Comments on the Soldier-Butler Environmental Assessment from the Flathead-Lolo-Bitterroot Citizen Task Force

Sent electronically to: comments-northern-lolo-ninemile@fs.fed.us April 13, 2019

Introduction

The Flathead-Lolo-Bitterroot Citizen Task Force is an incorporated Montana non-profit organization based in Missoula, Montana. Our organizational mission is to protect the natural features and conditions of the Northern Rockies area and specifically on the Flathead, Lolo and Bitterroot National Forests, its native fish and wildlife and their habitat, including Threatened and Endangered Species. We will work to protect the Wilderness and Wilderness Study Areas, the roadless areas, linkage habitats for wildlife and wild and scenic rivers and maintenance of the land's natural and primitive attributes for our continued use and enjoyment. We will function as a public benefit organization to help educate and inform the public on issues affecting our Area of Concern. We will formally and informally participate in the development of long term management plans for National Forests in our Area of Concern, formally and informally participate in grizzly bear recovery planning and challenge, when necessary, state and federal management plans through the formal appeals process and through litigation.

We support Alternative A, NO ACTION.

Due to the scope of the proposed action a full Environmental Impact Statement must be prepared for this project to continue. The proposal includes mechanical treatments on 7,388 acres, 14.3 million board feet of timber harvest and 3,000 truckloads of logs, 9.4 miles of temporary road construction, 7 miles of new permanent road construction and reversing a decision to decommission 37 miles of roads in grizzly bear security within a designated Demographic Connectivity Area and serious reductions in grizzly bear secure habitat.

Moreover, the scoping for this project was insufficient and did not include critical issues. For example, the last scoping meeting was held in January of 2017, more than two years ago. Since that time the Nine Mile area has been designated by the U.S. Fish & Wildlife Service as a Demographic Connectivity Area (Figure 1) for grizzly bears, meaning occupancy by female/cub groups. Public scoping was not taken on this major issue for regional grizzly bear recovery. The Nine Mile is occupied grizzly bear habitat, as documented by Montana Fish, Wildlife & Parks.

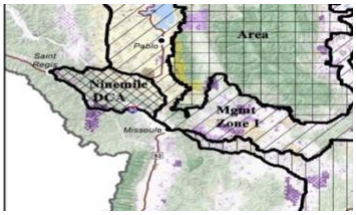


Figure 1.

Purpose and Need

The explanation of purpose and need in the EA do not justify the actions proposed nor are they based upon the best available scientific information, as required by the 2012 Planning Rule, NEPA and the ESA. We direct you to the comments of Dr. Richard Hutto to the Lolo National Forest (attached) on the Marshall Woods Project. These comments are also applicable to the Soldier-Butler EA. He wrote, in part:

"I would like to take this opportunity, however, to challenge the idea that there is a valid ecological justification for timber harvesting and prescribed fire in the project area. My comments are based on my experience as an ecologist and a USFS partner who designed and initiated the coordinated Northern Region Landbird Monitoring Program 25 years ago, and as a University faculty member who taught fire ecology for 15 years. The ecological justification for thinning in this forest type is weak, at best. The Lolo should probably give greater consideration to some of the more relevant habitat-specific fire literature when it comes to drafting future scoping statements and EAs so that the statements conform to current thinking in the field of fire ecology. Specifically, the first two of the four stated objectives for the project listed in the EA ("restore functioning ecosystems by enhancing natural ecological processes," and "emulate fire's natural role on the landscape through vegetative treatments including prescribed fire") are not ecologically based. The first is overly vague, and would probably never meet a court challenge; the second statement reflects out-of-date knowledge about how mixed-severity rather than low severity fire dominates mixed-conifer forest systems like that in the Rattlesnake and Marshall drainage."

Unfortunately, the Lolo National Forest has not heeded Dr. Hutto's expert advice.

The EA stretches the definition of Wildland-Urban Interface. The primary definition is an area within 0.5 miles of residential areas within the intermix zone. Common sense and reality dictate that occasional isolated residences in a very low-density setting cannot each be buffered to a 1.5 mile radius. Otherwise, much of the western U.S. would be classified as WUI, which is an unreasonable stretch of the primary definitions and intent. A previous collaborative project on Lolo National Forest land in the Rattlesnake drainage (Sawmill Gulch) relied on a much more realistic zone of 0.34 miles (Lolo National Forest 2004).

The EA and supporting documents are largely predicated on the desirability of mimicking presettlement stand conditions. A stated project goal is favoring retention and recruitment of large, widely spaced ponderosa pine and western larch and exclusion of Douglas fir, generating stands that are guestimated to be facsimiles of pre-settlement conditions. This vision is hypothetical versus broad-scale on-the-ground scientific findings. Two large-scale studies found a different story. Odion, et al. (2014) found that *"…the traditional reference conditions of low-severity fire regimes is inaccurate for most forests of western North America," and "current attempts to 'restore' forests to open, low-severity fire conditions may not align with historical reference conditions in most ponderosa pine and mixed-conifer forests of western North America."*

Williams and Baker (2012) found that historically, dry forests were structurally variable. Only 3, 12, 40 and 62% of their four landscapes fit a low-severity fire model and 38-97% had evidence of higher-severity fire. They conclude *"a set of laws, policies and initiatives that aim to uniformly reduce fuels and fire severity is likely to move many of these forests outside their historical range of variability with adverse effects on biological diversity."* Their macro-scale studies *"reveal higher-severity fires were and are a part of the normal dynamics of dry forests."*

These historic conditions may serve as a guide, yet numerous authors have cautioned that pre-settlement conditions cannot be replicated through restoration (Reinhardt, et al. 2008) *"…since historical conditions varied in time and space, selecting a single target stand structure is somewhat arbitrary and inappropriate."* Attempts to do so *"will not be desirable or feasible."* Spies (quoted in Oliver 2014) *"We'll want to keep some areas in dense condition, and we've identified places in the landscape where denser forests would have been natural - even in the pre-Euro-American period…"*

Non-mechanical thinning and burning may be appropriate in certain areas, but will only be effective in aiding structural protection if the treatments are immediately adjacent to residential areas and only if the structures themselves are made less flammable (Reinhardt, et al. 2008).

The accompanying risks to firefighters can be substantial. Fox and Ingalsbee (1998): *"…within the U.S. Forest Service, there has been more of an interest in mechanical fuels reduction treatments using commercial thinning for fuelbreak construction to lower the risk of crownfires. Proponents argue that using commercial thinning to reduce canopy densities would increase firefighter safety and prescribed fire efficiency during wildfire suppression, and are necessary treatments to prepare for future prescribed burning. However, we suggest that these kinds of mechanical treatments create their own fire risks and fuel hazards that can potentially cause problems for wildland firefighter safety and prescribed fire efficacy."* They also note that *"After generating abundant slash through mechanical thinning and before disposing of that slash, the program may become stalled due to lack of funding, air quality, or other political concerns. This scenario would leave firefighters worse off as they face both the untreated high risk fuels and vast areas of new slash."* Ingalsbee (2005) provides a cogent analysis and discussion on the efficacy and risks associated with creation of fuel breaks for future fire suppression.

Oliver (2014) reports a study in Oregon *"…provides solid evidence that not all mixed-conifer forests should be managed using the same approach when resilience is the goal," and "The availability of solid scientific evidence showing that mixed-conifer forests are not a one-size-fits-all landscape is helping these various stakeholders see with more clarity the range of possible restoration strategies for the different forest types…"*

Some of the major goals of the proposed project are thinning and burning of understory vegetation to promote fire safety, aid in future suppression and help prevent large catastrophic

fire events. This strategy has been shown to be self-defeating by numerous researchers. For example, Reinhardt, et al. (2008) write: *"Treating fuels to facilitate suppression is an example of circular logic. If fuel treatment makes suppression more successful in general, then less area will be burned in the short run and more acreage will tend to burn under extreme conditions, when suppression is ineffective. The inevitable result is that more area is burned in fewer, more unmanageable events with greater consequences."* They suggest a more successful approach is to focus on the area directly adjacent to structures and reduce the flammability of the structures themselves.

Moreover, Reinhardt, et al. (2008) and others (Ecological Research Institute) discuss the geographical and environmental limits of effective thinning and burning strategies. At page 1999 Reinhardt, et al. write: *"Destruction in the WUI is primarily the result of the flammability of the residential areas themselves, rather than the flammability of the adjacent wildlands."* Relatively small areas can easily be overwhelmed by large fires in extreme environmental conditions.

Grizzly Bears

The grizzly bear analysis presented in the EA is insufficient, inaccurate and incomplete. The Nine Mile area is a designated Demographic Connectivity Area (Costello, et al. 2016; U.S. Fish & Wildlife Service 2018). It is occupied grizzly bear habitat.

The EA significantly understates the level of grizzly bear activity documented by Montana Fish, Wildlife & Parks. The EA only lists one female with cubs, approximately 2 miles from the project area and well within dispersal distances for female grizzly bears. In fact, numerous grizzly bears have been documented by trapping and radio-collaring, photographs and tracks in reports including the Montana Wildlife Quarterly 2017 and from Region 2 Bear Manager Jamie Jonkel (Figure 2, attached). These include three female grizzly bears, and several other individual bears. Jonkel was quoted in the Missoulian newspaper (2019) that he has personally seen grizzly bears cross the Clark Fork River near the confluence with Nine Mile Creek.

In addition to these bears, several grizzly bears have been trapped and photographed in the Rattlesnake Mountains, adjacent to the Nine Mile DCA and which is a route for grizzly bears moving from the NCDE Recovery Area to the Nine Mile DCA.

The failure to adequately assess and protect the Nine Mile DCA is a major weakness of the EA. Isolation was one of the factors identified in the 1975 listing rule for grizzly bears. Linkages in the Northern Rockies have been identified, analyzed and ranked by several sources using different methodology (Picton 1986; Walker & Craighead 1997; Bader 2000c.; Peck, et al. 2017).

Linkage is a key recovery goal in the Grizzly Bear Recovery Plan. The Recovery Plan also recommends that, until the Service analyzes linkages, *"land management agencies take precautions not to degrade the potential linkage areas."* Recovery Plan at 24-26. Servheen, et al. (2001) wrote: *"Boyce, et al. (2001) have demonstrated the value of multiple*

populations with some dispersal between them to the survival of the grizzly bear in the Northern Rockies. For multiple populations to act to minimize the probability of extinction of the entire population of grizzly bears in the Northern Rockies, dispersal between different populations must have some acceptable probability of success. Thus, management of linkage zones to maintain and enhance movement opportunities is a critical part of the successful application of metapopulation theory to grizzly bear conservation."

The Interagency Grizzly Bear Committee endorsed these linkages in a letter signed by all Members including the U.S. Forest Service (IGBC letter 2001, Re: Support for the concept of linkage zones). They wrote: *"To address the issue of habitat fragmentation, the IGBC supports the identification of those areas within and between the major grizzly bear ecosystems where wildlife can live or move between large blocks of relatively secure habitat. Cooperation and coordination between public land managers, fish and game agencies, private landowners, and state and federal transportation agencies is required to maintain linkage zones that work for wildlife. Wildlife habitat conservation and the eventual recovery of listed species such as grizzly bears will require connections between populations."* Thus, grizzly bear survival and eventual recovery is dependent on demographic linkages where male and female bears can successfully live and move.

The IGBC also wrote: *"Dramatic changes are occurring in the remaining possible linkage areas due to ongoing human development. Time to maintain connection opportunities is growing short due to the pace of development on these lands."* However, actions and precautions are not included in the EA. Despite these official policies, the proposed action would significantly degrade the ability of this area to function as a Demographic Connectivity Area.

Moreover, the ruling in Crow Indian Tribe, et al. v. United States of America, et al. (Case 9:17-cv-00089-DLC Document 266, Filed 09/24/18) established that the U.S. Fish & Wildlife Service must ensure connectivity between isolated grizzly bear subpopulations.

The 2011 baseline is a rearview mirror approach to grizzly bear recovery. It will not sustain or build upon 25 years of progress. Rather, it takes several steps back. The Four Forest Plan Amendments for Grizzly Bear Habitat Management have so many exemptions, exceptions and interpretations that it cannot be an effective, enforceable plan that can be subjected to rigorous scientific review.

Baseline changes that exceed 2011 conditions may be made by "conservation partners" (U.S. Forest Service, Tribes, Montana Dept. of State Lands) without consulting with the U.S. Fish & Wildlife Service. Thus, violations of secure core that depart from 2011 conditions are built into the process. For example, the EA reveals that secure habitat for grizzly bears will be reduced by 20% over an 8-10 year period. It attempts to rationalize this impact by stating grizzly bears will simply move somewhere else because it is a low-density population.

The road density analysis in the EA is seriously flawed. The Boulanger & Stenhouse (2014) analysis is not applicable to this landscape. Their study area was in the dry prairie foothills of northern Alberta east of the Continental Divide in the Boreal forest region with substantial deciduous forest cover. It is a completely different ecosystem and climate type from the project area west of the Continental Divide, which is a moist conifer forest within the Maritime climate region. The upper limit of their findings translate to an open road density of ≈ 2.4mi/mi^2. Note this is different than total road density, which may include resource roads used for timber hauling and other activity but closed to the public, such as those described in the EA. As the EA reveals, these roads are expected to have the same level of impacts as those of roads open to public use.

These findings are totally inconsistent with decades of research on road effects on grizzly bear habitat use in coniferous forest regions west of the Continental Divide. These studies consistently found grizzly bears generally avoid areas within 500 m of roads more than expected and this zone of avoidance ranges up to 3 km (Mattson, et al. 1987; Kasworm & Manley, 1990; McLellan & Shackleton, 1988; Archibald, et al., 1987; Wakkinen & Kasworm, 1997; Mattson 1993; Craighead, et al. 1995; Mace & Waller 1998; Metzgar 1998; Auditor General of British Columbia 2017). The human population in Boulanger & Stenhouse study area is low density and does not compare with the levels of road use in the densely populated Missoula County area. Reliance on the Boulanger & Stenhouse analysis is arbitrary and capricious given there is data available from the adjacent Flathead National Forest and other areas west of the Continental Divide. Even so, they identified 1.2mi/mi^2 as a maximum road density to support female occupancy and reproduction.

The following graphics from Horejsi (2019; 1993) show the lethal effect road densities have on female/cub groups, in km/km^2. At ≈ 2.3mi/mi^2, female/cub survival drops to ≈ 50%. Habitat effectiveness suffers even more drastic reductions.

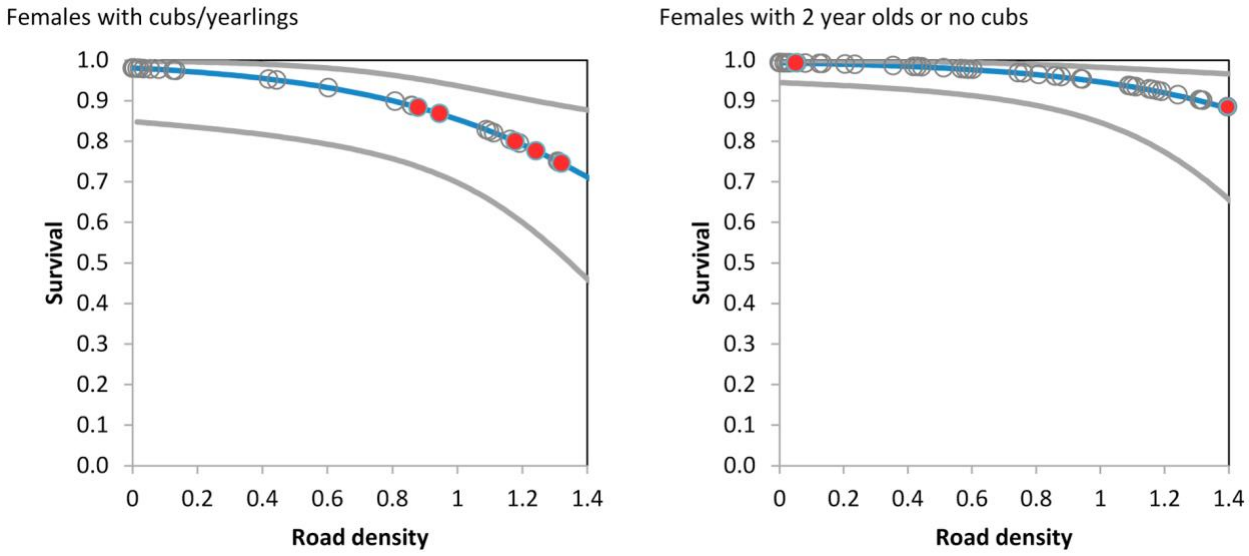
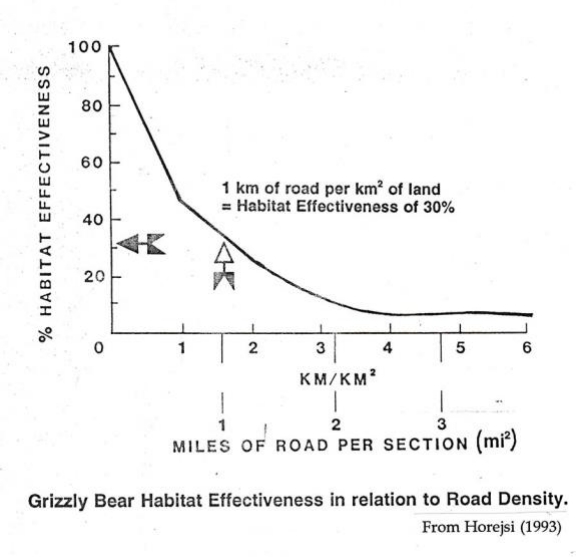


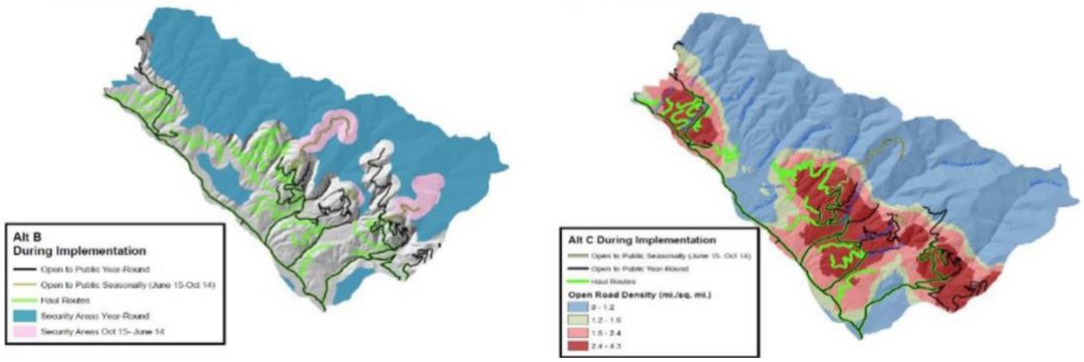
Figure 3.



Grizzly Bear Habitat Effectiveness in relation to Road Density.
From Horejsi (1993)

Figure 4.

At the road densities identified on the map at page 105 (Figure 5b.), a large portion of the project area will effectively become unavailable to grizzly bears as mortality risk to female/cub groups is unsustainable and defeats the purpose of the Nine Mile DCA. The EA estimates a 20% reduction in secure habitat, but that underestimates the actual project effects as that figure is averaged over the entire project area. Actual road densities within the activity area are 1.6-4.3 mi/mi^2. Based upon the map, it appears that grizzly bear use will be eliminated across at least 20% of the entire project boundary.



Figures 5a and 5b.

The Forest Service has received extensive comments on these issues from Dr. Lee Metzgar, a population ecologist and former director of the University of Montana Wildlife Biology Program (Metzgar 1998). His findings on total road densities within the roaded matrix align closely with those of Mattson (1993) and Craighead, et al. (1995) and should not exceed ≈ 0.25mi/mi^2 (.4km/km^2). The BC Auditor General Report (2017) stated scientists found that bear density was lower in areas with road density exceeding

1mi/mi^2 (0.6km/km^2) in the Kettle-Granby region.

The EA contains no discussion of the potential impacts on grizzly bear denning habitat and den site selection even though the project will include winter activity. Linnell, et al. (2002) reported that bears generally select dens 1-2km from human activity such as roads, habitations and industrial activity. Ciarniello, et al. (2005) found grizzly bears avoid roads when selecting den sites. Pigeon, et al. (2014) found den selection dropped by 30% at road density 1mi/mi^2 (0.6km/km^2); reduced by 70% at ≈ 2mi/mi^2 (1.2km/km^2) and reduced to ≈ zero at 3.2mi/mi^2 (2km/km^2).

Activity within 200m can cause den abandonment leading to increased cub mortality. Impacts short of den abandonment include physiological changes such as increased heart and breathing rate and wakefulness (Fortin, et al. 2016).

Denning habitat is likely to be limited in the Nine Mile DCA. Therefore, any loss of available denning habitat would be a limiting factor on the ability of the area to support residential occupancy by grizzly bears, including females with cubs.

At page 96 the EA makes the unsubstantiated claim that "human-made barriers to connectivity are also low" and "the need for corridors is minimal." The project area currently has more than 400 miles of human-made roads and extensive motorized access and the proposed action would build an additional 16.4 miles of road while also reversing a previous decision to decommission 37 miles of road. Roads and high road densities are known to be barriers to grizzly bear movements.

There are also cumulative effects the EA did not assess. For example, the Flathead Reservation portion of the Nine Mile DCA is also heavily roaded. By adding to the road network, the proposed action, in concert with the high road density on the Reservation, is detrimental to grizzly bear connectivity in the Nine Mile DCA.

The EA makes the erroneous assumption that grizzly bears disturbed by the project will simply move to the next drainage. The Nine Mile DCA is already very heavily impacted by high road densities and motorized activity. It is a relatively small land area that under the best of conditions would not support a large subpopulation of grizzly bears.

The project makes irretrievable commitments of resources well beyond the life of the project. The decision to retain 7 miles of newly constructed road for future management activity and the decision to reverse the decommissioning of 37 miles of road leads to a net gain of 44 miles of roads, a permanent loss of grizzly bear habitat. The Soldier-Butler Project will deter grizzly bear occupancy and movement towards the Selway-Bitterroot region, the major purpose of the Nine Mile DCA. The project represents an illegal taking of grizzly bear habitat, in violation of the Endangered Species Act.

Elk

The EA discloses that the project would violate Forest Plan standards for thermal cover for elk. Rather than complying with the standards, the FS simply gets rid of them. The EA does not contain a valid analysis of the effects of road densities, disturbance and loss of cover on elk. The plan to create widely scattered small clumps of vegetation adjacent to roads is totally inadequate. Going back to the Montana Cooperative Elk-Logging Study, it has been well known that logging and roadbuilding impact elk populations. Moreover, renowned Forest Service biologist Dr. L. Jack Lyon documented the serious impact of road density on elk habitat use, shown in Figure 4. At 1mi/mi^2, habitat use drops by 20%. At the densities outlined in the EA (Figure 4b) elk use will drop by approximately 40-90%.

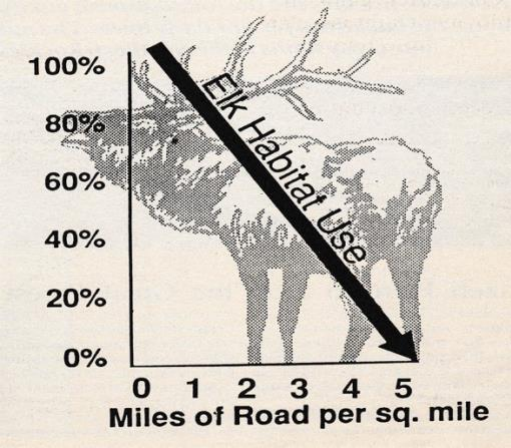


Figure 6.

Lynx

The analysis of effects on lynx is virtually non-existent. The EA simply assigns lynx habitat to areas above 4100'. This is arbitrary and does not consider the need for linkages to facilitate lynx migrations (Squires, et al. 2013). The Nine Mile area is likely an important linkage for lynx between the NCDE and Selway-Bitterroot areas.

Conclusion

As written and presented, the Soldier-Butler project violates the National Forest Management Act, the Endangered Species Act, National Environmental Policy Act and Administrative Procedure Act and is inconsistent with the Grizzly Bear Conservation Strategy. We ask that you either Select Alternative A, NO ACTION, or prepare a full Environmental Impact Statement that corrects the deficiencies described above.

Submitted by:

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