Data Submitted (UTC 11): 12/5/2019 11:00:00 AM
First name: Jeff
Last name: Lonn
Organization:
Title:
Comments: Buckhorn project scoping comments[mdash]Jeff Lonn

I submit the following comments as part of the Buckhorn scoping process. They are general, but not nearly as vague as your description of the project in the scoping letter. Problems with the Bitterroot NF SOPA website prevented me from making the Dec. 3rd deadline. In addition, the clearcuts >40 acres require a 60 day comment period 60-day regulation (scoping letter and Forest Service Manual 2470, Supplement No.: R1 2470-2016-2), so these comment deserve full consideration.

Comment 1. Please give details so that meaningful assessment and comments can be done. You give no specific plans nor detailed information in the scoping information. I cannot say whether the project follows NFMA, HFRA, ESA, SMZ or EHE standards because you give no information. I do suspect that the scoping does not comply with NEPA because the public cannot make meaningful comments without details. This "conditions-based analysis" process has recently been stopped by a judge in the Tongass National Forest. I hope it is also stopped on BNF by a lawsuit.

Comment 2. Do an environmental analysis of this project. Although the law may allow you to do this project under a CE, no one knows for sure because you give no documentation showing that it qualifies. In addition, the laws are written by politicians, not scientists, and do not take into consideration the unique aspects of BNF, re-construction of undetermined roads, or effects on ESA-listed species such as Bull Trout, Lynx, Wolverine, and Grizzly. BNF serves as a key corridor to connect habitat within the northern Rockies ecosystem. And with western Montana's ever-expanding human population, BNF is increasingly valued for its preservation of wildlands and wildlife habitat, for its role in carbon sequestration, for recreational activities, and for its contribution to the local economy by making Ravalli County an attractive place to live. At the same time, it is becoming less valued for its contributions to a dying timber industry. Headwaters Economics reports that timber-related jobs provide only 1.7% of Ravalli County wages. This project makes no sense either economically or scientifically.

Headwaters Economics, Economic Profile System (EPS) accessed 9-30-2019
https://headwaterseconomics.org/eps

Comment 3. Once again you are using the same old, tired reasons to gain support for commercial logging. The stated purpose is to: "Improve landscape resilience to disturbances (such as fire, insects and diseases) by diversifying forest structure and composition, and reducing fuels". Resilience has become a buzzword that sounds good, but it has different meanings to different people. Your definition given in the Darby Lumber Lands 2 EA (p. 4) is "the capacity of an ecosystem to withstand a disturbance by resisting damage and recovering over time to its original state. Such disturbances can include fires, windstorms, insect population explosions, and human activities such as fire suppression". It appears that you are trying to force the forest back into some arbitrary point in time with scant evidence for the conditions at that time. And remember that "historic conditions" included no roads or weeds. Your definition does not mention adaptation to change. Adaptation and evolution should be the focus of any forest management based on ecology. Disturbances are important for driving adaptation.

This area has been heavily logged in the past. Now, much of the area is recovering without any further FS management caused damage. Nature is busy with restoration up there, at no taxpayer expense. As usual, the most efficient and effective approach to restoration would be to remove man-made impediments to recovery and do no further harm. Baker et al (2007) state: "Exclusion of fire has not clearly and uniformly increased fuels or shifted the fire type from low- to high-severity fires. However, logging and livestock grazing have increased tree

densities and risk of high-severity fires in some areas. Restoration is likely to be most effective which seeks to (1) restore variability of fire, (2) reverse changes brought about by livestock grazing and logging, 3) ensure that degradation is not repeated." To this, we can also add climate change, which logging exacerbates.

Baker, W.L., T.T. Veblen, and Sherriff, R.L. 2007. Fire, fuels and restoration of ponderosa pine Douglas-fir forests in the Rocky Mountains, USA. Journal of Biogeography, 34: 251-269.

Campbell, J.L., Harmon, M.E., Mitchell, S.R., 2011, Can fuel reduction treatments really increase forest carbon storage in the western US by reducing future fire emissions? Frontiers in Ecology and Environment, doi:10.1890/110057.No evidence that thinning will decrease CO2 emissions in the long or short term; in fact it may be the opposite.

DeLuca, T.H., and Aplet, G.H.,2008, Charcoal and carbon storage in forest soils of the Rocky Mountain West: Frontiers in Ecology and the Environment, v. 6, n. 1, p. 18-24, doi:10.1890/070070.Charcoal deposition over the course of several millennia probably accounts for a substantial proportion of the total soil C pool in fire-maintained forest ecosystems. Forest management processes that interfere with natural fire processes eliminate the formation of this passive form of C.

Harmon, M.E., et al., 1996, Modeling carbon stores in Oregon and Washington forest products: 1900-1992: Climatic Change 33: 521-550. Found that only 23% of carbon harvested during the selected period is currently stored; the rest was emitted to the atmosphere.

Harris, N.L., and 6 others, 2016, Attribution of net carbon change by disturbance type across forest lands of the conterminous United States: Carbon Balance Management, v. 11, 24 p. DOI 10.1186/s13021-016-0066-5. Timber harvest in western forests resulted in 4 times more carbon storage loss than wildfire.

Law, B.E., and Waring, R.H., 2015, Carbon implications of current and future effects of drought, fire, and management on Pacific Northwest forests: Forest Ecology and Management, v. 355, p. 4-14.

Law, B.E., Hudibug, T.W., Berner, L.T., Kent, J.J., Buotte, P.C., and Harmon, M.E., 2017, Land use strategies to mitigate climate change in carbon-dense temperate forests: PNAS, www.pnas.org/cgi/doi/10.1073/pnas.1720064115. Logging is Oregon's biggestCO2 polluter, much more so than wildfire.

LePage, 2019, Logging study reveals huge hidden emissions of the forest industry: New Scientist online, https://www.newscientist.com/article/2215913-logging-study-reveals-huge-hidden-emissions-of-the-forestry-industry/

Reinhardt, E., and Holsinger, L, 2010, Effects of fuel treatments on carbon-disturbance relationships in forests of the northern Rocky Mountains: Forest Ecology and Management, v. 259, p. 1427-1435. Modeling indicated that fuel treatments decreased fire severity and crown fire occurrence and reduced subsequent wildfire emissions, but did not increase post-wildfire carbon stored on-site. Conversely, untreated stands had greater wildfire emissions but stored more carbon.

Segerstrom, C., 2018, Timber is Oregon's biggest carbon polluter: High Country News, May 16, 2018.

Comment 4. The Lodgepole stands are nicely thinned by beetles, without any ground disturbance. Needles are cast, so the fire hazard has been reduced below that of live trees (well established by scientific studies), without any ground disturbance, and with gains in soil building debris. "Overmature" lodgepole pine? This sounds like old growth Lodgepole. You should preserve all old growth as you state is a goal in the scoping letter.

Comment 5. Stop removing Doug Fir to favor Ponderosa Pine in all sites. P Pine and Doug Fir appear to be collaborating well in the area, with neither significantly dominating the other. In the Westside project, almost all Doug Firs were removed from all commercial harvest units below 5,000 feet without regard for aspect, topography, or microclimate, even though in many areas the historic forest was a mixed Ponderosa Pine-Doug Fir forest. This was most evident in the 20 acres of old growth logged, where every single large (marketable) Doug Fir was cut. Many, if not most, were 150-250 years old. Ponderosa Pines were of similar age, so these two species apparently grew up together long before fire suppression or other settlement activities interfered with natural processes. This shows that both tree species were historical components in many sites. Funk et al. (2014) show that P Pine will not be able to grow in the Bitterroot Valley by 2060, so why would you favor them? Let nature decide how to adapt.

Funk, J., S. Saunders, T. Sanford, T. Easley, and A. Markham. 2014. RockyMountain forests at risk: Confrontingclimate-driven impacts from insects, wildfires, heat, and drought: Union of Concerned Scientists report, 64 p., www.ucsusa.org/forestsatrisk

Comment 6. Restrict commercial timber harvest to MA 1 and the CPZ. Neither of these are part of the Buckhorn project. Jack Cohen's research shows that the 1.5-mile-wide WUI is basically BS. Some of the Buckhorn units are even outside this WUI. And the entire area is uphill and downwind of the "urban" areas. The closest "urban area" may be the resort in Rock Creek or Philipsburg.

Comment 7. Let insects and disease run their course; they naturally thin the forests, increase species diversity, and drive adaptation to climate change and other disturbances. In fact, the effects of USFS treatments to reduce insects and disease are largely unknown, and may actually be harmful to the forest ecosystem (Six et al., 2014, 2018). In other words, humans cannot select for the genetically fittest and most adaptive trees; only nature can do that. Even your own pamphlets (referenced below) state that mistletoe is not a concern unless timber harvest is your greatest priority, and that mistletoe is valuable in providing wildlife with habitat and a rich food source from the insects that live there. Timber production is the priority only in MA 1, so please restrict commercial logging for the purposes of controlling insects and disease to MA 1. A similar argument can be made for Spruce Budworm infested trees. How do you know that the Doug Firs most susceptible to Spruce Budworm (or Mistletoe) are not the same ones that will survive climate change (see Sthultz et al., 2009; McNulty et al., 2014; Carswell, 2016)?

Bailey, J.K., Deckert, R., Scheitzer, J.A., Rehill, B.J., Lindroth, R.L., Gehring, C., and Whitham, T.G., 2005, Host plant genetics affect hidden ecological players: links among Populus, condensed tannins, and fungal endophyte infection: Canadian Journal of Botany, v. 83, p. 356-361 (2005) doi: 10.1139/B05-008. Genetic differences in Cottonwoods that cannot be visually determined have profound effects on the forest ecosystem.

Carswell, C., 2016, Genetic research lays foundation for bold conservation strategies: High Country News, June 8, 2016. Pinyon pines susceptible to moths turn out to be the most drought resistant and survive over healthy appearing ones.

Hadfield, J.S., Mathiason, R.L., and Hawksworth, F.G., 2000, Douglas Fir Dwarf Mistletoe: Forest Insect and Disease Leaflet 54, USDA-FS, 10 p. Your own USFS pamphlet states "it is a pest only where it interferes with management objectives, such as timber production". In other areas, it is important for wildlife habitat. It also states that spread rates are faster in open stands than dense stands.

Hoffman, J.T., 2004, Management of Dwarf Mistletoe, 2004, USDA-FS https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5187427.pdfGives strategies for management when commercial timber production is the goal.

McNulty, S.G., Boggs, J.L., and Sun, G., 2014, The rise of the mediocre forest: why chronically stressed trees may better survive extreme episodic climate variability: New Forests, v. 45, p. 403-415. Finds that the healthy looking trees are not the ones that best survive climate change due to slower growth and higher root to foliage ratios. You cannot select for adaptive trees; only nature can do that.

Keim, B., 2019, Western forests could adapt to pine beetles, but people won't let them: Anthropocene Magazine online, www.anthropocenemagazine.org/2018/10/pine-beetle-resilience/

Six, D.L., Biber, E., and Long, E., 2014, Management for Mountain Pine Beetle Outbreak Suppression: Does Relevant Science Support Current Policy? Forests, v. 5, p. 103-133, doi:10.3390/f5010103.Thinning results in less live trees afterwards than just letting MPB go their course. You may actually be selecting the wrong (genetically less resistant) trees by thinning.

Six, D.L., Vergobbi, C. and Cutter, M., 2018, Are survivors different? Genetic-based selection of trees by mountain pine beetle during a climate-change-driven outbreak in a high-elevation pine forest: Plant Science, Plant Sci., 23 July 2018 | https://doi.org/10.3389/fpls.2018.00993Genetic differences that cannot be determined visually determine the variable susceptibility to bark beetles in lodgepole pine.

Sthultz, c.M., Gehring, C.A., and Whitam, Deadly combination of genes and drought: increased mortality of herbivore-resistant trees in a foundation species: Global Change Biology, v. 15, 1949-1961, doi: 10.1111/j.1365-2486.2009.01901.x The least vigorous pinyon pines with growth slowed by moth caterpillars had much greater survival rates during drought than healthy appearing trees.

Watson, D.M., and Herring, M., 2012, Mistletoe as a keystone resource: an experimental test: Proceedings of the Royal Society, v. 279, p. 3853-3860.. R. Soc. B (2012) 279, 3853-3860 doi:10.1098/rspb.2012.0856

Comment 8. Temporary roads are still roads, and remain on the landscape to fragment habitat for a long time. Does the plan include re-construction of undetermined roads? These are not considered new permanent roads by the USFS, but they really are and have the same impact as new system roads. Roads fragment habitat, increase stream sedimentation, cause visual scars, increase human visitation, and remove land from forest production. The historical forest included no roads, so roads have no place in restoration activities.

Comment 9. Do a thorough inventory of old growth, and do not do any commercial logging or road building in old growth. This includes individual old trees and large trees, which provide the backbone of the forest (Hessburg et al., 2015). I suggest implementing a 16" diameter limit. On the Westside project, the old growth inventory was incomplete and at least 20 acres of old growth was logged. In this old growth area, every single large Doug Fir was cut; most were between 150 and 250 years old. Clearly, they had not encroached on the Ponderosa (called "crop trees" by the silviculturist), but they were cut anyway under your one-size-fits-all prescription discussed in Point 1 above.

Hessburg, P.F., et al., 2015, Restoring fire-prone Inland Pacific landscapes: seven core principles: Landscape Ecology, v. 30, p, 1805-1835. DOI 10.1007/s10980-015-0218-0

Comment 10. Do extensive field surveys. Your planned schedule indicates you have little time for this, and the scoping letter states that treatments are being developing using modeling and remote sensing. These are no substitute for on-the-ground work. Using remote sensing techniques to develop models can often be summed up by the statement: garbage in-garbage out. This process does not analyze unique characteristics of individual areas; essentially all forests of a given type are considered to be the same.

Comment 11. Do not clear cut[mdash]not even Doug Fir or Lodgepole. Clear cuts are not ecologically sound. They do not mimic wildfire. They do maximize the timber industry's profit, but this does not justify them.

Comment 12. We have no info whatsoever on what might be done on state land, implying cumulative impacts are being discounted. And we can not assess any potential synergistic benefits of managing state and national forest in a coordinated way.

Sincerely,

Jeff Lonn