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EAST FORK SCOTT PROJECT SCOPING

Thank you for accepting these comments concerning the East Fork Scott Project from the Klamath Siskiyou Wildlands Center (KS Wild), the Environmental Information Protection Center (EPIC) and the Klamath Forest Alliance (KFA). Please ensure that we are provided hard copies of forthcoming NEPA and decision documents concerning this project.

We greatly appreciate the focus of this project on small-diameter thinning, reduction of current high road densities, and retention of older forest types. Thank you for these proposals to restore resilient forest and watershed conditions to the East Fork Scott River Watershed. Our primary initial concerns involve logging in riparian reserves, logging large trees, and the potential to downgrade forests currently providing existing spotted owl Nesting, Roosting and Foraging (NRF) habitat. Given the extensive and unsustainable existing road system, we strongly urge the Forest Service to please forego the additional "temporary" logging road construction identified in the scoping notice.

Retain Large Trees

As acknowledged in the Landscape Analysis, this planning area is in severe deficit for trees in large "decadent" size class. The purpose and need for the project is designed to help address hazardous fuels, forest health and water quality. There is no other single action the agency can take to ensure a successful collaborative outcome that achieves the project purpose and need than to implement a diameter limit for this project that retains large trees. Please consider implementing a meaningful conservation sideboard to retain large diameter trees in this project.

Large trees provide disproportionate hydrological benefits to the Scott River Watershed. The crowns of such trees help moderate peak flow events via canopy cover. Large live trees are the only source of future large down wood, which also helps to filter and moderate water flow throughout the year.

Finally, please note that in the Thom Seider FEIS (page 343) both the Klamath National Forest and the Environmental Protection Agency acknowledge that the diameter of conifer trees acts as a "measure of resistance to fire." Hence the forest resiliency goals of

the East Fork Scott project may be best met by retaining such trees where they still exist in the watershed.

How Many Large Trees Will Be Removed?

Variable retention and hazard tree logging prescriptions in older forest types may involve the removal of large-diameter trees that are in severe deficit in this planning area. Similarly, large trees may be removed to facilitate landing establishment, road construction and yarding corridors. Hence it is essential that that public and the Decision Maker know via NEPA the number and size of trees to be logged. This is particularly relevant for trees >30"dbh. Please estimate the number mature trees (20-30" dbh) and the number of "old growth" trees >30" dbh that would be logged from each unit. The most informative way of disclosing this data would be to report the pre-logging number of trees in these size classes and the post-logging number and size of trees in these size classes.

Logging Older Forests and Spotted Owl Habitat

Pages 10-11 of the scoping notice indicates that the largest single treatment type proposed in the East Fork Scott project is the logging of 2,571 mid-late seral forest types. We believe that the agency can best accomplish the project purpose and need through a focus on thinning early seral stands. If the Forest Service intends to log existing mid-late seral forests in the planning area then it is essential that large-diameter trees, multi-layer canopy cover and late-successional forest characteristic be retained. An upper diameter limit, as has been implemented in other KNF timber sales (such as the Happy Camp LSR projets), would ensure retention of large-diameter fire-resilient trees. We ask the Forest Service to recognize that not every acre of mid-late forest stands in the project area need treatment. In particular we ask that the project avoid downgrading or removing spotted owl Nesting, Roosting and Foraging habitat.

Riparian Reserve Logging

We are very skeptical of proposed commercial thinning in riparian reserve forests. The negative impacts from ground-based or cable yarding are often significant and long-term. We encourage the Forest Service to consider non-commercial thinning, lopping and prescribed fire treatments that do not require yarding logs through the riparian reserve land use allocation.

Please consider the findings regarding riparian reserve logging that are contained in this document:

-Frissell, C.A. 2013. Aquatic Resource Protections in the Northwest Forest Plan: Evaluating Potential Consequences of Proposed Riparian Reserve Reductions for Clean Water, Streams and Fish.

Please Do Not Construct Additional Temporary Logging Roads

Please consider the following statement by your colleagues in the Rogue River Siskiyou National Forest on page III-6 of the 2010 Rustler EA in which they conclude that:

> *Temporary roads are also expected to have an irretrievable reduction in soil productivity since they are bladed (soil is mixed and displaced) and compacted. Even once rehabilitated, the soil profile is modified to a degree that may take many years to return to the productive state of the undisturbed forest soils adjacent to it.*

The November 2000 (Forest Service) National Forest Roadless Area Conservation FEIS p 3-30 says that temporary roads are not designed and constructed to the same standard as classified roads and therefore result in a "higher risk of environmental impacts."

The Forest Service Roadless FEIS also says:

> *"Temporary roads present most of the same risks posed by permanent roads, although some may be of shorter duration. Many of these roads are designed to lower standards than permanent roads, are typically not maintained to the same standards, and are associated with additional ground disturbance during their removal. Also, use of temporary roads in a watershed to support timber harvest or other activities often involves construction of multiple roads over time, providing a more continuous disturbance to the watershed than a single, well-designed, maintained, and use-regulated road. While temporary roads may be used temporarily, for periods ranging up to 10 years before decommissioning, their short- and long-term effects on aquatic species and habitats can be extensive."*
>
> *-Roadless Area Conservation FEIS — Specialist Report for Terrestrial and Aquatic Habitats and Species prepared by Seona Brown and Ron Archuleta, EIS Team Biologists*

Please note that BLM specialists have come to similar conclusions. A BLM soils scientist recently spoke to the restorative value of decommissioning "temporary" roads. He says: "[w]hat I have seen so far have been nothing more than modified rock rippers and little lateral fracture of the soil occurs and the extent of de-compacting is very limited." Coos Bay BLM, Big Creek Analysis file, section F, Soils Report. Page 4.

Hence, East Fork project planners should not assume that new roads will have little environmental effect because they are "temporary." In fact, scientific research has shown exactly the opposite. *Effectiveness of Road Ripping in Restoring Infiltration Capacity of Forest Roads.* Charles H. Luce, USDA Forest Service Intermountain Research Station, 1221 S. Main, Moscow, ID 83843. September 1996. Restoration Ecology, Vol. 5, No. 3. page 268.

Research results, published in *Restoration Ecology,* show there is nothing temporary about temporary roads, and that ripping out a road is not the equivalent to never building a road to begin with. "The saturated hydraulic conductivity of a ripped road following three rainfall events was significantly greater than that of the road surface before ripping... most saturated hydraulic conductivities after the third rainfall event on a ripped road were in the range of 22 to 35 mm/hr for the belt series and 7 to 25 mm/hr for the granitics. These conductivities are modest compared to the saturated hydraulic conductivity of a lightly disturbed forest soil of 60 to 80 mm/hr." *id*.

Even this poor showing of restoring pre-road hydrologic effects worsened with repeated rainfall. "Hydraulic conductivity values for the ripped treatment on the granitic soil decreased about 50% with added rainfall ($p(K1=K2)=0.0015$). This corresponded to field observations of soil settlement and large clods of soil created by the fracture of the road surface dissolving under the rainfall... The saturated hydraulic conductivity of the ripped belt series soils also dropped from its initial value. Initially, and for much of the first event, the ripped plots on the belt series soil showed no runoff. During these periods, run-off from higher areas flowed to low areas and into macropores.... Erosion of fine sediment and small gravel eventually clogged these macropores... Anecdotal observations of roads ripped in earlier years revealed that after one winter, the surfaces were nearly as solid and dense as the original road surfaces." Id. Even though ripped roads increase water infiltration over un-ripped roads, it does not restore the forest to a pre-road condition. "These increases do not represent "hydrologic recovery" for the treated areas, however, and a risk of erosion and concentration of water into unstable areas still exists." Luce, C.H., 1997. *Effectiveness of Road Ripping in Restoring Infiltration Capacity of Forest Roads, Restoration Ecology*; 5(3):265-270.

Over the last few decades, studies in a variety of terrestrial and aquatic ecosystems have demonstrated that many of the most pervasive threats to biological diversity - habitat destruction and fragmentation, edge effects, exotic species invasions, pollution, and poaching - are aggravated by roads. Roads have been implicated as mortality sinks for animals ranging from snakes to ungulates; as displacement factors affecting animal distribution and movement patterns; as population fragmenting factors; as sources of sediments that clog streams and destroy fisheries; as sources of deleterious edge effects; and as access corridors that encourage development, logging and poaching of rare plants and animals.
See Noss, Reed; *The Ecological Effects of Roads*;
http://www.eco-action.org/dt/roads.html

According to independent scientists, the spread of both native and exotic pests and pathogens in many forest systems can be linked to the ready travel corridors provided by extensive road networks. Please note that federal timber sale planners in the BLM Grants Pass Resource Area concluded that in the Deer North EA (page 102) that "roads are one of the main vectors for noxious weed spread and introduction."

- Trees at forest edges created by roads had 2.4 times more gypsy moth egg masses than trees in the forest interior. Bellinger, R.G., F. W. Ravlin and M.L. McManus.

"Forest Edge Effects and Their Influence on Gypsy Moth (Lepidoptera: Lymantriidae) Egg Mass Distribution." 1989. Environmental Entomology. 18: 840-843.

- Forest edges have been found to be source populations for tent caterpillars. Roland, J. "Large-Scale Forest Fragmentation Increases the Duration of Tent Caterpillar Outbreak." 1993. Oecologia 93:25-30.

The biological opinion issued by the National Marine Fisheries Service for PACFISH2 (USDA Forest Service and USDI Bureau of Land Management 1995) identified roads as a primary cause of salmonid decline, and indicated that roads may have unavoidable effects on streams, *regardless of how well they are located, designed, or maintained*.

Attached to these comments you will find the published peer-reviewed article by Daniele Colombaroli and Daniel Gaven entitled Highly Episodic Fire and Erosion Regime Over the Past 2000 Years in the Siskiyou Mountains, Oregon. The study indicates that the past 50 years of logging and road construction have had much greater impacts to sediment loading to watersheds than have wildfire events. These findings are directly relevant to the proposal to construct more logging roads in the East Fork Scott project area.

Also attached to these comments is a peer-reviewed article by Trombulak and Frissell (2000) detailing some of the negative impacts of road construction and use on both terrestrial and aquatic ecosystems. The abstract for the article reads as follows:

Roads are a widespread and increasing feature of most landscapes. We reviewed the scientific literature on the ecological effects of roads and found support for the general conclusion that they are associated with negative effects on biotic integrity in both terrestrial and aquatic ecosystems. Roads of all kinds have seven general effects: mortality from road construction, mortality from collision with vehicles, modification of animal behavior, alteration of the physical environment, alternative of the chemical environment, spread of exotics, and increased use of areas by humans. Road construction kills sessile and slow-moving organisms, injures organisms adjacent to a road, and alters physical conditions beneath a road. Vehicle collisions affect the demography of many species, both vertebrates and invertebrates; mitigation measures to reduce roadkill have been only partly successful. Roads alter animal behavior by causing changes in home ranges, movement, reproductive success, escape response, and physiological state. Roads change soil density, temperature, soil water content, light levels, dust, surface waters, patterns of runoff, and sedimentation, as well as adding heavy metals (especially lead), salts, organic molecules, ozone, and nutrients to roadside environments. Roads promote the dispersal of exotic species by altering habitats, stressing native species, and providing movement corridors. Roads also promote increased hunting, fishing, passive harassment of animals, and landscape modifications. Not all species and ecosystems are equally affected by roads, but overall the presence of roads is highly correlated with changes in species composition, population sizes, and hydrologic and geomorphic processes that shape aquatic and riparian systems. More experimental research is needed to complement post-hoc correlative studies. Our review underscores the importance to conservation of avoiding construction of new roads in roadless or sparsely roaded areas and of removal or restoration of existing roads to benefit both terrestrial and aquatic biota.
-Trombulak, S.C. and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14(1): 18-30.

The cumulative impacts of "temporary" road construction, ORV use, landing construction and widespread tractor yarding on this highly impacted watershed must be fully disclosed in the forthcoming NEPA document due to the ongoing significant impacts to hydrology (and soils) acknowledged.

How Will the Project Address OHV Damage to Meadows and Aquatic Values?

Page 3 of the scoping notice indicates that Off Highway Vehicle use is impacting the ecological function of meadows in the planning area and photo 3 on page 14 illustrates OHV use through a wet meadow off of the 41N06 road. The scoping notice identifies conifer removal and road management actions that are designed to improve meadow conditions, but we are unable to find any references to how continued and foreseeable OHV damage will be addressed. In the forthcoming NEPA document please disclose how the Forest Service will address this aspect of meadow management.

Conclusion

Thank you for proposing a project that thins small-diameter ground and ladder fuels while reducing road density in the planning area. We believe that project objectives could be better met by also providing full riparian reserve protections, avoiding new road construction, and retaining large-diameter trees and protecting spotted owl Nesting, Roosting and Foraging habitat.

Please ensure that we are on your mailing list to receive hard copies of all forthcoming documents regarding this project.

Best regards,

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