designating roads and trails for motorized use compromises the agencies purpose: to determine the minimum transportation system necessary to provide "safe and efficient travel"; and the "administration, utilization, and protection of NFS lands." 36 CFR 212.5(b); 70 Fed. Reg. 68264 – 65.

Travel Analysis

Travel analysis is a key step along the process of developing a proposed action, yet we have received no indication that such an analysis was conducted on the Mt. Hood National Forest. There is no mention of it in the NOI.

Direction for completing Travel Analysis can be found in the proposed Forest Service directives for implementing the Travel Management Rule.[6] The draft directives propose to make extensive changes to the Forest Service Manual and Handbook. It is our understanding that these directives, while not yet final, represent the Agency's current thinking on the appropriate level of "pre-NEPA" analysis that should be undertaken prior to developing proposed actions for travel management plans (the FS often refers to this as "left side analysis"—see the attached graphic). The draft directives carry forward the duty to address "minimum system" issues[7] and decommissioning priorities,[8] and require that the agency consider the ability to enforce and other fiscal considerations.[9]

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[6] particularly Forest Service Manual section 7712 and related handbook sections in the proposed directives.

[7] **Proposed FSM Section 712(3):**
Travel analysis should be used when determining the minimum road system, specifically, when:
a. Determining the need for access to NFS lands;
b. Identifying the infrastructure required to provide that access;
c. Considering and minimizing effects of construction, reconstruction, maintenance, and decommissioning of forest transportation facilities on natural and cultural resources; and
d. Providing a forest transportation system that facilitates management of the NFS and provides a wide range of motorized and non-motorized recreational opportunities.

Proposed FSM Section 712.1(6):
In conducting travel analysis, simultaneously address issues pertaining to identification of the minimum road system and travel management decisions. Travel analysis may be conducted in conjunction with landscape or watershed analysis.

[8] **Proposed FSM Section 712(4)(3):**
Use travel analysis to evaluate opportunities and priorities for road reconstruction, decommissioning, and conversion to other uses.

[9] **Proposed FSM Section 712(4)(4):**
When identifying and recommending changes to travel management decisions:

There is also a reporting provision for capturing the analysis.[10] If such a report exists for the Mt. Hood National Forest, we would like to see a copy of it.

Notwithstanding those sections of the draft directives which grant a certain degree of flexibility to FS officials to rely on prior decisions and respond to local conditions, it is clear from the materials that describe the travel analysis procedure that the intention is to conduct a rather comprehensive review of travel management problems and opportunities, to address issues related to "minimum system," resource impacts, enforceability, and fiscal sustainability, and to generate the proposed action accordingly.

In contrast, what we see on the Mt. Hood National Forest is a highly constrained proposed action which seems to be premised on expediency, rather than a conscientious attempt to address ongoing impacts related to the use, misuse, or in some cases the mere existence of roads and trails across the forest.

The Forest Supervisor has referenced lack of funds as well as political, timing, and policy issues as the basis for putting off the tough issues.[11] This leaves us to question: if not now, when the need for action is clear, the public is already actively engaged on the issue of travel management, and the FS has already signaled its intention to prepare an EIS, then when? Is it really better to engage

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…
h. Coordinate travel analysis with Law Enforcement and Investigations Staff regarding the ability to enforce proposed travel management decisions.
…
k. Consider the Forest Service's ability to administer and maintain roads and trails.

[10] **Proposed FSM Section 712(4)(5):**
Produce a report and accompanying maps that document the recommended minimum road system and the social and environmental opportunities, issues, risks, and priorities for future road management. Identify proposed changes to travel management direction and the forest transportation system. Subsequent environmental analysis should build upon these proposed changes to the extent necessary to facilitate a reasoned choice among alternatives. The report should identify access needs and opportunities based on current budget levels and realistic projections of future funding.

[11] Constraints as identified by Supervisor Larsen:

Staff resources: The Forest Service does not have the resources to do the NEPA analysis (i.e. write an environmental impact statement on removing, maintaining, or upgrading roads).

Politics: The Forest Service feels that the OHV proposal is already contentious enough and is concerned about the added controversy of road removal.

Timing: The Travel Plan must be completed by November 2009.

Regional agency direction: Internal direction is to focus on OHV planning and not open up travel planning to non-OHV needs.

in two (or more) separate EIS level planning processes when there is such a high degree of interest in this issue now? Is it going to be any easier to make the hard but necessary choices to close and decommission roads once the recreating public has adjusted to and begun to claim "ownership" of the routes which appear on the MVUM following the decision?

Let's assume for the moment that travel analysis was actually done, and the proposed action was developed in response to this analysis. The logical conclusion one would reach upon reviewing the proposed action is that the Forest Service believes:

- that the existing system of designated roads and trails constitutes the "minimum system,"
- that the Mt. Hood NF has sufficient capacity to expand the designated route system in six specific zones
- that the elimination of cross-country travel and the expansion of use in six specified zones will address all resource impacts and user conflicts, and
- that current and anticipated budgets are sufficient for the maintenance, monitoring, and enforcement of this proposed expanded system.

Given the reality of high motorized route densities, ongoing impacts, and declining budgets, we are highly skeptical of such conclusions. Impacts from sedimentation associated with the existing system are already happening, and will only worsen unless proactively addressed. Wildlife impacts associated with route proliferation are well-known. The Forest has already spent some effort on Roads Analysis, which--when augmented with travel analysis--can serve as an analytical basis for moving forward.

We request that the Mt. Hood National Forest immediately make its Travel Analysis report available for review so that the public can understand the methodology that was used in developing the proposed action. If no such report exists, we recommend that the Forest withdraw the NOI, do the necessary travel analysis as described in the draft directives, craft a proposed action which is responsive to the "minimum system" issue, ongoing resource impacts, enforceability issues, and fiscal sustainability concerns, and re-initiate formal scoping at a later date.

Baseline System/No Action Alternative

In developing the no action alternative, the Forest Service must define accurately the extent of the current transportation system. In our view, this system is limited to those roads, trails, and areas which are supported by environmental analysis and decision documents that justify their inclusion on maps and in spatial databases. We draw support directly from Forest Service guidance on this topic – the proposed directives for implementing the Travel Management Rule make specific reference to past decisions as they relate to the baseline. The Forest Service Manual specifically states that the Forest Transportation Atlas should be used "**to record decisions** regarding forest

transportation facilities, including: a) road and trail management objectives; b) identification of needed and unneeded NFS roads; c) **travel management decisions**; and d) road management priorities."[12] Emphasis added

As part of the discussion of travel analysis and the baseline system in the Forest Service Handbook, we find the following supportive text:

Section 11 – COMPILE EXISTING TRAVEL MANAGEMENT DIRECTION (STEP 1) Existing travel management direction reflects each National Forest's history of travel planning, occupancy and use, road and trail construction, and ***past decisions****, including those contained in the applicable land management plan. Some National Forests have recently completed travel management decisions with extensive public participation.* (emphasis added)

11.1 – Baseline System--Consolidate existing direction on travel management into a single location. This step should not create new direction. Rather, this step involves ***compiling past decisions*** *that guide motor vehicle use, including maps, road and trail management objectives for NFS roads and NFS trails on the administrative unit or Ranger District (FSM 7714), and monitoring reports.* (emphasis added)

We are concerned that a significant discrepancy may exist between what the Forest Service is calling its system and the routes which are supported by appropriate documentation. We would expect the Forest Service to perform a comprehensive inventory of its past transportation decisions as part of Travel Analysis, but we suspect that this has not been done.

We believe it would be very useful for the Forest Service to develop a "documentation" spreadsheet which would accompany the description of the baseline system in the no action alternative. This spreadsheet would summarize the NEPA decisions, together with other relevant documentation such as vehicle class determinations, RMOs/TMOs, and evidence of consistent maintenance of the route over time, which support the inclusion of each route in the "baseline" system. We do not consider this to be a burdensome task because the Forest Service is already tasked with compiling all relevant NEPA analysis and decision documents as part of Travel Analysis. Although we recognize the challenges associated with locating adequate supportive documentation given a past history of poor agency recordkeeping, we do not believe this justifies a reliance solely on the listing of a motorized route in INFRA.

A partner group in Colorado has developed a sample of the type of spreadsheet we believe would be adequate for this purpose, and we have attached it to this letter.

We also recommend that maps of the baseline system use contrasting colors to distinguish routes or route segments which have supporting NEPA documentation, which lack supporting NEPA documentation, and which

[12] FSM 7711.2 (2)

predate NEPA. We believe that any routes lacking documentation should be analyzed as new unauthorized routes, in recognition of that fact that there is no record of analysis addressing the environmental impacts of motor vehicle use on these routes. While this request may seem like an exercise in record-keeping, it has very real consequences on the Forest.

In response to a FOIA request submitted by Bark, we received a copy of an email from Mr. Laurence Olson to multiple agency staff. In the email Mr. Olson described the consequences of the extensive road system, "The condition that adds a much greater risk, however, is the proliferation of unmarked roads throughout the District. Even if I can figure out where I am, there is very little chance that a Deputy or an EMT will be able to discern how to get to a location without lengthy, complex, and confusing directions that I would probably not have the luxury of dividing my attention long enough to provide on a radio that may or may not work well enough to do so in outlying areas." He continues, "As a new employee working alone, I have had a very difficult time trying to figure out what is an official road and what is not, and what the number designation for that road is…The 45 and 4610 road systems are good examples of this problem."

The link between the road system and OHV use cannot be underestimated. In the same email referenced above Mr. Olson describes the link, "I have discussed this problem with new Zig Zag LEO Frank Aguilar and he told me that long ago he informed the District staff that he *would not patrol* on any unmarked road where he could not be sure of his location and be able to easily communicate that location to our County Dispatcher." Emphasis added

Additional Baseline Data Needs

In addition to identifying the existing system, baseline data is needed on a number of other factors critical to making an informed decision including current rates of illegal use of "closed" roads, rates of illegal OHV use, effectiveness of management techniques, OHV demand, and existing landscape conditions. Bark believes that without this information, the Forest Supervisor will not be capable of making a reasoned decision for moving forward.

Illegal use/Enforcement Effectiveness

Bark has been monitoring activities on Mt. Hood National Forest for over 10 years. During this time we have seen a significant increase in *illegal* motor vehicle use. This use is most often seen in the form of vandalized Forest Service closures and OHV use on the "closed" road. A 2007 inventory of 335 roads, (~10% of the categorized road system) each approximately one mile in length found that a significant percentage of "closed" roads inventoried were in fact either already being used illegally or could potentially be accessed due to ineffective closures. See Table 1 for details.

TABLE 1
335 road segments were surveyed between March 2007 and September 2007, representing data on 300 Mt. Hood National Forest roads in all four ranger districts. Of the segments inventoried:

133 (44%)contained some closure device
- 42 berms
- 42 metal gates
- 21 metal railings or cables
- 10 rock and boulder piles
- 18 other

Of the 42 berms
- 16 (38%) are considered ineffective at keeping vehicles from passing
- 10 (23%) show signs of vehicle use beyond the closure

Of the 42 metal gates
- 31 (74%) were not locked (at the time of analysis, it was unclear if the gates were not locked for administrative purposes or from vandalism)
- 28 (66%) show signs of vehicle use beyond the closure
- 18 (43%) show obvious signs of vandalism or non-administrative reasons (i.e. open on purpose) for an unlocked gate

Of the 21 metal railings or cables
- 12 (60%) are ineffective at keeping vehicles from passing
- 9 (43%) show signs of vehicle use beyond the closure

Of the 10 rock and boulder piles
- 7 (70%) are ineffective at keeping vehicles from passing
- 3 (30%) show signs of vehicle use beyond the closure

The 2007 information presented in Table 1 is not new. A 2003 study produced by Bark titled, "Roads to Ruin: 1,500 miles of destruction," inventoried 205 roads in the Upper Clackamas, Oak Grove Fork and Collawash/Hot Springs watersheds of the Clackamas Ranger District . The result was nearly identical with 54 (25%) of the roads showing signs of vehicle use beyond the closure. The complete report can be found in Appendix C.

The NOI suggests that illegal use is not a significant problem, and that most riders in Mt. Hood National Forest are responsible, "Most people ride OHV responsibly, but a few riders leave lasting impacts by traveling through wetlands and other sensitive areas." Bark believes that any proposed action for allowing OHV use in the forest must rely on reasonable data. *Assuming* that most OHV riders are responsible provides no basis for the prediction of effectiveness of a new management scheme like the one proposed.

The use of closed roads by Riders has been consistently documented by the Forest Service. In conversation with Mt. Hood's law enforcement, the picture of an out of control misuse of roads in known areas has been described. Areas such as the Road 45 system and the Black Wolf Meadows to Timothy Lake are examples of significant and established destinations. As with Road 45, the Forest Service law enforcement varies from nonexistent to ineffective.

Even with a significant shift in management from an open-unless-closed to a closed-unless-open management scheme, historic behavior by OHV users in Mt. Hood National Forest has been lawless at best.

TABLE 2
335 road segments were surveyed between March 2007 and September 2007, representing data on 300 Mt. Hood National Forest roads in all four ranger districts. Of the segments inventoried:

Of the 335 road segments 87 (26%) had clear signs of OHV use.

Of the 87 roads used by OHVers
- 35 (40%) roads had a closure device
  - 9 with a berm
  - 11 with a gate
  - 15 other

Of the 335 road segments, we found in total
- 32 user-created OHV trails
  - 10 of which started beyond a closure device
- We documented 64 road segments to have unofficial spur roads.
  - 19 (30%) of the road segments with documented spurs showed signs of OHV use
  - 133 unofficial, spur roads were documented

This pattern of illegal use by OHVs is not unusual. A report by Utah State University commissioned by the Utah Division of Parks & Recreation to help "better plan OHV management strategies on Utah public lands" reveals that an inordinate number of riders prefer to ride "off established trails." Of the ATV riders surveyed, 49.4% prefer to ride off established trails, while 39% did so on their most recent excursion. Of the dirt bike riders surveyed, 38.1% prefer to ride off established trails, while 50% rode off established trails on their most recent excursion.

Over all rates of illegal use is important for determining expected behavior among OHV riders, but equally important is to establish a baseline of data on the effectiveness of OHV management techniques on Mt. Hood National Forest,

Specifically Bark would like to know rates of effectiveness for:
- Terrain barriers (See Table 2)
- Signage

- Non-terrain closures (administrative closures)
- Law enforcement
- Rider education

If the agency has followed the 1977 Executive Order 11644, then it should have a record of various closures and their respective effectiveness. This can provide the basis for the proposed action.

> *Executive Order 11644 provides that ORV use on federal lands must be consistent with "the protection of the resources of the public lands, promotion of the safety of all users of those lands, and minimization of conflicts among the various uses of those lands." (Executive Order 11644 § 3(a)) Executive Order 11989, the 1977 amendment to Executive Order 11644, further provides that the agency head must, "whenever he [she] determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife habitat or cultural or historical resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects until such time as he determines that such adverse effects have been implemented and that measures have been implemented to prevent further recurrence."* (Id. § 9(a))

OHV demand on Mt. Hood National Forest

No accurate estimate exists of the demand for OHV, or non-OHV, recreation on Mt. Hood National Forest. The following four documents mention OHV use in Mt. Hood National Forest, but the data provided is of different geographic regions, types of activities, methods of collection, and the results vary widely:

(a) The Off-Highway Vehicle Recreation in the United States, Regions and States: A National Report from the National Survey on Recreation and the Environment (NSRE) states that 22% of Oregon's population uses OHVs. 930 participants surveyed. 15
(b) The Mt. Hood LRMP cites the 1986 Recreation Information Management Estimates, Report 2300-1, stating that there are 66,800 visitor days for "motorcycle/scooter use" (other OHV use not mentioned), which comprise 1.5% of the total visitor days. LRMP Two-13.
(c) The Oregon State Comprehensive Outdoor Recreation Plan completed user surveys in 2003. From 323 surveys in Regions 2 and 6 (those that cover Mt. Hood National Forest but cover extensive land east and west of the federal forest land), 6.41% and 12.65% respectively of those surveyed use all-terrain vehicles. This does not include motorcycles or full-size 4X4s since on-highway versus off-highway use was not determined.
(d) The National Visitor Use Monitoring survey found that .17% of Mt. Hood National Forest use is by OHV riders.[13]

[13] United States Forest Service, Region 6. National Visitor Use Monitoring Results June 2004

Existing condition of landscape

The EIS will address past, present, and foreseeable future actions as they relate to the proposed action. Bark does not see how this is possible without a complete inventory of the existing system, including illegal OHV use. To expect that all Riders will understand the changes and new designations for vehicle use on forest roads within the first few years is completely unrealistic. We, therefore, would expect to see other known areas of current use be included in the EIS as part of the anticipated short term cumulative impacts to other recreation needs and the ecological integrity of the surrounding forests.

The Mt. Hood National Forest Teachers in the Woods program released a 2004 document that describes the increase in illegal ATV use, the impacts to watershed health, and the lack of current data on these impacts.

> *"The problem is exacerbated by the fact that new trails appear to encourage further use by subsequent ATV operators. For this reason, the off-road use of ATVs is inconsistent with Forest Service watershed management goals and is prohibited on the Mt. Hood National Forest. Despite this, the creation of illegal off-road trails continues. Because it has only relatively recently taken on a measure of urgency as a management concern,* ***its extent and the amount of resulting damage have not been quantified****."*
> Teachers in the Woods 14 Emphasis added

Bark is happy to see the use of volunteer resources to collect data on the existing system. The data, at least as presented in the 2004 document, is a little sparse, but it is exactly the kind of work that needs to happen to inventory the existing system. The Restore Mt. Hood Coalition is prepared to assist in this work with the Forest Service.

Bark expects to see past logging in the potential cumulative impact analysis for the proposed action. For instance, the La Dee Flats area lies directly on the No Whisky Timber Sale. As Bark responded to this project, we saw an extensive system of user-created trails resulting from past logging in the area. Riders create short courses with jumps and sport features in the actual logged units. Riders utilize haul lines, landing areas and temporary roads as opportunities to penetrate the forest from the legitimate roads. As well, the reopening of administratively closed roads during operation has often served as a welcome mat to entirely new areas.

<u>Proposed OHV areas</u>

La Dee

> *"Chief [Dombeck] states he doesn't believe off-road use and accompanying damage make it reasonable for us to provide an off-road use experience here."*

-Email from Officer Christine Lynch to Officer Laurence Olson, September 11, 2003

The proposed La Dee OHV area provides the perfect example of the gravity of the proposed action. For over 15 years the Forest Service has been struggling to manage illegal OHV use and associated activities (shooting, dumping, etc.). In 1992 the Forest Service takes its first official action and closes the area to shooting that is not a part of a "legal hunt." As described by former LEO in the Clackamas Ranger District, "USDA Forest Service and USDI BLM jointly agree that resource damage from garbage dumping and shooting MUST be stopped before some gets badly injured or killed."[14]

Subsequent attempts to stop resource damage from occurring included an area closure, multiple cleanup efforts by SOLV and Dumpstoppers, reposting of the closure sign (the newest sign is solid steel to stand up to the shooting), and constant replacement of closure devices. On a field trip with Clackamas District Ranger Andrei Rykoff, he told Bark that enormous root balls put in place were systematically whittled by chainsaws and then rolled out of the way. In sum, this exercise in futility is likely what led to the statement by the Forest Service Chief that the area should not be considered as an OHV destination. All of this leads Bark to wonder why La Dee is in the proposed action.

The answer to this question seems (at least on record) is arbitrary and disturbing. In response to a FOIA request for OHV information in the North Fork Clackamas River, Bark received a copy of an email dated August 16, 2005, from Malcolm Hamilton, Mt. Hood Recreation Program Manager, to Johanna with the Raven Off-Road Club, in which Mr. Hamilton stated, "I want to let you know about how we incorporated the information that you provided to us when we met last January 26th at the Sandy office. Actually we did two things. First, we added a new planning area which we are calling La Dee. Secondly, we included the entire 4610 road as a connector between the La Dee planning area and the the Black Wolf planning area (to the east)."

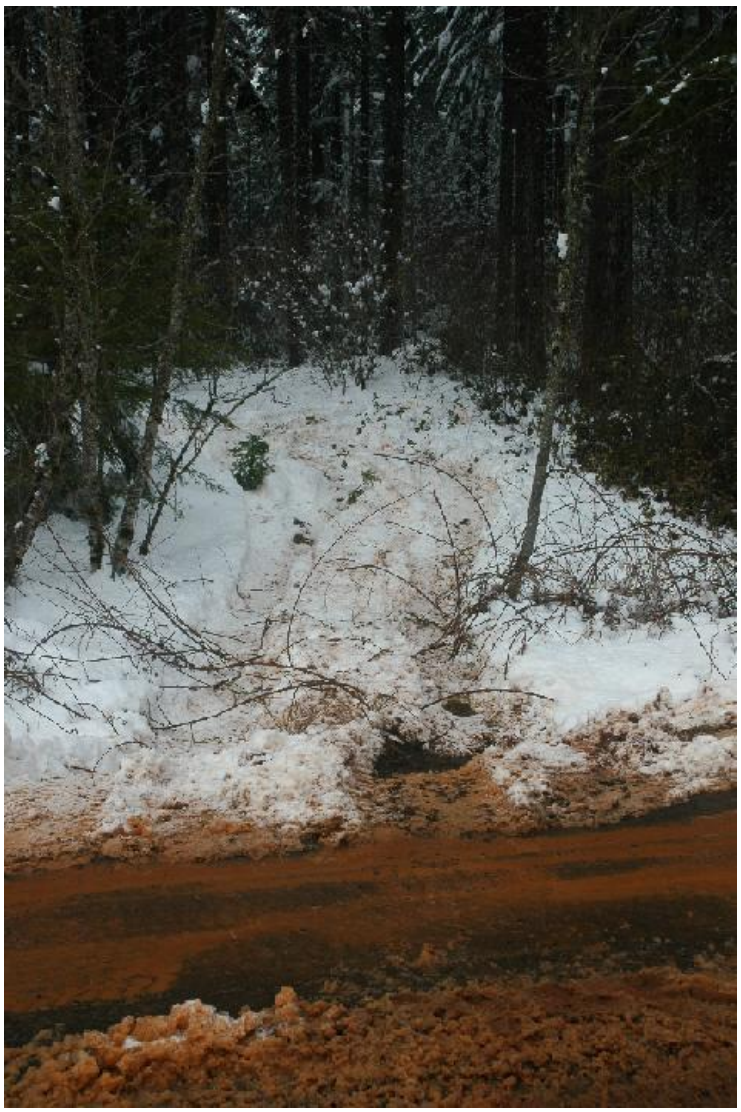
Regardless of the Forest Service's reasoning for including La Dee, Bark is concerned that the North Fork Clackamas River will be degraded by the cumulative impacts of OHV use and logging. The No Whisky Timber Sale is currently being logged in the proposed OHV area. For information on No Whisky including photos of the area and some of the OHV damage please visit http://www.bark-out.org/tsdb/detail.php?sale=nowhsky.

The No Whisky EA states that past Off Highway Vehicle (OHV) and off-road use of skidtrails and roads in the Ladee Flats area has resulted in ongoing erosion. It goes on further to suggest that new skid trails created by No Whisky may lead to increased OHV use in units adjacent to FS Rds 4610 and 4611. However, this statement contains no analysis of the expected impacts associated with this type of activity. Bark expects to see such an analysis in the Plan EIS.

[14] Email from Christine Lynch to Laurence Olson, September 11, 2003. Obtained by Bark through FOIA request.

As stated by Larry D. Reed, a 34-year veteran of Mt. Hood National Forest and reserve law enforcement officer, there is no such thing as a closure for quads (4-wheel ATVs) and motorcycles; the only limiting factor is terrain. (conversation March 14, 2006) As shown in the photo below, full-sized vehicles (jeeps and trucks) are also capable of doing damage where terrain isn't a limiting factor. The modification of terrain due to the No Whisky Timber Sale should be thoroughly analyzed.

The lack of documentation regarding the issue of OHV use and sedimentation production is troubling since it was the #1 aquatic resource issued identified in the Clackamas River Basin Action Plan Appendix A: Summary of Recommendations from the Mt. Hood National Forest (and BLM) Watershed Assessments.



OHV damage observed March 12, 2006, off Rd4610. Terrain (lack of trees) allowed for full-sized vehicle to damage ground vegetation

FROM EA page 25: Some have also advocated that instead of a focus on thinning, the EA should plan the restoration of areas damaged by OHV use. This was not developed. The analysis conducted by resource specialists found that the impacts created by unauthorized OHV use were not significant and that past attempts to restore high use areas resulted in the impact shifting to new areas. The Forest is in the early stages of developing a Forest-wide plan for OHV (s. 4.16). That plan is the

proper arena for discussion of OHV restoration. This project contains measures designed to prevent the expansion of OHV use onto new temporary roads landings and skid trails (s.3.6.6.6).

Additional issues raised in the No Whisky EA:

- "The localized effect of OHV use within small wetlands and meadows in the La Dee area has resulted in the degradation of some of these habitats." EA p 68
- "Within the project area, unauthorized OHV use and shooting are occurring. . . .Areas used for shooting are also littered with debris, trash, shells, broken glass, and other remnants of targets. Trees are often targeted until they fall..." EA p 85
- "The District has implemented various projects to reduce unauthorized use. However there are still concerns that logging activities could make new areas avoidable for OHV use and/or shooting." EA p 85

I
Bark hereby incorporates by reference Quantifying Threats to Imperiled Species in the United States.[15] This article quantifies threats to endangered species. Looking at US "species, subspecies and populations that have been added to the federal endangered species list or have been formally proposed for such listing by the USFWS as of 1 January 1996," (609) the authors found that outdoor recreation harms 27% of endangered species (610). "Within the category of outdoor recreation, the use of off-road vehicles is implicated in the demise of approximately 13% of endangered species" (610).

Bark is specifically concerned that the proposed action will not meet aquatic protection requirements as laid out in the Northwest Forest Plan.

Sediment from an illegal OHV "mudding" spot on 4610 is dumping into a tributary of the North Fork Clackamas River.

Peavine

The Peavine OHV area is one of the three proposed areas whose boundaries are within a mile of current or future wilderness. Summit Lake and the Summit Lake campground are within the OHV area.

[15] David S. Wilcove; David Rothstein; Jason Dubow; Ali Phillips; Elizabeth Losos *BioScience*, Vol. 48, No. 8. (Aug., 1998), pp. 607-615.

In conversation with OHV riders, we understand that the West Pinhead Butte is a current destination in this area. The proposal would provide for a loop that would lead riders to the butte and back to the area. We are very discouraged to see that this loop comes within a mile of the Pacific Crest Trail, which summits the South and North Pinhead Buttes on Warm Springs land and would use the Skyline Road (4240110). Both of these are historic and culturally significant destinations for other important users of the forest. Every year thousands of people from around the world hike along portions of the Pacific Crest Trail. They depend on the hundreds of volunteer hours invested in keeping this a thriving challenge for all Americans to hike from Mexico to Canada. Unfortunately, the impact of OVHs on non-motorized recreationists (see Factors to Consider in Environmental Analysis) trumps the hard work of those maintaining the trail itself. To have the Peavine OHV area as a bruise on this iconic trail is a poor prioritization on the part of the Forest Service.

The Skyline Road, or what was once part of the Oregon Skyline Trail, was the precursor of the Pacific Crest Trail in this region. The original trail led from Mount Hood to Crater Lake. Most of the original 1920 route in the Clackamas District was built in 1909. Parts of the old trail remain as artifact. While logging has damaged much of it, significant stretches remain. The first route was incrementally replaced by the Skyline Road. The piece of this road being incorporated into the proposed Peavine OHV area is one of the remaining areas left in tact and accessible. Although full-size vehicles are using this as a connector road, it is a chosen destination for its exquisite views and surrounding old-growth forests. This potential conflict of use is a clear example of where much better analysis is needed on how to manage the recreation needs with the historical and cultural resources on Mt. Hood.[16]

Skyline Road

This upper Clackamas area is one of the remaining swaths of Mt. Hood with considerable old-growth forests still standing.

We have noted that along 4210, there has been considerable concession made to OHV riders already. We understand that after request was made by OHVers with large towing rigs to fell trees along sharp corners of the road for better visibility, this was granted. These large trucks have a more difficult time using this road system because of these visibility impediments and the need to break should other cars be on the road at that time. While we hope that safety is

[16] http://www.trailadvocate.org/stories/storyReader$208

always a concern for vehicle use on these roads, we have grave concerns about the Forest Service's plans to manage the roads for an increase in use by large trucks with towing rigs.

High fragmentation, patchiness and loss of connectivity contribute to the large edge effects on habitat in this area (Upper Clackamas Watershed Assessment, 10). These conditions have severely affected late seral habitat in the area, including the Upper Clackamas LSR (60). The LSR is so skinny that activities outside of the reserve have large effects on reserve habitat (17). Bark does not believe that the Peavine OHV area is appropriate if it requires the logging of old-growth to facilitate safe travel.

Rock Creek

Habitats in the Rock Creek area change with climate cycle (White River Watershed Assessment, 5-2). Open canopy habitat has been lost but closed canopy habitat exists (4-18). Forest health is declining and riparian and aquatic ecosystem function is already poor as a result of irrigation diversions (4-19, 20). Insects and disease are increasing tree mortality and thermal cover and winter range for elk and deer are in decline (4-21). There is little NRF habitat provided in the area, only 5-25% of the area is moist enough to support spotted owls (5-2). OHV use should occur in areas so as to mitigate the effects on the small amount of NRF habitat that exists.

Mule deer, black-tailed deer and elk have high population levels (White River Watershed Assessment, 4-18). Many threatened and sensitive bird species inhabit the Rock Creek area including the bald eagle, northern goshawk Swainson's hawk, the sandhill crane, flamulated owl, northern pygmy owl, great grey owl, Lewis' woodpecker, and pileated woodpecker (B-1). The area also supports wolverine, white-tailed jackrabbit, Cope's giant salamander, red-legged frog, cascade frog, tailed frog (B-6).

Despite the fact that average topography is gentle, erosion and sediment deposits in stream is much more frequent than historic levels as a result of compaction, ditch blow-outs, roading, recreation use and grazing (4-17, D-1). Compaction is a large problem related to past management activities and soils with moderate texture, weak structure and low organic matter (D-1). There is a high level of noxious weeds in the area including thistle and knapweeds, and soil disruption will encourage invasive species growth (4-19).

The White River subbasin is one of the few areas where primitive recreation still exists as it does not have access to a road for easy entrance and exit (4-19). Hikers, horse-back riders, mountain bikers, camping, kayaking, swimming. Primitive recreation in more natural settings is in highest demand and "in many cases people are using facilities and settings more developed than they would prefer" (4-23).

Property taxes are the primary source of funding for law enforcement and local communities have begun to struggle financially to provide this service (4-23).

This raises concerns over conflicts between private land owners in and around the Sportsman's Park community and OHV users.

The TMR describes a process of public participation. When Rock Creek was originally proposed, it did not include the easternmost portion of what is contained in the current Plan. The loop facilitated by a new route along the Gate Ck Ditch (historic?) is new to the NOI. The result is that proposed OHV area now includes the Rock Cr. reservoir and private inholding land. How is it that the result of public participation is the increasing encroachment of the Rock Creek proposal into the Sportsman's Park community? It appears that the proposal is meant to be a compromise and concession to the land owners, since it is proposed as a Day Use Only area. From Bark's perspective this is reminiscent of the same arbitrary decision making employed in the La Dee and Peavine areas.

Bear Creek

The Hood River Watershed contains many steep drainages and unstable geology which contribute to landslide affects in the area (Middle/East Watershed Assessment, G-2). Most soils in the area are deep ash mantle which has a high water holding capacity and is compacted easily, making it especially susceptible to erosion on slopes over 30% (G-10). This erosion hazard is especially high in the Gibson Planning Area (G-12). According to the Watershed Assessment, "to minimize erosion and sediment delivery to streams, it is thus crucial to minimize ground disturbance and revegetate disturbed areas as quickly as possible" (H-6). OHV use would intensify soil disturbance and decrease vegetation causing increased erosion hazards.

The economy in the Hood River area is dependent on quality of life attributes, such as clean water, air, and scenery (Hood River Middle/East Watershed Assessment, 1-8). Meadows in the area are highly valued by recreationists (1-2) and area visitors are nature oriented. Hiking, wildlife viewing and visiting natural attractions are the most popular activities (1-9). In addition to the popularity of non-motorized recreation, hiking and mountain biking trails in this area are already deteriorating from overuse (D-2).

The Bear Creek OHV area is particular troubling for the following reasons:

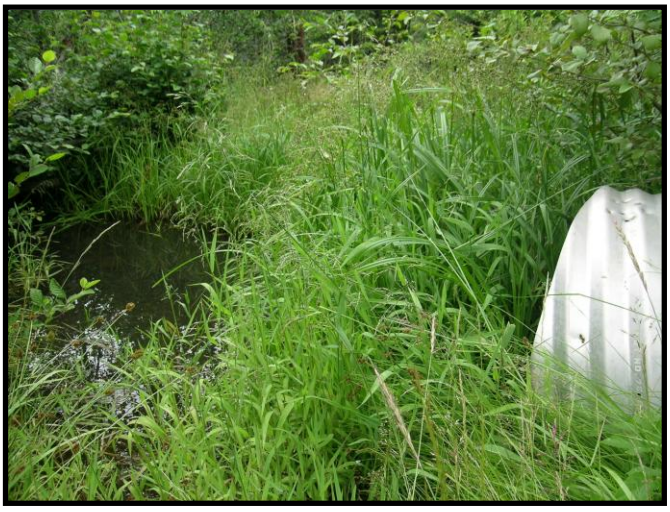
- It is not currently being utilized by OHVs, and it is irresponsible to introduce such impacts to an area already heavily impacted by past logging and roadbuilding.
- The Plan includes multiple new stream crossing. Lower Bear Creek contains bull trout habitat and is particularly sensitive to disturbance
- According to the map it uses, and opens to abuse by ATVs, the Vista Ridge Trail and Trail 632. This conflicts with the Mt. Hood LRMPs requirements to protect the quality of the trail experience.

- The proposed trails are very close to existing and proposed Wilderness, and will conflict with the existing wilderness experience enjoyed on the North side of Mt. Hood. This is particularly important given that the north side of Mt. Hood is renowned as the "quiet side," when compared to the south side, which houses four ski areas and is near Highway 26.

Gibson Prairie

The potential for conflict use in the GIbson Prairie area is very high, particularly considering the proximity of the staging area to the popular Gibson Prairie campground. This campground is used by equestrian groups, as well as hikers and campers. In conversation with horseriders, we found that the presence of mountain bikers in the area has already caused an issue of shared-use on the trails. Trail 688 goes through the proposed area. As well, the Gibson Prairie area is a known birdwatching destination. Although the Forest Service claims that there is an established use, we did not find this to be so for all of the proposed trails. Adding intensified OHV use to this area without consideration for the other recreation needs will not lead to a good outcome for all.

Connector route from 1711630 and 1711621



Blocked culvert on Road 17, we documented fish in the pool caused by the culvert, unable to travel further on up the West Fork of Neal Creek

Bark has concerns about the ecological impacts this proposal will have in the area. The proposed area has roads that cross the West Fork Neal Creek. We documented a blocked passage of fish at the hairpin turn on Road 17 in Section 2 of the proposed area. We also documented numerous failed culverts and signs of erosion on the roads in this area. With an increase of traffic and OHV use on these roads we do not see how the Forest Service will catch up with this serious

backlog while maintaining new trails and roads.

We understand that the Forest Service intends to provide this area as a continuation of private and county lands adjoining the national forest boundary. Although, OHV use may be appropriate in these other areas, we do not see a known late-successional forest and established quiet-use recreation area as a comparable place to continue this type of recreation. We expect that the EIS will include a considerable amount of data showing that this extension of use is necessary and how differences in rules and regulation will be clearly presented to riders crossing between land designations.

Considering the controversy surrounding fire management in this area with regards to the Dalles Watershed Management Area, we are surprised to see that the Forest Service is proposing to encourage more use that has a known fire risk attached with it. There has been a large number of fire starts in this area in the past years. Not only will an increase in people using the area raise the risk of campfires spreading to the forest, but also the use of vehicles with combustible engines will only continue increasing this risk on unmaintained roads and trails. We expect to see significant data proving that this use will not lead to further suppression of natural fire regimes or cause unnaturally large fires.

McCubbins

The local communities within and near to the proposed McCubbins OHV area have spoken out strong against this proposal. Although the Warm Springs tribal residents who have an adjacent ceremonial area to the proposal have a more than valid concerned about dispersed camping and noise, they also have valid concerns about the impact to the ecology of the area. At least five times new trails cross important drainage streams into the White River. Bark does not support the added impact to these streams that will be inflicted through trail construction.

As with areas such as La Dee Flats we continue to be discouraged to see the Forest Service condoning illegal trail creation by incorporating existing trails into the proposal. While there are thousands of roads in the national forest that could be decommissioned, we do not support any new road or OHV trail construction. Additionally, we do not understand how the Forest Service intends to curb the creation of additional illegal trail systems by sending the message that with enough effort and use these will eventually be incorporated into the legal transportation system, too.

This proposal extends into the White River Wild and Scenic Area. We expect the Forest Service to comply with all current and future designations and applicable regulation with regards to the Wild and Scenic Rivers Act.

Additional Factors to Consider in Environmental Analysis

Roads

The connection between OHV use, both legal and illegal, and roads on Mt. Hood National Forest is clear. Roads (and the non-OHV activities they facilitate) determine the existing ecological impacts on the landscape at the watershed level, they provide legal and illegal OHV access, they benefit or hinder OHV management techniques including law enforcement, and they provide the medium for interactions between forest users. This said, Bark has provided extensive explanation for why we believe that any OHV Plan must be built on a sound transportation system (i.e. minimum road system). Assuming that the Forest Service is willing to take this necessary step (as described in the proposed directives for travel analysis), Bark is including the following work for inclusion in such analysis.

Attached is a document entitled, "Road literature summaries." It contains brief (1-2 page) summaries of the following literature, which we believe is helpful in making decisions regarding the minimum road system.

Jones, J.A., Swanson, F.J., Wemple, B.C., Snyder, K.U. Effects of roads on hydrology, geomorphology, and disturbance patches in stream networks. Conservation Biology 14(1): 76-85. 2000

Strittholt, J.R., Dominkick, D.A. Importanace of roadless areas and biodiversity conservation in forested ecosystems: case study of the Klamath-Siskiyou ecoregion of the United States. Conservation Biology 15(6): 1742-1754. 2001

Wemple, B.C., Jones, J.A., Grant, G.E. Channel network extension by logging roads in two basins, Western Cascades, Oregon. Water Resource Bulletin, American Water Resouce Association 32(6): 1195-1207. 1996

Switalski, T.A., Bissonette, J.A., DeLuca, T.H., Luce, C.H., Madej, M.A. Benefits and impacts of road removal. Front Ecol Environ 2(1): 21-28. 2004

Parendes, L.A., Jones, J.A. Role of light availability and disperal in exotic plant invasion along roads and streams in the H.J. Andrews Experimental Forest, Oregon. Conservation Biology 14(1): 64-75. 2000

Wemple, B.C., Jones, J.A. Runoff production on forest roads in a steep, mountain catchment. 39:1220-1237Water Resource Research 39(8): 1-17. Water Resource Research2003

Madej M.A. Erosion and sediment delivery following removal of forest roads. .
Frissel, C.A., Nawa, R.K. Incidence and causes of physical failures of artificial habitat structures of western Oregon and Washington. 12: 182-197North American Journal of Fisheries Management 12:182-197. 1992

Ziemer, R.R. Flooding and stormflows. .
Trombulak, S.C., Frissel, C.A. Review of ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14(1):18-30. 2000

Trombulak, S.C., Frissel, C.A. (...continued)Review of ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14(1):18-30. 2000

Dutton, A.L., Loague, K., Wemple, B.C. Simulated effect of forest road on near-surface hydrologic response and slope stability. Earth Surf Process Landforms 30: 325-338. 2005

Jones, J.A. Hydrologic processes and peak discharges responses to forest removal, regrowth, and roads in 10 small experimental basins, western Cascades, Oregon. Water Resource Research 36(9):2621-2642. 2000

Jones, J.A., Grant, G.E. Peak flow responses to clear-cutting and roads in small and large basins, western Cascades, Oregon. Water Resource Research 32(4):959-974. 1996

In addition, Bark is attaching the following documents in their entirety:

Kolka, R, Smidt, M. Revisting forest road retirement. Water Resources Impact May 2001, 15-18.

Wemple, B.C., Swanson, F.J., and Jones, J.A., 2001, Forest roads and geomorphic process interactions, Cascade Range, Oregon: Earth Science Processes and Landforms, v. 26, p. 191-204.

DellaSalla, D.A., Frost, E.J.. An ecologically based strategy for fire and fuels management in National Forest roadless areas. World Wildlife Fund 2001

Daniel M. Ihara, D.M, Hackett, S.C., Manning J.J. Reinvestment in Jobs, Communities and Forests:The Benefits and Costs of a National Program for Road Removal on U.S. Forest Service Lands, A Preliminary Analysis. Center for Environmental Economic Development. 2003

Funding Sources for Road Decommissioning Projects. Wildlands CPR May 2006

Global warming

NEPA requires federal agencies to make a number of considerations that we specifically urge the USFS not to overlook. NEPA requires the USFS to "insure that presently un-quantified environmental amenities and values" are given consideration, "recognize the worldwide and long-range character of environmental problems and thus support international efforts to prevent declines in the world environment," and "initiate and utilize ecological information in the planning and development of resource-oriented projects." 42 U.S.C. § 4332, 40 C.F.R. § 1507.2.

While global warming may have been categorized as "un-quantified" five years ago, it is no longer such an abstraction. In an August 2007 GAO report entitled, "CLIMATE CHANGE: Agencies Should Develop Guidance for

Addressing the Effects on Federal Land and Water Resources," the Forest Service is identified with other agencies as having not made climate change a "priority."[17] The report goes on to say that the agency has not been provided with much direction on climate change. This does not mean, however, that the science does not already exist.

Data indicates that in 2004, almost seven percent of total greenhouse gas (GHG) production is tied to off-road motorized vehicle use. Natural Resources Canada, Energy Use Handbook, 2006 at 10 – 11 (Canadian Office of Energy Efficiency, Cat. No. M141-11/2004E). This represents an increase of 77.6% from 1990. *Id.* Other sources establish that by 2005, the group of GHG emitters that includes gasoline powered OHVs was injecting approximately 54.4 *trillion* metric tons CO_2 equivalent per year. *See*, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005 (U.S.E.P.A. 430-R-07-002 April 2007) at A-127 (listing "other equipment" emissions for "non-transportation mobile" gasoline engines).

The issue of climate change is particularly relevant to a Forest such as Mt. Hood which has as a centerpiece, Timberline Lodge and the affiliated ski area and the only 12-month skiing in North America. Accordingly, it is crucial that the Forest address this issue in its motorized use designation processes.

Pollution is yet another adverse impact attributable to OHV operation. The majority of OHVs, including motorcycles and ATVs, use 2-stroke engines that are highly polluting (White et al. 1993, Fritsch 1994). According to the Environmental Protection Agency, small engines account for 5 percent of total air pollution, with a significant proportion of this pollution being generated by OHVs along with motorboats, chain saws, and lawn mowers (Fritsch 1994).

The operation of two-stroke engines creates dangerous levels of airborne toxins including nitrogen oxides, carbon monoxide, ozone, particulate matter, aldehydes, 1,3 butadiene, benzenes, and extremely persistent polycyclic aromatic hydrocarbons (PAH). The EPA lists several of these compounds as "known" or "probable" human carcinogens. Benzene, for instance, is a "known" human carcinogen and several aldehydes including butadiene are classified as "probable human carcinogens." All are believed to cause deleterious health effects in humans and animals well short of fatal doses. In addition, two-stroke engines discharge 25-30% of their fuel mixture, unburned, directly into the environment. Unburned fuel contains many toxic compounds including benzene, toluene, xylene and the extremely persistent suspected human carcinogen Methyl Tertiary Butyl Ether (MTBE).

Vegetation can also be adversely impacted by pollution. Pollution from vehicle exhaust contains a number of elements that are damaging to vegetation. While the amount of pollutants emitted by a two-stroke engine are greater than those emitted by a four-stroke engines, the elements in the emissions, except for the unburned fuel emitted by two-stroke engines, are similar and include: 1) carbon

[17] United States Government Accountability Office. Climate Change: Agencies should develop guidance for addressing the effects on federal land and water resources. August 2007. Report is attached.

dioxide which may act as a fertilizer and cause changes in plant species composition (Bazzaz & Garbutt 1988, Hunt et al. 1991, Ferris and Taylor 1995); 2) sulphur dioxide which is taken up by vegetation and can cause changes in photosynthesis (Winner and Atkinson 1986, Iqbal 1988, Mooney et al. 1988); 3) oxides of nitrogen which may be harmful to vegetation or may act as a fertilizer, causing changes in plant species composition (Rogers et al. 1979, Falkengren-Grerup 1986, Iqbal 1990, Wellburn 1990); 4) organic gases such as ethylene, to which plants may be extremely sensitive (Gunderson and Taylor 1988, Taylor et al. 1988); and 5) heavy metals which may cause phytotoxic damage (Atkins et al. 1982). Ozone, which is formed by the photochemical reaction of released nitrogen and hydrocarbons, may also injure plants and affect plant species composition (Reich and Amundson 1985, Becker et al. 1989, Ashmore and Ainsworth 1995, Warwick and Taylor 1995).

Habitat

Mt. Hood National Forest fills many different habitat needs that are detrimentally affected by OHV use. Riparian areas are particularly fragile and susceptible to the effects of OHV use. Allowing OHV use in riparian areas may also be a violation of the Aquatic Conservation Strategy. Recreation Management Standard & Guideline RM-2 of the Northwest Forest Plan states that the agency is required to "adjust dispersed and developed recreation practices that retard or prevent attainment of Aquatic Conservation Strategy Objectives. Where adjustment measures… are not effective, eliminate the practice or occupancy."

For example, there is currently no quantification of the amount of sediment that may be introduced from these activities. NEPA requires the agency to quantify and qualify the extent of direct and indirect impacts as a result of its activities. 40 C.F.R. 1508.8. The USFS must include an adequate discussion in an EIS of the effect that this project will have on sediment input, or it will also violate NFMA, which requires the agency to conserve aquatic resources. 36 C.F.R. 219.27(a)(1). A failure to evaluate the impacts to aquatic systems from all potential sources of sediment would violate NEPA, which requires the USFS to assess the impacts of all activities associated with the proposed project in a single environmental document. 40 C.F.R. 1502.16. Also, a discussion of the cumulative sediment input from this project is necessary according to the MHLRMP, which requires the USFS to drop projects that will not or do not meet Oregon water quality standards. The Northwest Forest Plan (NFP) states "Headwater riparian areas need to be protected, so that when debris slides and flows occur they contain coarse woody debris and boulders necessary for creating habitat farther downstream."(NFP p.B-9)

OHV use will result in significant impacts to vegetation**.** OHV impacts to vegetation can be both direct and indirect and can impact all plant species from grasses to trees. Such impacts may include crushing, breaking, trampling, and reduction of vegetative cover, damage to germinating seeds, and increased erosional forces which can alter the soil structure weakening the plant and its root structure resulting in impaired growth or death (Bury et al. 1977, Weaver and Dale 1978, Lathrop 1983, Wilshire et al 1977, Bury 1980, Griggs and

Walsh 1981, Ikeda and Okutomi 1990, 1992, Povey and Keough 1991, Sheridan 1979, Wilshire et al. 1978). These impacts can, in turn, increase the susceptibility of plants to disease and insect predation. NFMA requires the USFS to provide animal and plant diversity in the national forests. 16 U.S.C. 1604(g)(3)(B). USFS regulations implementing this requirement direct the Service to manage forests for viable populations of native vertebrate and desired non-native species. 36 C.F.R. 219.19. The Forest Service Manual, while not legally binding on the agency, also states that "the team must have the expertise to identify and to evaluate the potential direct, indirect, and cumulative social, economic, physical, and biological effects of the proposed action and its alternatives. FSH 1909.15.12.01, 12.1.

Cumulatively, when the direct and indirect adverse impacts of OHVs are combined with the other adverse impacts of OHVs on soil, the result is fewer and less vigorous plants, reduced plant cover, lowered plant diversity, reduction in plant biomass, adverse changes in plant species composition, increases in density of exotic species, increase in erosion (water and wind) impacts as plant density declines, reduction in fertile topsoil, increased sedimentation resulting in burial of vegetation, increased soil temperatures, and often-severe disruptions to plant successional and nutrient cycling processes (Brodhead and Godfrey 1977, Bury 1978, Cole and Knight 1990, Davidson and Fox 1974, Keddy et al. 1979, Snyder et al. 1976, Webb et al. 1977). The loss and damage of vegetation attributable to the direct and indirect impacts of OHVs, in turn, adversely affects the food and cover needs of wildlife resulting in decreasing populations (Bury 1980). Habitat selections by birds, for example, are influenced by vegetation structure, diversity, composition, and habitat patchiness (James and Wamer 1982, Rotenberry and Wiens 1978, Karr and Roth 1971). Again, NFMA requires that the USFS provide for species diversity, and also NEPA requires the USFS to consider the impact of its activities on all aspects of the environment. 36 C.F.R. 219.26; 40 C.F.R. 1508.25. If the USFS cannot assess the impacts to aquatic systems, habitat, vegetation, and soil as a result of the proposed project, then NEPA demands that the agency prepare an EIS. 40 C.F.R. 1508.27 (requiring an EIS when the effects on the human environment are "highly uncertain or involve unique or known risks"). When such information is lacking or when there are significant questions regarding the impacts of a project, the USFS has an obligation under NEPA to obtain the missing information. 40 C.F.R. 1502.22 (duty to obtain missing information or state why it cannot be obtained).

Enforcement and compliance

Bark is not familiar with any successful attempts at controlling OHV damage on Mt. Hood National Forest. To the contrary, what documentation that we have seen paints a picture of total ineffectiveness (see Baseline Data/No Action Alternative above). However, models from other national forests can be used. Bark recommends that you follow the guidance of the 2007 document released by Wildlands CPR entitled, Six Strategies for Success: Effective Enforcement for Off-Road Vehicle Use on Public Lands (see attached). This document includes proven techniques as demonstrating on five different forests. A summary of the recommendations follows:

1) Make a commitment - Engage in serious enforcement efforts
   - Expand enforcement capacity;
   - Target and intensify patrol efforts;
   - Look for new funding sources; and
   - Do not tolerate damage from off-road vehicles.
2) Lay the groundwork - Create enforceable routes and regulations.
   - Create off-road vehicle route systems with an eye toward enforceability;
   - Make the route systems clear on maps and on the ground; and
   - Implement a system that identifies off-road vehicles or limits their numbers.
3) See and be seen - Engage in visible action and meaningful collaboration.
   - Organize and publicize volunteer labor;
   - Form broad coalitions for public support;
   - Formalize law enforcement collaborations;
   - Create opportunities for citizen reporting;
   - Use nonprofit status to gather money; and
   - Publicize progress.
4) Make riders responsible - Promote a culture shift among peers.
   - Use mass media campaigns to educate riders and cultivate support;
   - Work with off-road community leadership;
   - Focus on common values; and
   - Promote rider responsibility.
5) Use the force - Incorporate technologies that work.
   - Use remote electronic monitoring;
   - Track noise violations; and
   - Track recurring problems and repeat offenders.
6) Fit the punishment to the crime - Make penalties meaningful.
   - Toughen penalties;
   - Consider natural resource damage in determining fines;
   - Add community service as a penalty; and
   - Link off-road violations with other recreational privileges; and
   - Impound vehicles.

A significant issue concerning federal and state agency monitoring and administration of OHV use is that the budget is not adequate for monitoring and riders engaging in illegal activity (cutting new trails, etc.) without monitoring and law enforcement. Without an adequate monitoring budget the designation and closure of OHV trails will have no impact on user activities and Forest Service officials will be unaware of conditions on the ground. Once trails are closed to OHV use, high quality enforcement mechanisms are needed to ensure compliance. "In many national forests, there is [only] one ranger for every million acres of forest. Moreover, there are 380,000 miles of official roads in the national forests, a figure that doesn't include all the user-created ghost roads. The agency has a $10 billion maintenance backlog just on the official roads, so money for closing and preventing unauthorized vehicle tracks is scarce" (Purdy). Mt. Hood National Forest currently has four full-time law enforcement officers.

The General Accounting Office noted in 1997 that ORV areas were being monitored "casually rather than systematically" (Economist). Even if OHV use is prohibited in certain areas, environmental degradation will continue if these prohibitions are not enforced in an organized, methodical way. What will be the cumulative environmental impacts of continued illegal trail usage, including previously legal trails, continued usage of old illegal trails, and new illegal trails that will result from the project? What will the economic impacts be in terms of enforcement of legal usage, destruction to natural resources on all trails, and impacts to revenue generated from non-motorized recreation? NEPA requires full disclosure of direct, indirect, and cumulative economic impacts, identification of environmental effects and values in adequate detail so that they can be compared with economic and technical analyses. 40 C.F.R. 1501.2(a); 1501.2(b); 1502.6; 1502.16; 1502.24; 1507.2(b); 1508.7; 1508.8; 1508.27.

Wildlife

OHV use will result in significant impacts to wildlife. As the flora of an area is adversely impacted by OHVs, the faunal assemblage is also affected. The size, noise, ground impact, speed, ability to travel long distances, and pollutants associated with OHVs, ensure far greater impacts on the environment, including animals, compared to other "non-consumptive" recreational activities. Soil compaction, loss of top soil, dispersal and burial of seeds, damage to vegetation (wildlife food and cover), and disruption of the soil mantle facilitating erosion are just some of the impacts attributable to OHVs which adversely impact wildlife (Bury et al. 1977). Even at low intensity, continual OHV use adversely impacts wildlife by reducing numbers, recruitment, and diversity (U.S. BLM 1975, Byrne 1973).

Boyle and Samson (1985) concluded that motorized recreation poses the greatest threat to wildlife and wildlife habitat as a result of habitat alteration, disturbance, or direct mortality. Indeed many researchers have determined that recreation impacts wildlife (Cole and Knight 1991, Knight and Gutzwiller 1995, Hicks and Elder 1979, MacArthur et al. 1982, Povey and Keough 1991, Schultz and Bailey 1978, Yalden and Yalden 1990). Recreational activities, including motorized and non-motorized activities, can impact wildlife in four fundamental ways: harvesting or killing, habitat modification, pollution, and disturbance (Gutzwiller et al. 1994). OHV recreation causes all four of these impacts.

OHV users may strike animals, intentionally or unintentionally, causing their death. Though consumptive activities (i.e., hunting) have a greater direct impact on animal mortality, so-called "nonconsumptive activities" can also cause or facilitate animal mortality. Several researchers have documented deliberate harassment of wildlife by OHVs (Corbet 1970, Curtis 1974, Baldwin 1970, Stace-Smith 1975, Butcher 1972).

A concern that will need to be thoroughly analyzed during planning is the impact of OHV use within the proposed areas on the Spotted Owl. Many of the proposed areas have preferred habitat for Spotted Owls, or documented Spotted Owl sightings. The USFS should discuss habitat loss and disturbance in an

EIS, as well as the cumulative impact to the population (i.e., the incremental impact of the action when added to other past, present, and future actions on the same resources, such as LSR, spotted owl critical habitat, and riparian reserves, specifically in Spotted Owl habitat areas). 40 C.F.R. 1508.7

If new roads are constructed to provide for increased OHV demand, it will fragment wildlife habitat thereby harming many species. Roads and associated human activities may impact the behavior and survival of many populations of large mammalian carnivores (Thurber et al. 1994, Jensen et al. 1986, Van Dyke et al. 1986, McLellan and Shackleton 1988, Mech et al. 1988, Brody and Pelton 1989, Lovallo and Anderson 1996). Wide-ranging species are particularly impacted by increased road densities that often accompany human-caused forest fragmentation. Many species respond to road density and human use of roads by altering movement or activity patterns or shifting home ranges

In their study of elk and deer distribution in relation to roads, Rost and Bailey (1979) determined that deer and elk avoid roads, particularly areas within 200 meters of heavily traveled roads. Rost also found that deer avoided heavily traveled roads more than less-traveled roads, but also avoided dirt roads used only by 4-wheel drive vehicles, trail bikes, and hikers (See also, Rost 1975). Rost and Bailey (1979) concluded that deer and elk avoid roads to an extent that is detrimental to their welfare as a result of displacement or avoidance from important habitat to lower quality habitat and the concomitant decrease in nutrition (Batcheler 1968). These impacts can be exacerbated either by expanding the road system or through an increase in traffic volume. There needs to be an analysis of the cumulative habitat loss and disturbance, and how it will affect deer and elk. This needs to be included in an EIS to satisfy NEPA's requirement that the agency assess the cumulative impacts of its actions. 40 C.F.R. 1508.7.

Roads may also adversely impact other species, including small mammals and their habitats. Oxley et al. (1974) determined that roads greater than 20 meters in width pose a barrier to small rodent travel.

The ecological impact or zone of influence of a trail or road may extend up to 100 meters or more on each side (Tyser and Worley 1992, Miller 1996, Miller and Knight 1995). The principal impact of a trail or road is habitat fragmentation. Fragmentation reduces the overall suitability and availability of habitat for plants and animals and, therefore, is considered a major threat to the conservation of biodiversity (Miller and Knight 1996, Talbert 1997). Habitat fragmentation impacts animal populations in many ways including decreasing species diversity and a reduction in density of some animal species in the resulting smaller patches (Arnold et al. 1995, McIntyre 1995).

Fragmentation also increases the amount of "edge affected" habitat while decreasing the availability and suitability of "interior" habitat (Matlack 1993, Thompson 1994, HaySmith and Hunt 1995, Reed et al. 1996) to the detriment of species that require interior habitat (Thompson 1994, Wilcove 1985, Talberth 1997). Miller and Knight (1995), for example, found that two grassland and

five forest species increased in abundance with increasing distance from trails (See also, Temple 1986, Wilcove and Robinson 1990).

Indirectly, the noise generated by OHVs can adversely impact animals, impairing feeding, breeding, courting, social behaviors, territory establishment and maintenance, increasing stress, and/or by making animal or their young more susceptible to predation (Janssen 1978, Weinstein 1978, Luckenbach 1975, Wilshire et al. 1977, EPA 1971, Bury 1980, Burger 1981, Vos et al. 1985). According to the Environmental Protection Agency, noise acts as a physiological stressor producing changes similar to those brought about by exposure to extreme heat, cold, pain, etc. (EPA 1971). The EPA states that:

"Clearly, the animals that will be directly affected by noise are those capable of responding to sound energy and especially the animals that rely on auditory signals to find mates, stake out territories, recognize young, detect and locate prey and evade predators. Further, these functions could be critically affected even if the animals appear to be completely adapted to the noise (i.e., they show no behavioral response such as startle or avoidance). Ultimately it does not matter to the animal whether these vital processes are affected through signal-masking, hearing loss, or effects on the neuro-endocrine system. Even though only those animals capable of responding to sound could be directly affected by noise, competition for food and space in an ecological niche appropriate to an animal's needs, results in complex interrelationships among all the animals in an ecosystem. Consequently, even animals that are not responsive to or do not rely on sound signals for important functions could be indirectly affected when noise affects animals at some other point in the ecosystem. The 'balance of nature' can be disrupted by disturbing this balance at even one point."

Furthermore, the EPA anticipates that the consequences of a loss of hearing ability could include a drastic change in the prey-predator situation. It states:

> The animal that depends on its ears to locate prey could starve if auditory acuity decreased, and the animal that depends on hearing to detect and avoid its predators could be killed. Receptions of auditory mating signals could be diminished and affect reproduction. (Masking of these signals by noise in an area could also produce the same effect). Detection of cries of the young by the mother could be hindered, leading to increased rates of infant mortality or decreased survival rates.

The USFS has an obligation to make a population-based analysis and current surveys for sensitive species that are listed or proposed for listing, and MIS species that have been reported or are likely to utilize the project area. Without this information, there is a significant level of uncertainty regarding the level of impact this project will have on listed species in the planning area. NEPA requires that when data is not available, an agency should recognize the lack of data and explain why it was not feasible to obtain. 40 C.F.R. 1502.22. The ESA prohibits the FS from going forward with proposed projects without ensuring that the

project will not result in jeopardy to the species. In light of this, an EIS should be prepared. Also, NEPA requires the agency to use only high quality science and to obtain data when it is missing yet necessary to make an informed decision. 36 C.F.R. 219.27(a)(6); 40 C.F.R. 1503.24 (scientific accuracy), 1502.22 (incomplete or unavailable information). Without such data, the USFS must do an EIS.

Non-motorized recreation

Recreation is a very important aspect of Mt. Hood National Forest. It "is an urban national forest, as more than two million people in the greater Portland, Oregon, and Vancouver, Washington, areas live within a two-hour drive of the Forest. More than six million people from the U.S. and around the world visit the Forest annually…Outdoor recreation has replaced timber as the local area's economic generator" (p. 2 Stakeholders assessment). Because recreation plays such a large role as a use and economic generator for the forest, we must consider the implications of the OHV planning on all types of recreation, including hiking, camping, mountain biking, horses, hunting and fishing, etc. OHV use can have adverse impacts on non-motorized forest users (Joslin and Youmans 1999). OHV Planning should minimize conflicts between different recreational interests and acknowledge non-motorized and primitive recreation demands.

Soil and water quality

OHV use will result in significant impacts to soils. According to the United States Geological Survey, based on an 18-month study of OHV impacts to more than 500 soils from more than 200 sites in various climatic zones and with different vegetative cover, "all soil types examined are vulnerable to OHV damage, except certain dry-lake deposits (if not driven on after a rain) and some clay-rich soils on low slopes (less than 10 degrees)(Snyder et al. 1976)."

In addition to soil texture, OHV impacts on soil are influenced by a number of factors, including soil depth, slope, vehicle type, vegetative cover, and amount and time of use (Wooding and Sparrow 1979). Vehicular damage to soils is the result of shear and compaction (Harrison 1976, 1980). Shear is defined as slippage between strata or particles in planes parallel to the soil surface (Harrison 1976). Shear damage occurs because of wheel slip and is an inherent impact of OHV use since wheel slip is essential for forward propulsion. Shear impacts are a function of differential velocity or slippage between, for example, the tire and the substrate. The soil substrate will determine the potential for slippage which, in turn, influences the severity of the shear impacts. In addition, the shape of the tire also influences shear impacts with an increase in shear as tire pressure decreases. Compaction is caused by compression of the soil surface reducing the interstitial space between soil particles (Lull 1959, Davidson and Fox 1974). Compaction and shear are influenced by the amount of pressure on the substrate.

The fundamental impact of OHVs on soil is to cause an increase in soil bulk density (Iverson et al. 1981, Wilshire and Nakata 1976, Webb 1983, Sheridan

1979, Griggs and Walsh 1981). This impact, which is also referred to as compaction, results in a cascade of adverse environmental impacts including increased erosion, increased runoff, increased soil surface strength, reduced plant production, inhibition of seed germination, impairment of root penetration and growth, alteration in plant succession, reduced soil permeability to air and water, reduced soil moisture, reduction in soil depth and organic matter, reduction of groundwater recharge, alteration of hydrological flows, reduced nutrient cycling, increase in heat conductivity and a decrease in heat capacity of soil, and augmentation of colonization by exotic species (Iverson et al. 1981, Wilshire and Nakata 1976, Sheridan 1979, Manning 1979, Wilshire et al. 1977, Mortensen 1989, Berry 1980, Griggs and Walsh 1981, Eckert et al. 1979, Liddle and Moore 1974, Liddle 1975, Liddle and Grieg-Smith 1975, Kuss 1986, Kuss and Hall 1991). These impacts are both short and long term and can trigger even greater habitat impacts including adverse affects on the flora and fauna in an ecosystem (MacMahon 1987, Hendrix et al. 1992, Coleman et al. 1992, Wilshire et al. 1977). Because OHV impacts to soils can be synergistic and may occur over many years, the cumulative impacts of OHV impacts may not be known for years or decades after the original disturbance (Vollmer et al. 1976).

Iverson et al. (1981) determined that soil bulk density increases logarithmically with the number of vehicle passes; that is, the largest increase per pass occurs during the first few passes (See also, Webb 1982, Webb 1983). An increase in soil density is generally greatest a short depth below the surface instead of actually at the surface (Parker and Jenny 1945, Arndt 1966, Snyder et al. 1976) but density changes have been measured to a depth of one meter (Snyder et al. 1976, Wilshire et al. 1977).

Trail characteristics (i.e., location) also influence erosion potential. OHV trails at higher elevations generally experience more severe erosion than trails at lower elevations (Willard and Marr 1970, Marion 1994), trail depth is deeper (Burde and Renfro 1986), and erosion rates are greatest during the summer (Dale and Weaver 1974). These impacts may be caused by the higher precipitation rates and extended period of snowmelt in the mountains resulting in muddy soils and a greater potential for erosion, more severe freeze/thaw cycles resulting in more loose soil augmenting erosion rates, and/or increased exposure to wind erosion (Leung and Marion 1996).

Increased erosion can result in a decline in water quality (Miller 1970) due to an increase in sediment and dissolved matter, including plant nutrients (Wilshire et al. 1977), which not only may adversely impact aquatic systems and species but also will reduce the fertility of the remaining soil for plant growth. The Clean Water Act and Oregon Law indicate that the agency is precluded from degrading the habitat of organisms that depend on aquatic habitat. OAR 340-041-0027 (2000) (“Waters of the state shall be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities”); 33 U.S.C. 1311(b)(1)(C)(1994); 40 C.F.R. 131.10(h)(1)(1998). In addition, a reduction in soil water content attributable to OHV compaction impacts, also corresponds to less locally available water (Webb 1983, Wilshire 1983) which, in turn, influences soil biota activity, nitrogen cycle dynamics (Torbert and Wood 1992), vascular plant vigor and reproduction (Crawford

1979, Skujins 1984), and decomposition rates of soil organic matter (West 1981). OHV-caused soil disturbance can also facilitate wind erosion.

Finally, soil disturbance attributable to OHVs facilitates the colonization of exotic and weedy species (Mooney and Drake 1986, Hobbs and Heunneke 1992, Pickett and White 1985, Kotanen 1997, Johnstone 1986) which can drastically alter the ecology of an area. This not only results in a decline in native species as a result of competition with more disturbance-tolerant exotics, but it also can cause the spread of soil-borne diseases.

The affects of OHV use on soil and water quality should be given special consideration regarding the following area-specific concerns;

Safety

The increase in OHV use would threaten public safety. Injury and mortality statistics remain high and should be of concern to the Forest Service in authorizing the use of these vehicles on and off of forest roads and trails. According to the CPSC (Consumer Product Safety Commission), 47 percent of ATV injuries documented in 1997 involved children compared to 46 percent in 1985. The total number of children involved in these incidents, however, declined from 42,700 in 1985 to 21,300 in 1997. Ninety-five percent of the injured children were operating ATVs larger than recommended for their age. While the CPSC reported a 72 percent reduction in the overall number of injuries, 22 percent of the total injuries (to children and adults) involved head injuries (i.e., concussions or other brain injuries) and 65 percent of those suffering such injuries were not wearing helmets. Overall, the CPSC estimates that there have been 3,200 ATV-related deaths since 1985. Over 35 percent of the ATV deaths involved children, 87 percent involved males, and 85 percent involved the ATV driver. Because young children often lack the physical size and strength, cognitive abilities, and fine motor skills to operate ATVs properly, their risk for injury is greater (Editorial Note in Helmkamp et al. 1999). In 1997, the CPSC estimated that ATV drivers aged 15 years were 2.5 times more likely than drivers aged 16-34 years and 4.5 times more likely than drivers aged 35-54 years to be injured (cited in Helmkamp et al. 1999). Collisions accounted for 56 percent of deaths while overturns were responsible for 28 percent of deaths. While the CPSC reported that the overall risk of ATV related injury has declined since the 1980s, the factors associated with the risk of injury remain the same as those identified in 1985 and 1989 risk analyses and include the same types of warned against behavior previously observed.

Conclusion

Bark has spent the last ten years working in Mt. Hood National Forest monitoring timber activities in all corners of the forest. We have witnessed the increasing damage to the environment from the road system and OHV use. We have implemented two road inventories both of which have illustrated a shocking disconnect between what is documented and what is truly happening in the forest. Furthermore, we have enjoyed an increasingly strong relationship with Forest Service staff who have shared with us their frustrations at the

inability to control the damage being done by OHVs. Bark is excited by the opportunity to strengthen our relationship by working together to address the various threats posed by unmanaged travel in Mt. Hood National Forest. We believe that this is only possible by withdrawing the current Plan, and expanding the purpose and need to include the larger transportation system, non-motorized recreation, and watershed health. The Restore Mt. Hood Coalition has attempted to provide an outline of how it believes this is possible, and Bark looks forward to hearing from you about this opportunity.

Sincerely,

Alex P.Brown

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APPENDIX A

Jennie O'Connor
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MHNF Travel Plan Team:

Please accept these comments from the Restore Mt. Hood Coalition (Coalition) in response to the proposed Mt. Hood National Forest Off-Highway Vehicle (OHV) Travel Management Plan (OHV Plan). The Coalition commends the Forest Service for recognizing the importance of controlling OHV abuse in Mt. Hood National Forest (MHNF) – all Americans have the right to enjoy our public forests, but no one has the right to destroy them or to ruin the experience of other forest visitors.

The Restore Mt. Hood Coalition represents recreation and conservation organizations committed to promoting and preserving Mt. Hood National Forest's world-class recreation opportunities and healthy ecosystems. We believe that a Mt. Hood Travel Plan should provide a framework for all users and not just OHV riders. Therefore, we respectfully request that the Forest Service expand the scope of the OHV Plan to simultaneously address the impacts of OHV use AND the crumbling road system on ecosystem health and quiet recreational opportunities. The result will be a stronger Mt. Hood recreational community, a more robust recreation infrastructure, improved relations with adjacent landowners and communities, and healthier ecosystems.

Travel plan regulations intent broad, Mt. Hood plan narrow

The nationally-mandated travel planning process is designed to create a framework for current and future travel infrastructure decisions. The regulations (36 CFR 212,251,261, and 295) clearly state that the Forest Service should address "*all* motorized travel" and identify the "minimum road system" necessary. *Emphasis added.* However, the purpose and need of the proposed OHV Plan addresses only two small parts of larger travel planning needs on Mt. Hood. The approach described in the Notice of Intent states that the "National Environmental Policy Act (NEPA) process will only address OHV use and motorized access to dispersed camping." In order for the true intent of travel planning to be realized, the Forest Service must address off-road user needs simultaneously with the needs of quiet recreationists, other forest visitors, and the ecosystem impacts of the various modes and conditions of travel throughout the forest.

Multiple Forest Service documents raise concerns associated with the extensive road network within MHNF (~3,464 miles), including the need for greater road closures, decommissions, and maintenance. The 1999 Mt. Hood Access and Travel Management Plan (ATM) found that 49% of the classified road system is "…closed now or could be closed or decommissioned in the future" to mitigate

the threat to fish and wildlife habitat and drinking watersheds. The Mt. Hood National Forest 2003 Roads Analysis states that "preliminary estimates indicate that the Forest Service is underfunded by more than 50% to maintain the current road network to full objective maintenance-level standards." Despite the 1999 and 2003 analyses, there is limited information on the effectiveness of current road closures and decommissioning efforts. Bark, a Coalition member, conducted a forest-wide road inventory and found that out of 335 road segments surveyed, twenty-six percent, or eighty-seven road segments, had clear signs of OHV use despite being labeled "closed" by the Forest Service. Without the elimination of unneeded roads, the Forest Service has a limited ability to prevent roads listed as closed from being abused or further damaged.

Mt. Hood National Forest deserves a vision

The Coalition has adopted a vision for Mt. Hood National Forest that will successfully meet the intent of USFS travel management regulations as well as the needs of all stakeholders. Given the absence of a vision offered by the Forest Service to guide the OHV Plan and related travel management decisions, we encourage the Forest Service to adopt language similar to the following citizen-generated vision.

The Restore Mt. Hood Coalition envisions a future for Mt. Hood National Forest that balances long-term ecosystem health with diverse recreation opportunities by protecting the health and safety of different users and minimizing conflicts with adjacent landowners and communities.

In order to implement this vision, we propose the OHV and travel management plan include the following outcomes:

- The Coalition supports a travel planning process that designates OHV areas only where it is demonstrated that there will be adequate enforcement and minimal user conflicts.
- The Coalition supports a travel planning process that includes the evaluation of the year-round impacts of motorized travel on existing roads, trails, and areas with the goal of using this information for future recreation planning and management decisions.
- The Coalition supports a travel planning process that uses quantifiable standards to determine roads that should remain open or be improved, roads that should be closed through passive decommissioning, and roads that should be removed through active decommissioning.
- The Coalition supports a travel planning process that attains the minimum road system necessary to balance Forest Service administrative needs with recreational needs and long-term ecosystem health.

Overcoming obstacles

The Coalition believes that by working together with the Forest Service and other stakeholders that the current scope of travel planning can be expanded to

implement a comprehensive, yet timely, Mt. Hood Travel Plan. Based on two meetings with Mt. Hood National Forest Supervisor, Gary Larsen, we understand that our vision echoes similar sentiments within the agency: nationally, as described in the 2001 Roads Rule and 2005 Travel Management Rule, and locally, as described in the 1999 ATM and 2003 Roads Analysis. However, Mr. Larsen has expressed to us his concern in accomplishing a more comprehensive Travel Plan due to the following four constraints:

- **Staff resources**: The Forest Service does not have the resources to do the NEPA analysis (i.e. write an environmental impact statement on removing, maintaining, or upgrading roads).

- **Politics:** The Forest Service feels that the OHV proposal is already contentious enough and is concerned about the added controversy of road removal.

- **Timing:** The Travel Plan must be completed by November 2009.

- **Regional agency direction**: Internal direction is to focus on OHV planning and not open up travel planning to non-OHV needs.

Common sense solutions to real problems

The Coalition is committed to working with the Forest Service to circumvent these constraints and broaden the scope of the travel planning process to comply with both regulatory mandates and previous Forest Service recommendations for Mt. Hood roads. The Coalition suggests the following resources and solutions for working together on this process:

1. ***Staff resources and funding:*** In the last year, the Coalition has contributed over 2,000 hours of volunteer time inventorying the Mt. Hood road network. Data has been collected on road closures breached by OHVs, failing culverts, and recreation demands. Recognizing that information collected by non-professionals may not provide sufficient data for a comprehensive Travel Plan and Environmental Impact Statement (EIS), the Coalition has secured funding for consultation services to assist the agency's data collection and analysis. The Forest Service has an extensive history of working with multiple Portland-based consulting firms in the collection and analysis of data for a variety of NEPA processes. The Coalition encourages entering into a cost-share agreement with the Forest Service were it to expand the scope of the travel plan to address forest-wide travel needs while seeking opportunities for active and passive road decommissioning.

2. ***Timing:*** We believe that the following Forest Service documents serve as a model for expanding the scope of the planning process by providing baseline information and identifying existing data gaps: the 1990 Mt. Hood Land and Resource Management Plan, 1999 ATM, 2003 Roads Analysis, 2004 National Visitor Use Monitoring Project, 2007 Oregon State Comprehensive

Outdoor Recreation Plan, various 5th field watershed analyses, and guiding regulations found at 36 CFR 212,251,261, and 295.

Federal contracting requirements allow for an abbreviated procedure when working with previously certified contractors. The Coalition would be supportive of utilizing such a process to identify a consultant in a timely manner and begin implementation as soon as possible. We believe that the combination of existing documentation and guidance, flexibility in federal contracting process, and willingness of the Coalition to work with the Forest Service facilitates the development of a comprehensive Travel Plan to be completed well within the September 2009 goal.

3. ***Politics:*** Removing unnecessary roads is only one small (although well documented) component of a truly comprehensive travel plan. The Coalition represents 50,000 Oregonians who recreate in Mt. Hood National Forest, depend on it for drinking water, and believe that a truly comprehensive Travel Plan is less controversial than one which only caters to one user group.

A timeline for a comprehensive Travel Plan

The Restore Mt. Hood Coalition realizes that time is limited, but we also want the Forest Service to move forward in a way that is inclusive and thorough. The Coalition is sensitive to the September 2009 timeline for this process. By moving forward with an expanded scope the Coalition feels the process will be more effective and diminish the likelihood of an administrative appeal. In order to realistically accomplish the goals outlined above, we propose the timeline below that we believe will allow for the completion of the necessary Motor Vehicle Use Map by the September 2009 deadline.

- Re-issuance of Notice of Intent following required travel analysis February 2008
- Publication of Draft EIS August 2008
- Final EIS and accompanying Record of Decision completed November 2008

We understand the current constraints under which the Forest Service is working and offer resources and potential solutions to help alleviate some of the burden. We hope the Forest Service will move forward with an inclusive and transparent process that meets regulatory mandates, addresses ongoing resource impacts, and is responsive to diverse stakeholder concerns. By broadening the scope of the OHV Plan to be more consistent with the intent of the November 2005 Travel Management Rule, the Forest Service, the Coalition, and other stakeholders can work together to create a long-term and sustainable vision for MHNF that results in a stronger Mt. Hood recreational community, a more robust recreation infrastructure, improved relations with adjacent landowners and communities, and healthier ecosystems.

We would appreciate as soon as possible confirmation of your receipt of this letter and a written response to our proposals outlined herein by November

30th. It is our desire to meet with the plan ID team and forest supervisor to discuss these proposals in greater detail.

Sincerely,

The Restore Mt. Hood Coalition

APPENDIX B

Mt. Hood National Forest road and OHV chronology:

- In February, 1998, the Forest Service Chief laid out an agenda for the agency that focused on road issues and most forests responded with the creation of an Access and Travel Management plan (ATM). Mt. Hood's ATM was completed in 1999 and determined that nearly half (49%) of the forest roads were candidates for closure or permanent decommissioning. The ATM, however, provided no proposed action or NEPA analysis of the road network.

- In 2003, the Forest Service issued a closure to off-road travel in LaDee Flat.

- In January, 2001, the Forest Service issued the "Roads Rule." A modification of 36 CFR 212, the Roads Rule required the agency to identify the "minimum road system" that is commensurate with resource objectives, and minimize adverse environmental effects associated with road construction, reconstruction, and maintenance. This information was to be on a single Roads Atlas (Mt. Hood's atlas is a big map with highlighter pen marks found in the office of the road engineer). Equally important was the rule's requirement to identify unneeded roads that should be decommissioned and to give priority to decommissioning those roads that pose the greatest risk to public safety or environmental quality.

- In 2003, Mt. Hood responded to the Roads Rule by completing a GIS map-based Roads Analysis that once again echoed the ATM's call for decommissioning and closing roads that are a financial burden and an ecological threat. Once again though, the 2003 document did not provide the environmental analysis needed to move forward, "Roads Analysis is not a decision making process, however the opportunities identified with the analysis may lead to proposals that initiate the Federal decision making process under the National Environmental Policy Act."

- In early 2005, the Forest Service holds two open houses, one in Sandy and one in Hood River. Bark staff in attendance described the process, in which OHV riders were asked to mark areas on the map where they want to ride. The invitations to the open houses specifically identified OHVs, without referring to other uses of the forest that may or may not conflict with OHVs.

- In November of 2005, the final Travel Management Rule was completed, taking the Roads Rule a step further and requiring the annual publication of a Motor Vehicle Use Map, designating *those roads, trails, and areas that are open to motor vehicle use*. The most dramatic change, however, is the management of Off-Highway Vehicles in the National Forest System, which was changed from an "open unless posted closed" to a "closed unless posted open" management scheme. The mandate is for all forests to have a Motor Vehicle Use Map complete by the end of 2009.

- In March 2007 the Forest Service published a set of draft directives for implementing the Travel Management Rule, including extensive changes to the

Forest Service Manual and Handbook. Notably, these directives outlined a process called "travel analysis" which was designed to replace the previous roads analysis procedure and expand the scope of this pre-NEPA analysis to all motorized routes. The draft directives carry forward the duty to address "minimum system" issues and decommissioning priorities, and require that the agency consider the ability to enforce and other fiscal considerations. The draft directives also include a reporting provision for capturing the analysis.[18]

- Early in 2007 Bark, Mazamas, and other stakeholders informally requested that the Forest Service hold one of its "pre-scoping" open houses in Portland. The Mazamas offered its space and Malcolm Hamilton, Mt. Hood Recreation Planner, agreed that they would do so. In June, the Forest Service mailed first-class invitations to stakeholders to attend pre-scoping open houses in Sandy and Hood River, but not Portland. Bark received this letter approximately ten days before the first meeting was to be held. Similar to the 2005 open houses, the Forest Service presented its proposal to create six OHV areas, almost identical to those in the proposed action, without addressing other recreation or motorized travel.

- In June, 2007, Representatives from Bark and the Mazamas met with Mt. Hood National Forest Supervisor, Gary Larsen, to discuss issues regarding the scope of travel planning activities on the Forest. At the meeting Supervisor Larsen reiterated the Forest Service's documented position that Mt. Hood has too many roads and needs to do something about it, but expressed an unwillingness to

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[18] **Proposed FSM Section 712(1)(6):**
In conducting travel analysis, simultaneously address issues pertaining to identification of the minimum road system and travel management decisions. Travel analysis may be conducted in conjunction with landscape or watershed analysis.

Proposed FSM Section 712(4)(3):
Use travel analysis to evaluate opportunities and priorities for road reconstruction, decommissioning, and conversion to other uses.

Proposed FSM Section 712(4)(4):
When identifying and recommending changes to travel management decisions:
…
h. Coordinate travel analysis with Law Enforcement and Investigations Staff regarding the ability to enforce proposed travel management decisions.
…
k. Consider the Forest Service's ability to administer and maintain roads and trails.

Proposed FSM Section 712(4)(5):
Produce a report and accompanying maps that document the recommended minimum road system and the social and environmental opportunities, issues, risks, and priorities for future road management. Identify proposed changes to travel management direction and the forest transportation system. Subsequent environmental analysis should build upon these proposed changes to the extent necessary to facilitate a reasoned choice among alternatives. The report should identify access needs and opportunities based on current budget levels and realistic projections of future funding.

expand the scope of travel planning due to resource, political, policy, and timing constraints.[19]

- In September 2007 the FS initiated formal scoping by publishing this NOI. It is unclear whether the agency conducted travel analysis as described in the draft directives for implementing the rule or documented its analysis in the required report prior to publication of the NOI.

[19] Constraints as identified by Supervisor Larsen:

Staff resources: The Forest Service does not have the resources to do the NEPA analysis (i.e. write an environmental impact statement on removing, maintaining, or upgrading roads).

Politics: The Forest Service feels that the OHV proposal is already contentious enough and is concerned about the added controversy of road removal.

Timing: The Travel Plan must be completed by November 2009.

Regional agency direction: Internal direction is to focus on OHV planning and not open up travel planning to non-OHV needs.