



Juniper Group, Oregon Sierra Club
c/o Environmental Center
16 NW Kansas Avenue
Bend, OR 97703



Central Oregon Bitterbrush Broads and Bros
Great Old Broads for Wilderness
61503 Camelot Pl., Bend, OR 97702

Via Electronic Portal

Ochoco National Forest
Shane Jeffries, Forest Supervisor (Reviewing Officer)
3160 NE Third Street
Prineville, Oregon 97754
<https://cara.fs2c.usda.gov/Public//CommentInput?Project=58081>

Re: Mill Creek Dry Forest Restoration Project Environmental Assessment Pre-Decisional Administrative Review

Dear Reviewing Officer:

The Great Old Broads for Wilderness, Central Oregon Bitterbrush Broadband (COBB), and the Juniper Group of the Oregon Sierra Club (JGSC) jointly file these objections for the Mill Creek Project (58081) in accordance with 36 CFR 218, Subpart A and B. We submit objections to the Draft Decision Notice (DDN), Finding of No Significant Impact (FONSI) and Final Environmental Assessment (Final EA) for the Mill Creek Dry Forest Restoration Project.

The JGSC represents over 2000 members in Eastern Oregon counties. The mission of the Sierra Club is:

- To explore, enjoy, and protect the wild places of the earth.
- To practice and promote the responsible use of the earth's ecosystems and resources.
- To educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

We are filing these objections in part to protect wild places, educate, and restore the quality of the natural and human environment.

The mission of the Great Old Broads for Wilderness, including the Bitterbrush Broadband, is to preserve and protect wilderness and wild lands. We give voice to the millions of Americans who want to protect their public lands and wilderness for now and future generations, bring knowledge, leadership, and humor to the wilderness preservation movement, and educate the public about the critical connection between healthy public lands and climate change mitigation.

We commend the Ochoco National Forest (ONF) and Lookout Mountain Ranger District for several substantive changes that were made to the project since the Draft EA was issued in August 2023. We are particularly pleased with the removal of timber harvesting all trees 21 inches and over (in keeping with the "Eastside Screens") and the substantial reduction of commercial timber harvest in Riparian Habitat Conservation Areas (RHCAs). As noted in both our organizations' comments to the Draft EA, these two actions that were originally proposed are very contentious, not scientifically supported, and when implemented, have a large potential to impact other natural resources including soils, native plants, fish and wildlife populations and their habitats, biodiversity, carbon storage, and climate change.

We support the ONF decision to not authorize cutting trees 21 inches and over, consistent with the original 1994 Eastside Screens as well as Judge Hallman's ruling on August 31, 2023, in the District Court of Oregon, 2023 (Greater Hells Canyon Council v. Wilkes, Case No. 2:22-cv-00859-HL, ECF 97). The Forest Service's 2021 Amendment to the Eastside Screens which eliminated the 21-inch rule was unlawful under NFMA, NEPA and the ESA and the Screens Amendment is vacated. Recently on March 29, 2024, Judge Aiken affirmed the lower court's findings (Greater Hells Canyon Council v. Wilkes, Case No. 2:22-cv-00859-HL, ECF 104 (March 29, 2024)). The judge ordered a vacatur of the Screens Amendment, issued an injunction, and ordered the USFS to prepare an Environmental Impact Statement. Vacatur of the Screens Amendment results in the reinstatement of the 21-inch rule as the controlling Forest Plan standard with which this project must be consistent. 16 U.S.C. § 1604(i). This is also consistent with President Biden's Executive Order 14072 which stresses protection and the importance of mature and old-growth (MOG) forests on federal lands for their role in contributing to nature-based climate solutions by storing large amounts of carbon and increasing biodiversity.

We welcome the substantive changes made since the Draft EA and efforts to reduce the project impacts and support restoration of stream and aquatic resources. However, the Broads and Sierra Club have several remaining concerns about the Draft Decision Notice and project proposal. These include planned management activities in RHCAs and streams, wildlife, travel management and roads, HRV, livestock grazing, the use of forest products for biomass energy, economics, undeveloped lands, steep slope logging, climate change, and cumulative effects.

Objector Name and Contact Information

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Proposed Project

Mill Creek Dry Forest Restoration Project

Name and Title of Responsible Official

Slater R. Turner, Lookout Mountain District Ranger

National Forest and Ranger District

Ochoco National Forest, Lookout Mountain Ranger District

Suggested Remedies that would Resolve the Objection:

The Broads and Sierra Club ask the ONF to adopt and incorporate the following changes to the proposed project. Remedies are provided for each topic.

Specific Issues Addressed by these Objections.

In the following statements, excerpts from other documents are indented. As the Final EA includes in “Appendix C – Consideration of Public Comments” quotes from several organizations, including ours, from comments on the Draft EA, those comment documents are included in full in this objection by reference.

Some quotes taken from our Draft EA comment documents include citations to bibliography references. These bibliographic references have been changed to match the shortened bibliography included in this document.

Large Tree Timber Harvest

Examples of our Comments to the Draft EA

The 1995 Eastside Screens were implemented to preserve the few remaining large and old trees, and the ecosystem values they provide for soil, water quality, wildlife, and fish habitats.

The previous century of logging from the 1920s to the 1990s removed the largest and oldest trees across many of the forests in eastern Oregon and impacted biodiversity, soils, water quantity and quality, and many fish and wildlife species that used large old trees for part or all of their life history needs.

Large trees are important as either live or dead, standing or fallen onto the forest floor or into the stream and are critical to forest, wildlife habitat, and watershed function. In streams, fallen logs are large woody debris (LWD). LWD is important for structure, function, and biodiversity of forests in upland and aquatic ecosystems. Habitat for a diversity of wildlife species is found in the dead branches, cavities, seeds, cones, snags, and the buildup of the forest floor with litter. Large old trees have thick bark that withstand forest fires and survive, and provide shade, wind breaks, soil moisture and a cooling effect in the multilayered canopy.

Large trees in riparian areas provide stream-side shading and instream hiding cover for aquatic species. Large mature trees accrue soil depth, cycle nutrients, mitigate pollution, purify water, release oxygen, and provide habitat for wildlife at levels far superior to logged forests.

This project must account for how it disrupts ecological systems, wildlife habitat, and biodiversity in ways that natural disturbances do not.

There is no real need to harvest along the perimeter of the wilderness area. Leaving this alone would benefit wildlife by eliminating this wildlife and landscape disturbance and maintain wildlife security habitat. As a similar reduction in activity is proposed around the Steins Pillar area, there is precedence for including such exclusions in an alternative.

Undeveloped areas are rare on the ONF, and leaving this area is a great benefit to wildlife.

Issues and Impacts

The Draft Decision Notice (p. 3) states:

By limiting the size of trees of any species to be removed to 21" DBH, this decision responds to several organizations' positions in opposition to such thinning. Alternatives 4 as analyzed in the A would have allowed removal of grand fir and Douglas-fir up to 30" DBH as part of thinning in areas under specific conditions and where necessary to reach a desired species composition and basal area. Limiting thinning in those stands to trees up to 21" DBH will leave some areas in a denser condition and will not move species composition as much as it would under Alternative 4

Since the issuance of the Draft EA last summer in 2023, we applaud the ONF's decision change to not cut trees 21 inches and over and restore the Eastside Screens for this project. This change will benefit fish and wildlife species, biodiversity, soils, native plants, water quality, and carbon storage and sequestration to mitigate the impacts of climate change. It is also consistent with President Biden's Executive Order 14072 and goal to reach 30X30 which is a global initiative to conserve biodiversity and climate.

Remedy

We thank the ONF for making this big step toward conserving large trees in support of fish and wildlife habitats, climate change, and biodiversity.

RHCAs and Streams

We thank the ONF for selecting Modified Alternative 4 that reduced commercial harvest in most RHCAs to 58 acres. The Draft Decision Notice (p. 3) states:

This decision is also responsive to public comments in opposition to forest restoration efforts on steeper slopes and within Riparian Habitat Conservation Areas (RHCAs). In some cases, the elimination of RHCA acres created nonviable treatment units, resulting in more acres being dropped from commercial thinning than just those within the RHCA.

We strongly support this reduction of the commercial harvest of 523 acres. However, we remain concerned about the 58 acres of commercial harvest and thinning of 774 acres in RHCAs in Modified Alternative 4. In addition, the Draft Decision Notice does not state where or which units the 58 acres of commercial harvest will occur.

The Broads and Sierra Club commented on our concerns with proposed treatments in RHCAs and streams during the Draft EA comment period related to this objection. The following are examples of our comments.

Examples of our Comments to the Draft EA

Timber harvest and thinning near streams and in riparian areas can harm water quality and fish habitat, especially the negative effects associated with the removal of large, commercial-sized trees. While some habitat loss from thinning and burning may be short term for a few years, the loss of large-diameter trees, snags and down wood takes decades or centuries to recover. Harvest also reduces recruitment for future snags and downed wood.

Effects on fish habitat from loss of streamside vegetation [from timber harvest, roads, and livestock grazing] include increased stream temperature, loss of cover, increased erosion, widening and shallowing of the stream channel, and reduction or loss of perennial flow. Degraded habitat is characterized by increased sediment and water temperatures, declines in pool depth, quality, and frequency, reduced LWD, increased cutbanks and bank instability, and high width/depth ratios. Water quantity and quality problems, primarily flow reduction or loss, temperature, sedimentation, and turbidity, limit fish distribution and production (Bottom et al. 1985).

Studies have shown that logging, even selective logging, has increased instream fine sediments ([12], [19]), and increased instream water temperatures ([6]) and these changes in habitats are found decades after logging. Most streams on National Forest lands in Eastern Oregon, like the ONF, have high stream temperatures and violate state water quality standards for temperature.

Logging in riparian areas can increase nutrient loads, stream temperature, and sediment to the stream, compromising fish habitat and water quality. Any active management in stream corridors and riparian areas risks harm to stream ecosystems ([20]) via the release of nutrients and increases in sediment and stream temperatures.

Issues and Impacts

a. Commercial Timber Harvest

Please provide the specific locations, harvest units, and RHCA category, along with acres that are proposed for the proposed 58 acres of commercial harvest in RHCAs. These were not provided in the Final EA or Draft Decision Notice. While Appendix A lists all the units, the list does not identify which are the RHCA proposed harvest units. Are the trees proposed in RHCAs located in the floodplain or on a sidehill well above the floodplain? How many trees are planned for commercial cutting in the 58 acres? How close are they to a stream? What is the current basal area and what will it be after harvest? How will the RHCA be protected from livestock grazing if the justification is to restore hardwood species? We note many streams in the forest have both hardwood species and conifer overstory and disagree with the alleged justification to cut conifers to restore hardwoods. The lower end of Mill Creek in the Mill Creek Wilderness has an abundance of large and small conifers in the RHCA that support extensive riparian hardwood species, as do other streams such as Rock Creek (John Day basin) and Brush and Lookout creeks (North Fork Crooked River tributaries).

The Draft Decision Notice (p. 3) states that commercial thinning units overlapping category 1 RHCA only occurs in situations where a road is used for a unit boundary and falls between the stream channel and the treated area upslope of the road.

But this statement contradicts Table DN-1 (p. 5) that shows zero acres will be commercially harvested in Category 1 RHCAs. These contradictions make it impossible for the public to know what, where and how much harvest will occur in RHCAs other than the broadly stated 58 acres.

The Ochoco Land and Resource Management Plan (LRMP) for riparian areas (MA-15) specifically states the following:

Riparian areas are among the most critical wildlife habitats in the Forest. Over 75 percent of the Forest wildlife species are directly dependent on riparian zones or utilize them more than other habitat areas. Wildlife use streambanks as “connectors,” or travel lanes between forested habitats...For management purposes, a special protection area (100 feet from the edges of perennial bodies of water) will be apparent.

INFISH established RHCAs because of the long history of stream degradations caused by management activities including timber harvest, livestock grazing, and roads. INFISH (A-5) states that:

Widths of interim Riparian Habitat Conservation Areas that are adequate to protect streams from non-channelized sediment inputs should be sufficient to provide other riparian functions, including delivery of organic matter and woody debris, stream shading, and bank stability (Brazier and Brown 1973, Gregory et al. 1984, Steinblum et al. 1984, Beschta et al. 1987, McDade et al. 1990, Sedell and Beschta 1991, Belt et al. 1992). The effectiveness of riparian conservation areas in influencing sediment delivery from non-channelized flow is highly variable. A review by Belt et al. (1992) of studies in Idaho (Haupt 1959a and 1959b, Ketcheson and Megehan 1990, Burroughs and King (1985 and 1989) and elsewhere (Trimble and Sartz 1957, Packer 1967, Swift 1986) concluded that non-channelized sediment flow rarely travels more than 300 feet and that 200-300 foot riparian 'filter strips' are generally effective at protecting streams from sediment from non-channelized flow.

INFISH includes the following objectives for Riparian Management Objectives (RMOs):

- Bank stability greater than 80 percent
- Width/depth ratio (W/D) less than 10, (mean wetted width divided by mean depth)
- Shade greater than 80 percent of water surface shaded
- Large woody debris greater than 20 pieces per mile; less than 12 inches diameter; less than 35-foot length
- Pool frequencies varies by width (10-foot channel width = 96 pools/mile, 20-foot channel width = 56 pools/mile, 25-foot channel width = 26 pools/mile, etc.)
- Water temperature less than 59° F within adult holding habitat. No measurable increase in maximum water temperature (7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature)
- Turbidity: Stream channel cutbanks should not exceed an average of 20 percent for any given stream drainage.

Implementation of INFISH buffers and monitoring of habitat parameters has been critical to restore habitat and water quality to restore and protect native inland fish. It specifically directs that commercial logging in RHCAs should only be applied in very limited situations when treatments are needed to attain RMOs. INFISH standards clearly specify that no activity can be done that retards attainment of these RMOs.

The exclusion of proposed timber harvesting in the affected areas would permit the natural succession of forest vegetation and would rely more heavily on natural events, such as fire and insect and disease infestations, to influence or shape forest succession. Consequently, increases in tree mortality and the associated risk of fire, insects, and disease would be expected.

The INFISH standard and guideline TM-1 prohibits timber harvest in RHCAs except to apply silvicultural practices for Riparian Habitat Conservation Areas to acquire desired vegetation characteristics where needed to attain Riparian Management Objectives. Apply silvicultural practices in a manner that does not retard attainment of Riparian Management Objectives and that avoids adverse effects on inland native fish.

Any commercial harvest will remove trees that are necessary for future recruitment of trees to support future large woody debris (LWD), shade, channel stability, bank stability, reduced sedimentation, and water quality. The Forest Service has not provided sufficient justification for any commercial harvest in RHCAs.

Remedy

Provide management direction and supporting information such as the specific units, locations, species, and number of trees for each unit proposed for commercial harvest in RHCAs in the Final Decision Notice regarding where and how much commercial harvest will occur in RHCAs. Without knowing where and how much these activities will occur in which RHCAs in the project area, we oppose any commercial harvest in RHCAs and believe it is in noncompliance with INFISH. No commercial harvest must occur in any Category 1 or 2 RHCA. All trees commercially harvested in RHCAs must be left on site in the floodplain or placed instream or in channel to provide LWD, assist restoring degraded stream channels and morphology, assist building pools, and prevent livestock from further degrading streams and any proposed restoration.

b. Noncommercial thinning

The Draft Decision Notice (p. 9) reports there are 4,756 acres of RHCAs in the Mill Creek project area. All thinning will impact 1,032 acres of RHCAs (about 16% of all RHCAs categories).

However, the Draft Decision Notice (Table DN-1, p. 4) states that 774 acres will be thinned in RHCAs. Again, like proposed commercial harvest, there are conflicting numbers reported in different locations of the Final Decision Notice for the same management activity and these contradictions make it impossible for the public to know how many and where acres are planned for thinning in RHCAs. Again, Appendix A does not state where any of the RHCA units and what Category stream they are located where thinning is proposed.

Furthermore, removing the acreage of the wilderness from the project area analysis, where no treatments can occur, significantly increases the relative amount of thinning in project area RHCAs outside the wilderness. We remain concerned that the level of thinning compromises fish habitat for shade, bank stability, and future wood recruitment. It may also impact a multitude of wildlife species that use riparian areas as migration corridors, breeding habitats such as nesting birds, fawning and calving areas for mule deer and elk, and hiding and thermal cover. Any type of thinning in RHCAs at this level can impact stream habitat values for aquatic life, wildlife food, resting and cover habitats, and soils.

The Draft Decision Notice (p. 3) states that the majority of treatments are noncommercial thinning within Category 4 RHCAs.

On page 3-15 of the DEIS of the 1999 Mill Creek project, the Forest Service states:

there is a potential to increase water temperature in intermittent non- fish bearing streams, but this would not result in a violation of state water quality standards.

The EPA, in response to the 1999 Mill Creek project stated that:

It is not specified whether the Forest Service is referring to water quality violations in the intermittent streams or in downstream reaches. Regardless of the water body, we find no basis for this conclusion in the DEIS. Elevated stream temperatures in intermittent streams would contribute to the cumulative effect of elevated downstream temperatures.

In other words, even harvest of trees, commercial or noncommercial thinning, in Category 4 intermittent streams can result in higher stream temperatures, even when these streams go dry.

We note that the 1999 Mill Creek project (p. 1-3) proposed the following treatments in RHCAs:

Within RHCAs, 219 acres of individual tree selection harvest and 552 acres of precommercial thinning would occur. These activities are proposed to promote development of late and old structure characteristics and improve shade conditions within the riparian areas.

Given that these activities occurred in the early 2000s, there is no evidence in the few habitat surveys conducted since then that show improvement in riparian woody species in RHCAs.

Furthermore, the 2024 Aquatics Report (p. 33) alleges that proposed thinning and prescribed fire activities and hardwood enhancement would improve riparian vegetation which in turn would further stabilize streambanks and foster improved hardwood growth.

This failed to occur as a result of the 1999 project using largely the same treatments. Except for proposed floodplain restoration, instream wood placement and livestock fencing, we are skeptical thinning and burning will results in restored riparian vegetation. We are hopeful that additional restoration work and protection from livestock grazing will improve the outcome.

We also assert that the ONF failed to adequately evaluate and acknowledge short-term impacts, while at the same time, arbitrarily asserting that long-term benefits will offset any short-term impacts almost immediately without conducting a full and fair assessment of the effectiveness of project mitigation measures (Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Serv., 265 F.3d 1028, 1035–37 (9th Cir. 2001), failure to address short-term impacts; S. Fork Band v. U.S. DOI, 588 F.3d 718, (9th Cir. 2009), “An essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective”).

Given the current conditions of incised channels, overgrazed riparian areas, and failure to meet many INFISH RMO standards, we are skeptical that the 1999 Mill Creek project, which failed to achieve the purposes of riparian and stream restoration that were touted in the project 25 years ago, that are now proposed for this project, will do any better. There is a repeating pattern of doing the same thing over again to achieve an outcome that fails, and then doing it again. That is the definition of insanity, but in this case, we are concerned that these management activities will further compromise habitat. We are

fully supportive of floodplain restoration and the addition of LWD, but are concerned that management activities of harvest and thinning used in the past will produce the same results for this project.

While today's science says that careful and constrained thinning of forest types on the east side of the Pacific Northwest may improve stands, it also opens the canopy to greater wind speeds and drying and could harm in the future. Since there is limited consensus on thinning, particularly in RHCAs, it is prudent to limit the impacts on other resources against the risks of both ignorance and arrogance.

Remedy

Explain where, how large, and in what pattern natural leave areas are retained in RHCAs for the benefit of other natural resources since these details affect how much the project will impact fish and wildlife and their habitats. Implement a Resource Protection Measure that sets a significant percentage of each treated unit that will remain unthinned as leave areas for riparian, fish, and wildlife protections. No mechanized thinning in RHCAs to avoid soil disturbance and compaction and stream sedimentation. All trees thinned in RHCAs must be left on site in the floodplain or placed instream to provide LWD, assist restoring degraded stream channels, assist building pools, and prevent livestock from degrading streams and any proposed restoration areas. Additional LWD for stream restoration should be brought in from outside RHCAs to meet LWD targets.

c. Prescribed Burns

Prescribed burns can be an opportunity or a risk to create disturbance that may improve or harm riparian areas.

The Draft Decision Notice (p. 8) states that up to 48% of the project area will receive prescribed burning treatments [which we note is a substantial portion of the project area].

The Draft Decision Notice (p. 4) in Table DN-1 indicates that 1,053 acres are proposed for prescribed burning of which well over half the acres (680 acres) are in Category 1 RHCA with the remainder in the Category 2, 3, and 4 RHCAs.

INFISH (p. A-11) states for FM-1 to design fuel treatment and fire suppression strategies, practices, and actions so as not to prevent attainment of Riparian Management Objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could perpetuate or be damaging to long-term ecosystem function or inland native fish.

The 1999 Mill Creek project included prescribed fire on over 1,200 acres in the project area. The 2010 Mill Creek AMP (p. 136) included prescribed fire on about 9,277 acres (¼ of the size of this project area) across the project area of which 1,128 acres (<12% of total prescribed fire) were in RHCAs.

Prescribed burning will affect an even larger area of the project and has the potential to impact important wildlife habitats that use riparian areas as migration corridors, breeding habitats (e.g., nesting birds, fawning, and calving areas), and hiding and thermal cover.

Remedy

Explain where, how large, and in what pattern natural leave areas are retained for the benefit of other natural resources since these details affect how much the project will impact fish and wildlife and their habitats. Retain large patches of leave areas to limit impacts to other resources. Retain significant proportions of leave areas in areas treated with prescribed fire (e.g., no more than 50%) so that there are untreated areas for riparian, fish, and wildlife protections.

d. RMOs and Habitat Issues

INFISH set riparian goals to maintain or restore water quality, shade, stream channel integrity and channel processes, and instream flows to support healthy riparian and aquatic habitats.

INFISH (Appendix E-3) states that actions that reduce habitat quality, whether existing conditions are better or worse than objective values, would be inconsistent with the purpose of this interim direction. Without the benchmark provided by measurable RMO [riparian management objectives], habitat suffers continual erosion.

With the degraded streams in the project area, it is critically important that none of the RMOs are impacted by harvest, thinning, and burning. The following discussions focus on shade and temperature, but the same concerns apply to lack of bank stability, increased sedimentation, and width/depth channel ratios that already occur in the project area.

Shade

Shade is critical in forest streams to reduce solar insolation, plays an important role in reducing high temperatures, and is one of the few factors amenable to management. The Final EA (p. 177) states that:

The term “stream shade” often refers to all shade on any part of the stream that blocks solar input to the stream channel. Shade functions occur within 60-100 feet (Dewalle 2010) of the channel and stream shade is primarily a function of stream orientation, channel width, tree heights adjacent to the stream, and ground slope above the bankfull channel.

We concur that topography, channel width and stream orientation can affect the amount of shade, but the 60–100-foot shading is less than the 100-200 feet most authors describe. In addition, buffer widths were established for shade but also for other resources such as limiting sediment going instream.

The 1999 Mill Creek Project (p. 3-16 and 3-18) states that:

The following streams within the watershed are on the State 303(d) list of water quality- limited waterbodies: Mill, East Fork Mill, West Fork Mill, Harvey, and Lemon Creeks. These streams are all listed because of temperatures. The principal source of heat in small, forested streams, like those in the project area, is from the sun striking the stream surface (solar radiation). Shade from vegetation and topography are the primary factors regulating the amount of sun reaching the stream surface. Vegetation providing shade may consist of trees, shrubs, grasses, sedges, and other plants. Shade functions (Beschta, et al., 1987) occur within 100-200 feet of the channel.

Leinenbach et al. (2013) [13] studied many aspects of shade and in regard to buffer widths:

The width of the band of vegetation along the stream bank influences the amount of solar radiation that reaches the stream. Wide buffers create more shade than narrow buffers, as measured by angular canopy density (Brazier and Brown 1973, Wooldridge and Stern 1979, Steinblums et al. 1984, Beschta, et al. 1987). However, there is a high degree of variability in this relationship, particularly at narrower buffer widths where the effect on shade is greatest. For instance, data from Brazier and Brown (1973) and Steinblums et al. (1984) indicate that a 15-m buffer width might provide anywhere from 18 to 80% shading (Figure 3). In addition, these studies also showed that 75-90% shade can be achieved with a wide range of buffer widths, ranging from 9 to 43 m. The high variability in buffer width and shade condition is a function of the many variables that influence the amount of shade produced by riparian vegetation. As described above, low-density stands with limited vertical distribution of branches and foliage may require wider buffer widths to produce the same amount of shade as high density stands.

Roon et al. (2021) [21] also assessed the effects of thinning and management on riparian areas:

Resource managers in the Pacific Northwest (USA) actively thin second-growth forests to accelerate the development of late-successional conditions and seek to expand these restoration thinning treatments into riparian zones. Riparian forest thinning, however, may impact stream temperatures—a key water quality parameter often regulated to protect stream habitat and aquatic organisms...In the watersheds with more intensive treatments, thinning reduced shade, increased light, and altered stream thermal regimes in thinned and downstream reaches. Thinning shifted thermal regimes by increasing maximum temperatures, thermal variability, and the frequency and duration of elevated temperatures. These thermal responses occurred primarily during summer but also extended into spring and fall.

While the Final EA states in numerous places that management activities are unlikely to increase stream temperatures, based on the scientific literature, any amount of harvest and thinning in RHCA's have the potential to reduce shade and increase temperature. Reducing shade and increasing temperatures, even small amounts, are in direct violation of INFISH standards.

Temperature

We reviewed the temperature data for the 2024 Aquatics Report (Figures 5a and 6a, p. 45-46) and noted a lack of correctly reported data and misleading statements and conclusions as a result. We also reviewed the temperature data from the 2010 Mill Creek AMP which correctly reported temperature data during the summer and early fall months of highest likelihood of exceeding state standards. There are significant differences and discrepancies reported in the 2024 Final EA and Aquatics Report leading to false conclusions.

The 2010 Mill Creek AMP (p. 101) reported that the mainstem Mill Creek, West Fork Mill and East Fork Mill had Maximum Seven Day Moving Mean Stream Temperatures that were measured from 1994 to 2008. Mill Creek was measured for 11 years and had high temperatures that ranged from 23 to 26C, the

West Fork was measured for 12 years and 11 of the 12 had temperatures ranging from 21 to 26C, while the East Fork was measured for 11 years and ranged from 23 to 26C, all well above the 18 C standard.

This is vastly different than stream temperatures reported in the 2024 Final EA and Aquatics Report. The Aquatics report showed tributary streams like Benefield, Desolation Canyon, and Harvey creeks and compiled all of the 28 years of data into a tiny graph and falsely concluded that stream temperatures in the project area were close to the 18C standard. Benefield and Desolation Canyon creeks are smaller headwater streams and expected to have cooler temperatures. Why did the ONF use a separate set of tributaries to report temperature data? Is there temperature data still collected for the East and West Forks of Mill Creek and if so, where is the data and why is it not reported? Is this an oversight or something more insidious?

Even more egregious is the graph of Mill Creek stream temperatures from 2016 to 2022 at only one gauge showing temperatures stayed at or below 18C. This graph is copied into Figure 1, below. **BUT, none of the temperatures in the Mill Creek graph FOR ANY YEAR showed temperatures from July 1 to October 1 which is the most critical time of the year when stream temperatures exceed state standards!** This is a misrepresentation and (mis)use of select data to make false claims about stream temperatures meeting state temperature standards. Please explain this discrepancy of temperature data in the final decision.

Regardless, the Final EA and Aquatics report fail to demonstrate the project will comply with state water quality standards as required under the Clean Water Act, section 313.33 U.S.C. § 1323(a).

The Final EA (p. 178) states that:

Within the project area there are four streams with assessed water quality impairments related to summer water temperature. These include Harvey Creek (1.4 miles listed), Mill Creek (1.5 miles listed), East Fork Mill Creek (7.6 miles listed) and West Fork Mill Creek (4.9 miles listed). These streams are on Oregon's 2018-2020 Section 303(d) List of "Water Quality Limited Waterbodies.

The 2024 Mill Creek Final EA and Aquatics report fail to note that Lemon Creek is also water quality limited (see 1999 Mill Creek project p. 3-15). Furthermore, streams that are designated as 303(d) listed as impaired for summer temperature, means the agency cannot contribute to causing any additional heat or otherwise cause or contribute to increases in water temperatures.

The 2024 Mill Creek Final EA (p. 178) alleges that:

On average, stream temperatures are right at the 18 degree C threshold set forth in the Oregon State water quality standards (Figure 36) for trout and salmon rearing and migration but higher than the desired threshold of 13.0°C for spawning.

This is not true as many streams in the tiny little graph exceed the 18C rearing and 13 C spawning standard and is contradicted by the temperature data in the 2010 AMP. We find it a violation of full NEPA disclosure that the actual data is not shared with the public¹ and instead a coarse graph showing

¹NEPA requires disclosure of information necessary to determine compliance with legal requirements such as the Endangered Species Act, Clean Water Act, National Forest Management Act, and applicable Forest Plan Standards & Guidelines. See 40 CFR 15087.27(b)(10).

tributary stream temperature data from 28 years from 1994 to 2022 (Aquatics Report, Figure 5a, p. 45) incorrectly reports how high summer temperatures are impacting native aquatic resources. The graph deliberately dilutes the information for streams in the project area by showing data for all streams spread over a 28-year period rather than showing the year-by-year trends and maximum 7-day average during critical summer and early fall months for each stream. The Final also fails to share data from 2 important tributaries, the East and West Forks of Mill Creek. The 2016-2022 temperature graphs excluded the July 1 to October 1 stream temperature data. Therefore, the 2024 Final EA and Aquatics Report graphs conceal the true temperature data, and the analysis obscures impacts to aquatic species.

Furthermore, the ONLY detailed temperature data is in the Aquatics Report (p. 46) of Mill Creek temperatures for 2016-2022 and all years are missing the data from July 1 to October 1 (Figure 1). **This site-specific information in the Aquatics Report is required to be put in the body of the EA, as important parts of the NEPA analysis cannot be buried in specialists reports and appendices.**

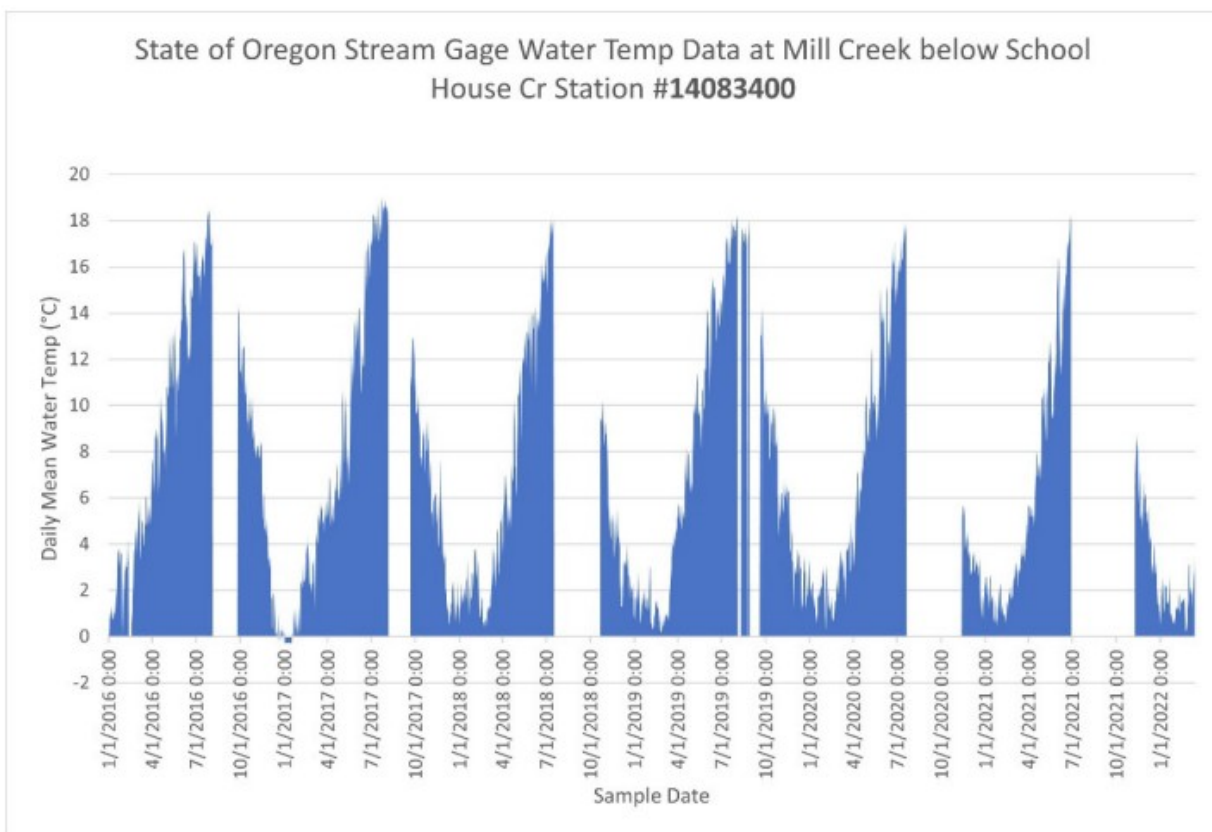


Figure 1. Figure 6a from the Aquatics Report (not in the body of the Final EA required by NEPA) which shows Mill Creek temperature data, 2016-2022. Note the missing graphical data from July 1 to October 1 of each year which is when stream temperatures are highest.

Where is the rest of the detailed data from streams, particularly the numerous ones that fail to meet standards? Why is the only detailed data reported from a section of stream that meets state standards from October 1 to July 1 but excludes the principal summer and fall months when temperatures are high? Where is the other monthly data for the other streams? **This kind of misleading analysis is flawed, disrespectful to the public, and fails to meet NEPA obligations for full disclosure.** We hope it is not intentional but merely an oversight.

The standard for water temperature reported in INFISH (p. A-4) (as well as in the 2010 Mill Creek AMP (p. 4)) is:

No measurable increase in maximum water temperature (7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period). < 59° F within adult holding habitat. <48° F within spawning and rearing habitats.

The Mill Creek Final EA and Decision Document failed to conduct proper analysis and disclosure of the stream temperature conditions in the project area and need to show monthly rather than annual trends for all streams in the project area. From the scanty and misleading temperature information provided, it is clear that violations of the temperature standard occurs year after year during summer and fall months, and falsely concludes that there will be no impacts to water temperatures caused by the project.

Remedy

Be honest with your data collection and analyses and re-do the water temperature analyses to correctly report riparian and stream temperature conditions. Correctly gather data more strategically and frequently and report ALL of the data, not selected misrepresentations of what occurs in project area streams. Reduce the amount of thinning and prescribed burning to limit impacts to riparian and stream conditions. Reduce road densities and ensure all road closures successfully close vehicular access and maintain those closures over time. Limit livestock access to streams by increasing the amount and size of exclosures, and/or more rest and rest rotation strategies that restore streams. Do not allow permittees to use livestock exclosures. Require the permittees to gather livestock and take them to the home ranch when out of water, and do not allow permittees to open exclosures for livestock use.

e. Modifying RHCAs PSZ

The Final EA and Aquatics Report used an artificial construct to delineate areas to harvest in RHCAs. For example, the Aquatics Report (p. 16) states that:

The spatial boundary used in GIS for analyzing the effects to stream temperature in commercial thinning, noncommercial thinning, and large wood source units is 50 feet from Category I-III RHCAs and referred to as the Primary Shade Zone (PSZ). This boundary is used because the PSZ is a minimum distance from which a tree of a determined height on a determined slope is providing shade during the period when peak temperatures occur.

Rather than apply INFISH RHCA widths to dictate the scope of riparian treatments, the ONF used a “lowland/inner vegetation zone” (or “primary shade zone,” or “PSZ”) and an “upland/outer vegetation zone” within each RHCA. While the Black Mountain project also used the unsupported concept, the project had a “PSZ” width of 70 feet for Category 1–3 perennial streams, the Mill Creek project uses 50 feet from streams. The Final EA uses the 50-foot distance but does not provide sufficient support or evidence for the concept of a “primary shade zone” or why the 50-foot distance was selected for the project, versus 70 feet or 100 feet or whatever distance. Furthermore, RHCA widths are not just based on shade but also soil disturbance, sedimentation, and other resources.

It is well established in the literature that timber harvest and thinning in riparian areas results in the reduction of shade with the amount of shading in riparian areas affecting the extent streams are warmed by solar radiation. Therefore, stream shade is key to maintaining low water temperatures. Yet, the Final EA notes that most streams in the Mill Creek project area fail to meet the Forest Plan or INFISH standards for 80 percent shade.

Forest Plan and INFISH standards for stream temperature in many of the project area streams are often exceeded in the summer and early fall months, when temperatures frequently are above ranges considered suitable for persistence of cool-water aquatic species. The two sensitive species in the project area, Redband trout and Columbia Spotted frog, are vulnerable to habitat alteration and recognized as needing special management attention to avoid placement on Federal or State endangered species lists.

We question the arbitrary and capricious use of a PSZ to delineate management activities and find it a randomly chosen number to determine management activities inside RHCAs. We assert that any timber management or prescribed burning management activities that impact shade, bank stability, sediment, or water temperatures have a great potential to further harm riparian areas, streams, and aquatic life.

Remedy

Do not use PSZ as a tool to provide options for management activities in RHCAs. Use the RHCA buffers designated by INFISH as the primary tool to guide restoration in riparian areas.

f. Baseline Data and Lack of Monitoring Stream Habitats

As stated above in our concerns on stream temperature information, we reviewed the temperature data for the 2024 Aquatics Report (Figure 5a and 6a, p. 45-46) and noted a severe lack of correctly reported data and misleading statements and conclusions. We compared it to temperature data reported in the 2010 Mill Creek AMP which correctly reported temperature data. There are significant differences and discrepancies in reporting. While this section repeats what was stated above on stream temperature monitoring, we are concerned that agencies parse topics for responses and the information below is needed to understand baseline conditions, monitoring, and providing complete data to the public.

The 2010 Mill Creek AMP (p. 101) reported that the mainstem Mill Creek, West Fork Mill and East Fork Mill had Maximum Seven Day Moving Mean Stream Temperatures that were measured from 1994 to 2008. Mill Creek was measured for 11 years and had high temperatures that ranged from 23 to 26C, the West Fork was measured for 12 years and 11 of the 12 had temperatures ranging from 21 to 26C, while the East Fork was measured for 11 years and ranged from 23 to 26C, well above the 18 C standard. This is vastly different than temperatures reported in the 2024 Final EA and Aquatics Report.

The Aquatics report showed tributary streams like Benefield, Desolation Canyon, and Harvey creeks and compiled all of the 28 years of data, from 1994 to 2022, into a tiny graph and falsely concluded that stream temperatures in the project area are close to the 18C standard. Even more egregious is the graph of Mill Creek stream temperatures from 2016 to 2022 at only one gage showing temperatures stayed below 18 C. **None of the temperatures in the graph FOR ANY YEAR showed temperatures from July 1 to October 1 which is the most critical time of the year when stream temperatures exceed state**

standards. This is a misuse of temperature data and is used to reach false claims about meeting state temperature standards.

The 2024 Aquatics (p. 14) report claims that:

the current average temperature readings at the two long term monitoring sites is at the 18 degree C threshold set forth in the Oregon State water quality standards (Appendix A, Figure 5a).

That is not surprising since the data fails to include from July 1 to October 1 for every year shown in the graph. Then, despite the fact that 30 years of data are scrunched into the graph for several tributaries, the data still shows that many tributary streams in the project area violate the state temperature standard for both spawning and rearing, and especially during summer and early fall months.

Much of the shade, bank stability, width/depth, and pool frequency data reported in Table 3a is stale and does not represent current baseline conditions which could have deteriorated further. While that is a concern, the greater fear is that trends in RMOs and stream temperatures are not improving and in some cases degrading. Therefore, any harvest and burning activity in the RHCAs risks greater consequences to removing shade, increasing temperatures, increasing sediment, and other impacts.

The 1999 Mill Creek project (p. 2-30) made abundant promises to monitor stream and riparian conditions:

Stream temperature monitoring is in place on five creeks within the Mill Creek Watershed. Monitoring will continue to verify that planned forest management activities are not contributing to increasing temperatures. Selected stream reaches adjacent to thinning and/or harvest units (no less than 2) will have pre- and post-treatment shade monitoring to verify that thinning and harvest guidelines are not reducing shade. Three water quality monitoring stations have been established in the Mill Creek Watershed: Dry Creek, West Fork Mill Creek, and East Fork Mill Creek. Peak flows, discharge, Total Suspended Solids (TSS), and turbidity will be measured. These stations will be maintained, and the data will be used to verify the expected effects on water quality.

Sadly, the scattered data populating table 3a of the 2024 Aquatics report for the Mill Creek project fails to demonstrate improvement in stream temperatures or other habitat INFISH RMOs meeting standards. Where are the water quality monitoring stations in the East and West forks of Mill Creek? If it exists, why is it not reported?

The Mill Creek Allotment Management Plan in 2010 made more promises to restore stream conditions:

*AY Pasture (p. vi): Pasture would not be grazed prior to July 15 each year to maintain consistency with the Programmatic Biological Assessment (BA) for steelhead habitat.

* Harvey Pasture (p. vii): Rest pasture for a minimum of 4 years, and until monitoring indicates an upward trend in resource conditions. Rest would begin when restoration activities begin. During the rest period, reduce authorized stocking rates by 339 AUMs, through a reduction in numbers and/or season; reduction would be proportionate between 2 permittees. Actively restore riparian areas on 4 miles of Harvey Creek (Reach 1) and Mill Creek (all reaches) with

activities including in-stream placement of wood and/or rock structures, planting hardwoods, creating physical barriers (such as wood, rock, or fences) to protect hardwoods and improve bank stability.

* Lemon Pasture (p. vii): Construct a riparian enclosure (about 128 acres with 2 water gaps) on Mill Creek; maintenance would be assigned to the Forest Service.

What of these promised activities were completed? Was the Harvey Pasture rested for 4 years and finally show an upward trend and were stocking rates reduced? Was the 128-acre riparian enclosure completed in the Lemon Pasture with 2 water gaps? If these activities were never completed, that is a likely explanation of why stream are not improving. If these were not completed, why not? Will they be completed now as mitigation?

Numerous statements in the 2024 Aquatics report note continued failure to restore streams despite these past attempts to move streams toward meeting RMO standards. The following are a few examples of ongoing degradation in stream and riparian systems despite past attempts via the 1999 Mill Creek Project and 2010 AMP to make improvements to meet RMOs.

2024 Aquatics Report

p. 17: There has been a very large decrease in percent stable banks in the uppermost reach of West Fork Mill Creek and Lemon Creek (Appendix A, Figure 7a). Percent stable banks are below forest plan standards in uppermost reach of West Fork Mill Creek, all reaches of Harvey Creek, and the lower two reaches of Lemon Creek.

P. 17: Very large increases were observed in percent fines in Reach 1 and Reach 3 of West Fork Mill Creek and Reach 1 of Lemon Creek. Percent fines in the channel substrate exceed desired levels in all reaches of West Fork Mill Creek, all reaches of Harvey Creek, and lower two reaches of Lemon Creek. Percent fines observed correlate closely with the trends in percent stable banks supporting a decrease in overall channel stability, increase in erosion and deposition, and decrease in aquatic habitat quality (Appendix A, Figure 7a).

p. 23: The data show an overall trend of decreasing large wood over time within the project area. The only stream that saw an increase in large wood per mile is Evans Creek. Most streams are at or just below the INFISH standard of 20 pieces per mile (Appendix A, Figure 8a) and only Evans Creek and East Fork Mill Creek showed large wood numbers within a range that can be considered acceptable. Research has indicated that current management objectives for pieces of large wood per mile (e.g., >20 pieces per mile) may be too low and in managed watersheds the target should be set higher for the interim until wood loading can occur within the natural range of variability (Fox and Bolton 2007, Wohl et al. 2017a, Wohl et al. 2017b). Based on supporting literature (Montgomery et al. 1995, Beechie and Sibley 1997, Seixas et al. 2020) and professional observations for the project area, the minimum desired large wood frequency per mile in most streams is 80 pieces minimum to enable reaching other INFISH RMOs such as pool frequency. [We concur with the ONF that 80 pieces per mile is a better minimum amount].

p. 25-26: Pool characteristics are shallow exhibiting little habitat complexity. The majority of streams within the project area fall well short of meeting management objectives of more than 96 pools per mile with no apparent trend in changing conditions (Figure 10a). Streams that exhibit less than 60 pools/mile include: Mill Creek, West Fork Mill Creek, Lemon Creek, and

Reaches 1 and 2 of Harvey Creek. Survey data indicates an overall trend in decreasing pools per mile across the entire Mill Creek watershed. Mill Creek, lowermost reach in West Fork Mill Creek and East Fork Mill Creek all showed no change in pools/mile (Appendix A, Figure 10a). Pools per mile are well below INFISH standards in all streams in the Mill Creek watershed with the exception of Evans Creek (although the last PIBO survey was in 2008).

These descriptions of intent to move streams toward meeting state temperature and INFISH standards indicate that either implementation of the mitigation activities never occurred, livestock pastures were never rested to restore riparian conditions, exclosures were not built or maintained if built, and ongoing management activities (e.g., livestock grazing) continues to impact RHCAs.

The lack of correctly reporting July 1 to October 1 data for Mill Creek, the tiny graph of almost 30 years of data for select tributary streams, the lack of incorporating past data from the Mill Creek AMP, and the parsimonious lack of baseline data and scattered data collection throughout the project area indicates a general lack of detailed knowledge and trajectory of habitat parameters and stream conditions. What is reported is not encouraging either. In many cases, from table 3a of the Aquatics Report, there may be only 1 or 2 data points and, in a few cases, 3 data points for a given parameter. Much of this data is stale and more than 5 years old.

Remedy

Correct the data, add the missing data, and correctly analyze it for stream conditions. Do not misrepresent to the public analyses with missing data and inappropriate analysis and conclusions. Provide an authentic picture of stream conditions. Do not draw ambiguous conclusions that temperature standards are met in the project area when they are not.

g. Riparian restoration floodplain and LWD treatments

The Broads and Sierra Club support the Ochoco Forest's proposed construction of riparian exclosures. The Aquatics Report states that:

Riparian planting with native hardwoods and forbs will take place, where necessary, in disturbed areas where mechanical treatment occurs. A percentage of plants will be protected with caging until they reach a height to withstand deer, elk, and livestock browsing. Two new riparian livestock exclosures are proposed in the West Fork Mill Creek area. One ~1-acre exclosure fence is proposed adjacent to an existing aspen exclosure and is intended to protect a productive wetland/spring area (Fig 1e). One ~5-acre exclosure fence is proposed along West Fork Mill Creek and is intended to protect an area where extensive stream restoration is authorized through the 2010 Mill Amp EIS along with protecting existing riparian planting from past restoration activities. Additionally, a ~20 acre riparian livestock exclosure that was authorized in the 2010 Mill Creek Allotment Management Plan EIS will be built on mainstem Mill Creek after the proposed stream restoration activities are completed (Fig 1e).

We note that according to the Mill Creek AMP (p. 20), a 128-acre exclosure was to have been built along Mill Creek. Now it appears to have been downsized to 25 acres 14 years or more after promised in 2010 by the time it is constructed. The ONF has a long history of promising mitigation measures that are rarely funded and implemented.

The Broads and Sierra Club support the implementation of riparian exclosures and in fact there should be many more and much larger in area. It should not take this project to build what was originally part of the 2010 Mill Creek AMP so we are once again dismayed at the failed promises but encouraged that the promised exclosures will come finally more than 14 years after proposed.

With this level of project management activity of stream restoration for LWD placement and floodplain restoration, the minimum protection of these resources should be complete rest from livestock grazing in the West Fork Mill area for a minimum of 5 years along with construction of livestock exclosures. This would ensure a higher likelihood of success. In addition, the ONF needs to take a more proactive and comprehensive approach to restore degraded riparian areas, including restoring stream channels and hardwood riparian species.

Remedy

Repair the numerous causes of stream degradation identified in the Watershed and Fisheries Effects Analysis. Reconnect streams to their floodplains, implement more native plantings, reintroduce beavers, and most importantly, exclude cattle grazing via exclosures or extensive rest periods, where any treatments, including thinning, burning and restoration will occur. Secure funding for restoration projects and monitoring and provide a timeframe when these projects will occur. Do not fail to implement these projects in a timely manner and do not wait for the next project to come along to fix what must be done now.

h. Aquatic species, including redband trout and Columbia spotted frog.

Studies have documented the impacts of degraded stream channels and riparian conditions including high stream temperatures, high sediment, bank instability, lack of LWD and lack of pools on aquatic organisms. For example, high stream temperature impacts aquatic species by raising stream temperatures above the tolerable range for rearing, and increases vulnerability to disease, reduces metabolic efficiency, shifts fish species assemblages, and inhibits upstream migration.

INFISH (p. III-13) reported that the percent of pool habitat and quality, and large woody debris recruitment in riverine systems has declined, migratory corridors blocked, and riparian vegetation disturbed greater than what is acceptable. As a result, the fish habitat carrying capacity of these streams has been diminished and a declining trend in the security of native fish populations observed.

The 1999 Mill Creek timber sale project (p. 3-43) reported that “The Mill Creek Watershed salmonid fisheries resource is limited by habitat quantity and quality. The watershed historically provided the low stream temperatures and large areas of suitable spawning gravel necessary for large stable runs for both anadromous and resident fish species. Anadromous fish currently are not present in the project area because of downstream blockages at dams that do not provide fish passage facilities. Of the 160.7 stream miles in the watershed, 50.4 miles are Class I and II streams that contain fish. Fish distribution throughout the watershed is limited by stream flow, both man-made and natural barriers, stream gradient, and rearing and spawning habitat quality and quantity...Mill Creek is presently estimated to sustain 10 percent of the historic level of salmonids. The primary reason for the decline in production of salmonids throughout the

watershed has been the loss of instream habitats and declining water quality. These low-quality salmonid habitat areas are concentrated within lower gradient, broader valley reaches within the watershed.”

In other words, based on the RMOs assessed for the 2024 Mill Creek project, conditions have not changed for the better. The 1999 Mill Creek project also asserted that project activities would improve conditions for aquatic species with all of the management activities. That has not occurred.

Even more concerning is that these severely reduced populations of redband trout are at risk of extirpation during drought conditions and from climate change bringing warmer and drier conditions. Despite promises of planned improvements, the 2024 Mill Creek Final EA (p. 199) states that:

All proposed treatments from the project could result in indirect effects that could negatively impact aquatic organisms. Examples of potential indirect effects are:

- fine sediment inputs,
- short term reductions in vegetative cover and shade in riparian areas, and
- short term increase in instream water temperature

However, project implementation will follow all BMPs and PDCs to ensure that potential indirect effects to water quality and aquatic organisms be minimized or potentially eliminated. In addition, these effects are anticipated to be short-term, with long term indirect impacts being beneficial impacts to improve the habitat conditions for Redband Trout. This appears to be a redo of the 1999 Mill Creek project making the same promises and leading to the same results.

Remedy

Treatments in riparian areas and stream channels must minimize risk to aquatic species and restore RMOs, no reductions in shade or other RMOs are allowed. Repair the numerous causes of stream degradation identified in the Watershed and Fisheries Effects Analysis. Do more to reconnect streams to their floodplains, more native plantings, reintroduce beavers, and most importantly, exclude cattle grazing via exclosures or extensive rest periods, where any treatments, including thinning, burning and restoration will occur. Secure funding for restoration projects and monitoring and provide a timeframe when these projects will occur. Do not fail to implement these projects in a timely manner rather than waiting for the next project to come along.

Wildlife Populations and Habitat

Examples of our Comments to the Draft EA

The ONF needs to balance the needs and obligations for restoring and maintaining fish and wildlife habitats and productivity with this effort to restore forest resiliency.

High road densities are a major pathway to altered hydrology in each basin including higher peak, lower base flows, and a major contributor to sediment in streams as well as impacts to wildlife such as fragmentation of habitats and disturbance.

This proposed Mill Creek Project is like many of the recently implemented, ongoing and future vegetation management projects such as Black Mountain, Gap, Spears, Jackson, Howard Elliot

Johnson, Deep, and Wolf. Just in the past 10 years, Gap, Spears, Jackson, Howard Elliot Johnson, and Wolf projects have “treated” over 115,000 acres, Black Mountain implementation is ongoing, while fires such as the Bailey Butte, Hash Rock, Ochoco Complex, and Bailey Butte have impacted another 30,000 acres. These are very large landscape changes that affect numerous wildlife species and their habitats, especially big game including elk and mule deer that use different habitats.

Elk numbers in the Grizzly Wildlife Management Unit including the project area are already below Oregon Department of Fish and Wildlife’s (ODFW) management objectives. All the action alternatives will further impact elk with loss of significant hiding and thermal cover.

The Draft EA minimizes the impact of climate change while overstating the need to do forest management (also at the expense of streams, water quality, fish and wildlife habitats and soils) in order to protect forests from increasing wildfires from a warming and drying climate. As stated in the previous section on wildfires, future severe wildfires will be climate and wind driven events and no amount of forest management will stop mega wildfire events such as occurred in the Cascade Mountains in September 2020.

The researchers at Oregon State University stated that the U.S. needs to establish new “Strategic Forest Reserves” to protect wildlife and reduce carbon emissions that contribute to climate change. Their maps showed that Western forests would store the most carbon and help the most fish and wildlife species if they were given the same level of protection from logging, grazing, and mining as designated wilderness areas receive.

This project must account for how it disrupts ecological systems, wildlife habitat, and biodiversity in ways that natural disturbances do not.

The cumulative effects analysis needs to not only look at other projects within this project area, but at adjoining projects outside the Mill Creek watershed that also affect migration routes, riparian disturbances, wildlife disturbance, and human activities.

Human activity is increasing over time both within the Mill Creek project area and throughout the ONF. This leads the ONF to consider projects such as Lemon Gulch and road improvements and trail expansions. Increased road traffic, camping, and hunting pressure are all affecting wildlife and the ecosystem, especially when including illegal activities such as firewood and timber harvesting, OHV use off-trail, etc. Forest-wide pressures need to be considered.

the DEA inadequately analyzes how current cattle allotments impact special elk habitats, including specific locations for calving and rutting in the Project area. Most of the Project is within the 58,857 acres of the Mill Creek Allotment Management Plan’s grazing allotments, and the Wildlife Report addresses that “livestock grazing may be present within portions of the project during rutting season and may impact use of the project area by elk, thus reducing the utility of some wallows.

Issues and Impacts

We support the decision by the ONF to not cut trees 21 inches and over as they are critically important for diverse fish and wildlife species. Large trees are important as live or dead, standing or fallen onto the forest floor or into the stream and are critical to forest, wildlife habitat, streams, and watershed function. Diverse wildlife in forested habitats evolved in a world with abundant dead wood, where every tree that grew in the forest died in the forest became downed wood and snag habitat. In streams, LWD is critical for structure, function, and biodiversity in aquatic ecosystems. Habitat for a myriad of wildlife species is found in the dead branches, cavities, seeds, cones, snags, and the buildup of the forest floor with litter. Large old trees have thick bark that withstand forest fires and survive, and provide shade, wind breaks, soil moisture and a cooling effect in the multilayered canopy.

We appreciate the ONF's recognition of the potential impacts to treat such a large and virtually continuous treatment of the project area outside the wilderness (Draft Decision Notice, p. 3) and the potential negative impacts of commercial harvest, non-commercial thinning, and prescribed burning to fish and wildlife populations and their habitat. The Broads and Sierra Club applaud the ONF's decision to reduce the size and scope of the project with the selection of Modified Alternative 4:

This decision is responsive to many public comments that were focused on the size and scope of the project itself, concerns that moving forward with forest restoration activities on a large portion of the non-Wilderness acres would create negative effects to wildlife habitat and the watershed.

However, we remain concerned that the project proposal still plans to treat almost 75% of the project area outside of the Mill Creek Wilderness. This level of disturbance and habitat alteration has a large potential to impact important fish and wildlife habitats. There is a high risk of increased disturbance and fragmentation to wildlife and their habitats including hiding and thermal cover for big game species, migratory corridors for all wildlife species (e.g. big game, avifauna, and carnivores), nesting habitat for resident birds and feeding and roosting for migratory birds, and riparian habitats and streams that support aquatic species. Impacting this large area of the project will severely effect many of our diverse fish and wildlife species, already compromised by past management activities and climate change.

Given the scope and scale of the project proposal, we recommend that the ONF retain significantly larger leave patches (>25% **minimum** of each treated area and prefer 40%) than that proposed in the Appendix C:

In general, the percentage of a unit not receiving commercial or non-commercial treatments can be anywhere from 0-40%, though the average likely ranges closer to 5-15%.

While we recognize that Resource Protection Measure (W-1) is intended to leave cover patches in a mosaic pattern, it is vital to leave larger wildlife cover patches in treated areas as much as possible. Please be specific about what units or areas will be treated and how much wildlife habitat will be retained in the final decision.

We also recommend retaining cover patches in contiguous strips as wildlife corridors. A very high connectivity corridor in the project area (Figure 2, below, and see the Priority Wildlife Connectivity Areas Map, <https://experience.arcgis.com/experience/6979b6598f904951bd0af1821e1595f1/>) was identified by ODFW and treatment units in this area should be dropped.

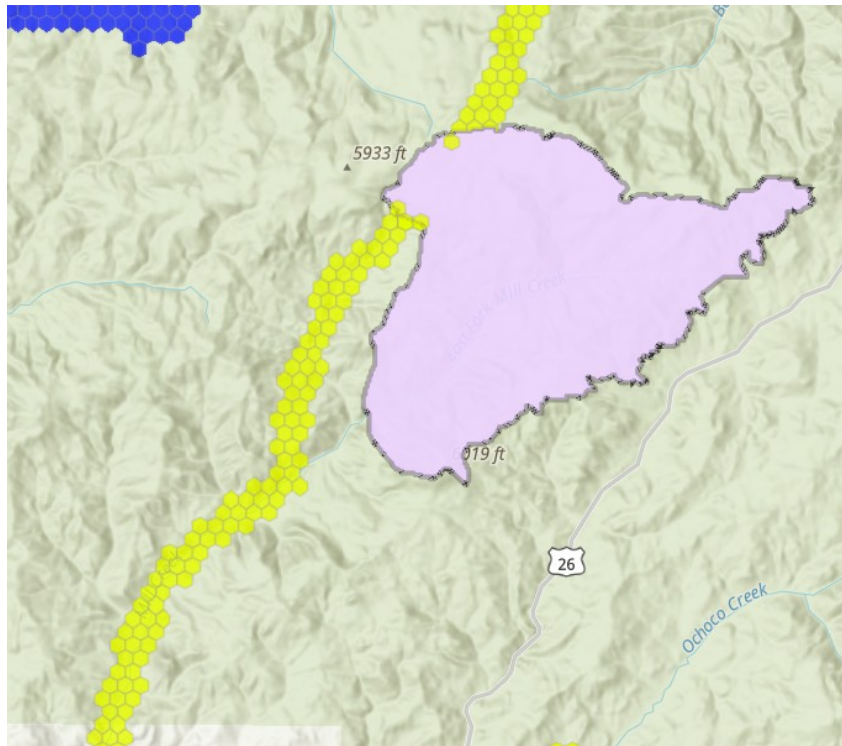


Figure 2. Note in yellow polygons an important wildlife corridor. Source: Priority Wildlife Connectivity Areas, ODFW, Oregon Conservation Strategy.

We remain concerned about impacts to elk security habitat and calving and wallows sites for successful elk reproduction. Moreover, elk are a forest MIS species and iconically important to Oregonians.

The Final EA (p. 126) noted the following regarding potential elk calving sites:

Field reconnaissance was completed in the spring to field verify these assumptions. Across the project area 24 sites were identified as having a high likelihood of containing the necessary habitat components for calving and fawning. These sites equated to approximately 293 acres. Of the 24 identified sites, portions of 8 of them lie more than ½ mile from an open road or motorized trail in identified elk security habitat and therefore may have a higher utility for elk or deer in comparison to other sites.

Given that elk (and mule deer) populations are below management objectives, we recommend that the ONF err on the side of caution and retain all 24 potential sites as special elk habitat that have habitat features for calving and fawning and leaves the largest area possible for successful reproduction. In addition, the proposed pre-treatment surveys, and reduced logging in RHCAs will ensure better protection for elk and mule deer from the extensive treatments.

The ONF conducted a similar analysis for elk wallow sites:

Across the project area 88 springs, seeps, and other potential wet habitats were identified. Of the 88 identified sites, 31 occur within 200 meters of an open road or motorized trail, and 10

occur within 100 meters of a non-motorized trail or administrative use only road, leaving 47 sites that have low potential for human disturbance and thus are the most likely areas to support elk wallowing.

For the same reasons above, we recommend that the ONF again err on the side of caution² and retain all 88 sites as special elk habitat leave areas that have the important features for elk wallows for reproduction. This in combination with the pre-treatment surveys and reduced harvest and thinning in RHCAs will provide better assurance for big game species.

Remedy

Retain larger leave patches (>25% minimum of each treated area and prefer 40%) than that proposed in Appendix C. Leave more patches of diverse tree species and density within sale units for greater variability across the landscape. Reduce proposed logging intensity to maintain more forest structure for wildlife, soil nutrient cycling, forest carbon sequestration and storage, and recreational values. Retain all 24 sites totaling 293 acres identified as potential important calving and fawning areas for elk and mule deer. Retain all 88 sites identified as potential important elk wallow habitat.

Travel Management and Road Densities

Examples of our Comments to the Draft EA

Most of the largely degraded streams and riparian areas are a result of past timber harvest, past and ongoing livestock grazing, and high road densities (including open, closed, decommissioned and temporary roads that are still actively driven).

We also support all permanent and seasonal road closures that should be physically blocked, not just administratively closed or with existing useless berms that fail to block the public members that violate closed roads.

The Bitterbrush Broads and Bros partnered with several other conservation groups and conducted closed road surveys in 2021 in the Mill Creek project area. Despite denser forest and steeper topography than the Black Mountain project area, we found a substantial amount of closed roads that were driven by the public and user created roads. In the Mill Creek project area, of the 110 closed roads surveyed, 31 (28%) were closed, 66 (60%) were open and illegally driven, and 13 (12%) were not surveyed.

The road density values used for this project as reported in the DEA in tables on page 123 are incorrectly calculated because the total project area includes the Mill Creek Wilderness which is not considered for roads, treatments, or any actions. This dilutes road density values and other values by adding 13205 inactive acres, acres that cannot be part of any alternative action in the project area. The actual road density is more honestly calculated by using active project acres of 23225.

²Use the precautionary principal.

Issues and Impacts

Road Density

Our concerns about “open road density” remain in spite of the Consideration by ONF stating that the “open road system complies with Forest Plan standards for the management allocations in the project area” (p. 398 and others). We cannot reconcile the illogic of quoting “open road densities” on paper when field work demonstrates that roads under regular public use create a higher road density with all the negative effects that roads and motor vehicles bring to the forest. Simply using administrative numbers does not reflect the reality of what is happening on the ground.

Our concerns about roads, as well as those concerns expressed by other groups, were quoted in item 142 (p. 397ff) and other items of the Consideration section. We note that the Consideration response states that the ONF ID Team analysis reports “many road closures that have been breached over the last 25 years; and there are also roads that were never effectively physically closed.” This substantiates our comment which stated in part:

In 2021, the Great Old Broads for Wilderness conducted a road survey and found that of the 110 closed roads surveyed, 31 (28%) were closed, 66 (60%) were open and driven, and 13 (12%) were not surveyed. The survey also found numerous decommissioned, and user created roads that were driven but did not enumerate those. This was not a comprehensive mapping exercise, which suggests there are numerous additional roads not counted toward the Project’s overall density.

In this same item, 142, the Consideration states:

The Ochoco National Forest has also been successful in implementing these road closures. Over the last 10 years the Ochoco National Forest has successfully installed 142 road closure devices...

These conflicting statements by ONF, first that “many road closures have been breached” and then “have been successful in implementing these road closures” strengthen our statements about road use and extensive habitat fragmentation and wildlife disturbance beyond the administrative open road system. Our fieldwork documented many closed roads open and regularly driven by the public.

We stand by our comments on the Draft, based on our ground surveys in the summer and fall of 2021 (Appendix 1). While ONF may try to administratively define open and closed roads, the Great Old Broads as well as the ID Team both found that “roads were never effectively physically closed,” as per the ID Team analysis. As noted in our Mill Creek Closed Road Survey Report, “Motorized roads and trails cause forest fragmentation, destroy habitats, and cause disturbance while also providing avenues for the spread of invasive plants, human-caused fire starts, trash, poaching, and increased stream peak flow events which can result in increased sediment loads and degraded stream channels. Habitat disturbance and destruction is further complicated by the impacts of livestock grazing, particularly in riparian areas. None of these things contribute to a healthy forest ecosystem.” (See Appendix 1 for our “Surveys for Maintenance Level 1 Closed Roads in the Ochoco National Forest Mill Creek Vegetation Management Project Area: What Did We Learn?”.)

Our Survey Results

As noted in our comments to the Draft EA, the following are some of the most egregious road violations that we encountered (Broads comments to the Draft EA (p. 13)):

- *The 3370-230 road is well used and goes to the top of the ridge separating the Mill and McKay creek drainages and connects with the Green Mountain OHV trail. The well used "closed" road connected to the 3300-170 road on McKay Creek.

- *The 3360 and 3380 roads are supposed to be closed for big game winter range and have metal gates and boulders. Those sites were visited on January 1, 2022, and found well driven motorized use and a pickup was departing the 3360 road behind the road closure gate.

- *The 3360-060 road is legally open 1 mile but the gate at the end of the open area was constantly down on multiple site visits and accessed many "closed" roads and illegal OHV trails such as in Schoolhouse Creek and across several ridge tops.

- *The 3330-050 has a major OHV trail that drops down to the W Fork Mill Creek and accesses numerous "closed roads" and user created OHV trails throughout the entire W Fork Mill Creek area and even more critically between the W Fork Mill Creek and the Mill Creek Wilderness.

- *Many of the unauthorized OHV trails and roads are easily seen on Google Earth.

Temporary roads

We applaud the ONF proposal to close or decommission about 6 miles of road and reinforce road closures at about 26 locations (Draft Decision Notice, p. 2), however, we are extremely concerned about the 49.1 miles of temporary roads proposed for the project (Final EA p. 90). That is a huge amount of road miles that will cause soil disturbance and compaction, sedimentation to Category 1 to 4 streams located with 300-400 feet of a temporary road, wildlife disturbance and harassment, habitat fragmentation, noise, and impacts to water quality. Temporary roads have all the same impacts on wildlife, streams, and riparian areas as any other road with motorized vehicles and occur not only when roads are newly constructed, but cause impacts long after the project activity is done. It is our experience that some "temp" roads are never completely closed and are sometimes used, particularly by off highway vehicles. Figure 3 is a "temp" road from the Wolf project (2014) area that we drove by in spring 2024 and is still easily visible and driven.



Figure 3. Temporary road from the Wolf project (2014) area.

Funding and timelines

The Final EA (p. 224-225) states:

Upon completion of commercial thinning activities, these roads would be closed and placed in storage status. Basic custodial maintenance may be performed to maintain future access, prevent resource damage, or hydrologically stabilize the road. Physical closure of roads may include placement of barriers such as trees, rocks, berms, or gates.

The Final EA (p. 396) in response to a comment states:

Road closure reinforcement could occur through the Good Neighbor Authority agreement with Oregon Department of Fish and Wildlife.

We applaud that the ONF will pursue road closures, hopefully more aggressively compared to past projects, but request concrete timelines for when roads will be closed after commercial harvest and thinning treatments are completed. We request that roads are closed quickly in a specified time frame, rather than closures with unspecified timelines. Specific timelines for closures must be clearly stated and enforced for any contracts for road closures, temporary roads, and decommissioning.

We request that road closures are funded and implemented as part of project contracts so that some future unidentified funding source is not relied upon for implementation. The ONF has had a long history of failing to implement mitigation measures including road closures. We note from the North Fork Crooked River Project (61651) that the ONF has had limited road maintenance funds and has only conducted routine maintenance on ML 3-5 roads. We are concerned that with limited road maintenance funds, it could preclude obligations for closing and decommissioning roads and once again, the mitigation requirements will not be met. Therefore, we request the ONF obtain the necessary funding

for road closures, decommissioning, and any closure monitoring be identified and secured prior to the project to assure completion of this mitigation obligation.

Remedy

Re-evaluate the open road density in the context of the Travel Management Rule and include closed and decommissioned roads as “open” for analysis of accurate road densities. Evaluate how this project’s roads are consistent with the 2015 Ochoco Travel Analysis Report and comport with the minimum road system. Conduct an authentic tabulation and road density analysis of closed roads used by motorized vehicles along with those administratively and/or physically open and closed. Comply with the road density standards in the LRMP for general forest, and in winter range areas. Set specific and near term (e.g., within 2-3 weeks) requirements for road closures and decommissioning following treatments. Identify and acquire funding for road closures, decommissioning and maintenance prior to project implementation and continue to maintain road closures into the future. Drop all “temporary” road construction and reduce the re-opening of currently closed roads. Especially don’t reconstruct or re-open roads already grown over or roads that were closed for ecological protection reasons, including roads within riparian buffers or that are hydrologically connected to streams.

Livestock Grazing

Examples of our Comments to the Draft EA

From our field observations of exclosures in the West Fork of Mill Creek, we find that livestock grazing has indeed harmed streams and riparian areas... Streams in the project area and any proposed restoration treatments must be fenced from livestock grazing to improve riparian and instream habitat.

Without reducing road densities and improved management of cattle (e.g., significant fencing of riparian areas), reducing or cessation of livestock numbers and duration of grazing, restoration, “restoration” activities such as wood placement and floodplain reconnection will provide relatively short duration and not long-term improvements. Without making changes in management practices that cause the degradation, these will be Band-Aids that look effective for a limited period of time but will ultimately fail because causal factors have not been addressed.

Concentrate grazing on the WUI area and remove it from more remote areas of the forest. This would be beneficial to wildlife and forest health.

Issues and Impacts

The Final EA (p. 150) described livestock grazing in the project area:

Livestock grazing currently authorized by the Marks Creek, Bear Creek, and Mill Creek AMPs occur within the cumulative effects boundary for this project and may impact birds of conservation concern or their habitats. Livestock grazing may cause shifts in plant species composition and abundance through the selection of more palatable forage species, reduce

ground cover through trampling or consuming vegetation, and decrease insect availability for foraging birds. However, current grazing strategies within the projects listed above include adaptive livestock management that is expected to improve livestock distribution and further improve habitat conditions for birds in localized riparian and sensitive areas. These improvements to grazing management should contribute beneficially to the overall cumulative effects.

Yet we note that compared to riparian and streams conditions in the 2010 Mill Creek AMP, from which the statement above relies, 14 years later the same poor quality riparian habitat and water quality conditions persist.

One of our Broads visited the West Fork of Mill Creek in the fall 2021 and encountered cows in the riparian enclosure. Later that day, the Broad encountered the major permittee holder for the Mill Creek Allotment and asked why cows were in the West Fork Mill Creek enclosure. The permittee replied that they put the cows in the enclosure because it was the only place where there was water in the stream for their livestock. This is illegal and a violation of grazing policy and law. When there is no water, livestock must be removed from the forest and returned to the home ranch. We find that enclosures have been used illegally as gathering pastures as well. This appears to be common practice in the forest, and we often see livestock in the forest in the wrong places and after grazing is not permitted.

The Final EA implies that conifers in the RHCA are adding to stream degradation which is not supported by any science. Conifers in riparian zones are a consequence of stream degradation, not a cause from channels incised by past and present management practices. For example, streams have downgraded and lost contact with the floodplain, and become widened or incised in many reaches of the West Fork of Mill Creek and Harvey Creek, due to livestock grazing, not due to “conifers.” The following is a photo of the West Fork of Mill Creek with a severely degraded channel and lack of riparian vegetation due to livestock grazing on the left and the enclosure with limited unauthorized grazing on the right (Figure 4). The enclosure had abundant riparian woody vegetation with a narrow, shaded stream channel compared to the heavily grazed and degraded channel with very few riparian shrubs and trees remaining. The Broads found very scattered remnant willows, aspen, and that were severely hedged by livestock and are “winking out” because they are grazed hard by livestock. This decline will continue without substantial recovery efforts, rest from grazing, and improved management of livestock. It will not recover from the removal of conifers and significantly, adversely impactful management activities.



Heavily Grazed West Fork of Mill Creek



Livestock Exclusion on West Fork Mill Creek

Figure 4. West Fork of Mill Creek. The photo on the left is a typical stream channel with lack of riparian vegetation along much of the creek. Photo on the right in the West Fork Mill Creek exclusion that is accessible to wildlife species but excludes cows. Note the dense riparian woody vegetation where livestock are excluded.

INFISH (p. E-9) requires per GM-1 for the Ochoco Forest to:

Modify grazing practices (e.g., accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing, etc.) that retard or prevent attainment of Riparian Management Objectives or are likely to adversely affect inland native fish. Suspend grazing if adjusting practices is not effective in meeting Riparian Management Objectives." Since 2010 AMP no improvements and with climate change and warming and drying streams, critical to improve livestock grazing practices to support riparian recovery.

It is obvious, even in the Mill Creek Wilderness, where there are no other management activities, that livestock grazing is retarding riparian recovery, albeit not as severely as the remainder of the project area.

Opening the density of conifers in RHCA's increases the risk of more access by livestock, which will further impact stream and bank conditions. Livestock are well known for preferring to graze and loaf in riparian areas, which causes excess grazing, post holing, and trampling. Grazing further contributes to stream damage including loss of shade and riparian vegetation, increased sediment, increased width/depth ratios, and lethal stream temperatures. Rather than removing many of the trees in RHCA's, they must be left to provide shade and future LWD. Conifers are sometimes the only vegetation left for shade and large wood, especially in areas impacted by heavy livestock grazing. Once harvested, thinned, or burned, the area will be open for more intense livestock grazing, and without exclusion fencing, these stream reaches will decline even further.

Livestock grazing is highly implicated in the continuing poor conditions of streams on the Ochoco Forest, and in some cases, significantly contributes to downward spiraling of riparian areas and streams.

Remedy

Repair the many causes of stream degradation identified in the Watershed and Fisheries Effects Analysis. Reconnect streams to their floodplains, restore hardwood plant communities through native plantings and exclosures, and reintroduce beaver to improve water quality and plant community resilience. Exclude cattle where restoration actions are implemented, or severely degraded riparian areas need a rest from grazing for 1-5 years. Acquire and commit funds to construct, monitor, and maintain fences to limit cattle access to streams. Increase funding dedicated to fencing projects, and construct fences along streams to block cattle access. Fence all existing cottonwood and aspen stands along any reaches that have remaining trees if they still exist. Limit livestock access to streams by increasing the amount and size of exclosures, more rest and rest rotation strategies that restore streams. Do not allow permittees to use livestock exclosures.

HRV/Reference Conditions

The Consideration of Public Comments (Consideration) in Appendix C of the Final EA provides inadequate arguments for the ONF use of HRV as a desired condition. See Final EA, Under Consideration of Public Comments, under Purpose and Need, p. 346ff, as well as HRV/Reference Conditions, p. 359ff.

The Consideration commented on one cited source from JGSC comments regarding HRV when nine references were cited directly our comment: Baker, et al., Federspiel, Johnston, et al., Keane, et al., Mathews, Millar, Nonaka, et al., Rawlence, and Science News.³

We also noted in both our Scoping and Draft comments:

This 30 year old concept has been discounted by the majority of researchers and the best available science, if only because of the current radically changing conditions on this planet. For just one example, see: <https://srs.fs.usda.gov/pubs/47361>. The ONF should instead be looking to protect large, old trees and encourage ecosystems that will dominate the conditions we will see in the next 100 years.

That USFS report by Millar in the above quote states on p. S28, “As a means of developing reference prescriptions and management targets, HRV is generally inappropriate...”. Yet this is what ONF is doing in this project. While ONF argues in Consideration that HRV may be used as a “course guide” for this “severely degraded ecosystem” (item 38, p. 361), ONF is instead using HRV as a definitive guide.

We also note from the scoping comment submitted by BMBP, questioning the validity of the HRV deduced vegetative distributions:

This account of Historical Range of Variability (HRV) history neglects to explain why there are Western larch, Douglas fir, and Grand fir seed sources and mature trees and big old growth fir stumps if this was all dry open forest. There is no consideration of variable topography, moisture regimes, and elevation and the need to retain different conditions across the landscape to preserve biodiversity. What are the types, locations, and dates of evidence used for the assumed HRV in this project area? Clearly the Forest Service is responsible for logging off the Ponderosa pine and Western larch. What evidence supports the contention that there is more

³Bibliography reference numbers in the comment on the Draft EA, in addition to one footnote, are: 32,18,27,40,35,3,42,16.

Douglas fir and Grand fir than there was historically in this area? We've field surveyed in this general area before, within the last 22 years. We also led a group hike into the Mill Creek Wilderness Area before it burned. There's plenty of evidence of historic firs—especially Douglas fir—from residual old growth live firs, and large old growth fir snags, logs, and stumps throughout the Ochoco National Forest and likely within the Mill Creek project area.

While the Consideration states that the Eastside Screens “require” use of HRV, this early guidance is tenuous for as we noted in our comments (p. 25):

The reference in the DEA to the use of HRV by the Eastside Screens (DEA, pp. 5, 22) is presented as if it supports such use in this DEA. Yet even in the 1994 Eastside Screens there was controversy over this new (at that time) theory for forest management. From the 5 June 1995 Decision Notice [14]:

“Concern about the adequacy and propriety of the Historic Range of variability (HRV) process and the rigidity of the complete deferral of timber activities in the riparian areas existed before and after the adoption of the 1994 interim direction.”

Considering that such debates have existed since its inception, it is fair for us to question the use of the draft 1994 document [22] by ONF for deciding HRV conditions to direct treatments for management objectives “regarding density, structure, and composition” (DEA, p. 21). The ONF should drop such arguments. After all, if HRV is to be used to return forests to their historic levels, other levels of human intrusion must also be restored, including road density and grazing levels, if this is an honest goal for management.

Other studies have documented how many current conditions demand more than just consideration of HRV. As noted in the COBB comments:

Not surprisingly, many dry side forests have changed given past management practices of large diameter timber (high grading) harvest, extensive roading, and intense livestock grazing. The late 1800s... did not have high road densities on the landscape that are known to occur on the ONF, which have caused continued degradation of streams and wildlife habitats.

This EA is using HRV as a panacea for fixing ongoing problems when there is so much more to consider, as our comments point out.

While the Consideration states that weaknesses in HRV “are outside of the ability to rectify”, it also states that there is no way “to provide a scientifically based ‘Range of Future Conditions.’” In refusing to consider future conditions, ONF should also refuse to consider HRV as a future goal, for the same reasons, most prominent being weak and uncertain data. Or as our comments recommend and is also stated in the USDA Forest Service report by Keane et al. (abstract):

Our study results indicate that historical time series should be used in conjunction with simulated future time series as references for managing landscapes.

The Consideration goes on to document that ONF “is interested in” using climate models (p. 347) while also stating that projections from various modeling tools cannot at this time “provide a scientifically

based” range of future conditions (p. 348). It follows, therefore, that HRV is also inadequate, as is argued in our comments and the numerous citations we provided.

Regarding the public perception of the Draft EA as aiming for a monoculture of ponderosa pine, the Consideration says that “EA page 275” states that thinning “would leave small clumps, gaps, and leave areas.” This appears to refer to Table A-3, Resource Protection Measures, Wildlife W-1. In reading the Draft EA and specialist reports, we are unable to find maps or locations identified for such protections. We note that “small leave areas” are not indicative of a healthy forest ecosystem, and are not part of predicted HRV vegetative distributions because of the weaknesses of the historical data.

The Consideration goes on with statements about how the actions of ONF will create a more resilient forest for future conditions, while the comments from several organizations perceive this work as primarily for timber harvesting. (The Consideration notes that JGSC, GOBW, COLW, and BMBP made this observation. The Consideration also noted that AFRC commented support of “contributing wood products” to the economy.) While reiteration of the purpose and need does not convince us to change our perception, we will reiterate our statement (JGSC comment, p. 6):

The ONF is a multi-use forest, but has put a priority on resource extraction, as stated on page 3 of the DEA, to “supply timber and wood products”. National and world priorities have shifted to give conservation and climate change an equal and we hope a priority stand to be considered against such short-term economic uses. In response to Executive Order 140721 [1], the ONF needs to consider carbon sequestration and full ecosystem long-term health, changing from short-sighted local economic goals to long-term national goals and generation-spanning ecosystem processes.

The Consideration continues to assert that using the Simpson, et al., 1994 “Viable Ecosystem Management Guide (Draft)” is the appropriate guidance for this vegetative management project, in spite of the two decades of research since then. As noted under HRV/Reference Conditions item 36, many organizations (JGSC, BMBP, GOBW) have commented their doubts, using references including studies by Forest Service scientists. We are not convinced by the Consideration assertion that ONF is doing it right.

Remedy

To address our concerns and this complaint, the ONF must provide the public the model used and projections for future conditions of the forest. Based on those projections, and consulting with organizations and scientists both within and outside of the FS, develop management plans that focus on the continuity of the natural forest ecosystem, the benefits of ecosystem services and recreation, the role of the forest in the ecoregion and larger regional integrity of nature, and lastly on resource extraction. We find the arguments in the Final EA are self-conflicting and this needs to be corrected.

Biomass

Regarding the Final EA, Under Consideration of Public Comments, under Soil Resource, p. 379ff:

The Decision notice states there will be 1182 acres of biomass thinning plus 58 acres of commercial and biomass thinning in RHCA areas. Biomass thinning is defined as cutting for removal or chipping stems up to 14-inch DBH. Our comment regarding this (p. 5) for the Draft EA is:

The removal of small trees for biomass (DEA, p. 12) is an economic benefit but also removes nutrients from the ecosystem and increases water depletion of the ecosystem by removing wood, standing and downed, that holds moisture, slows the wind, and blocks the solar radiation that dries the soil. Organic matter contributed to the soil by downed wood also helps retain moisture, build soil, and slow water runoff. Important decay organisms at the bottom of the food chain are also limited by removing wood, and thus limit the numbers and complexity of species higher on the food chain. We would choose less disruptive efforts that allow natural processes, including wildfire, to rejuvenate our public forest ecosystems and all the benefits they provide, including clean air and clean water.

The Consideration responds to this by stating “The EA concludes that ground-based activity units would meet soil quality standards upon completion of the project activities.” This fails to address our comments or our concerns. What are the soil quality standards? How does ONF address nutrient removal, organic matter removal, and changed microclimate conditions? What does your wildlife report say about changes to fungal and insect populations and repercussions throughout the food web?

As noted in the COBB comment on the Draft EA:

... the proposed thinning and harvest of large project areas... will likely have severe impacts on... large multilayered stands that provide essential services for carbon storage, biodiversity, soil and nutrient cycling and water quality.

We appreciate that the large areas of harvesting for commercial, non-commercial, and biomass have been reduced in the 4M alternative. We object to the ONF ignoring how the impacts of biomass harvesting affects the ecosystem in both the long and short terms. We believe there is ongoing pressure for more biomass harvesting to support local industries (as indicated by the development of bioenergy in Prineville and pellet production in John Day, and other development across the region) and this will increase demand for more public land to be harvested for private industry.

Remedy

To address our concerns and this complaint, the ONF should replace biomass harvesting with prescribed burns or non-commercial thinning, and provide a long-term plan for limited, sustainable biomass production quotas based upon climate change models to be adjusted as needed to sustain a healthy ecosystem across the area.

Steep Slope Logging

Our comment regarding steep slope logging is:

Steep slope logging has long been avoided in order to protect soils from disturbance and compaction and greater erosion. Opening slopes up by removing trees increases drying and wind effects, thus increasing wildfire spread and intensity. Wooded slopes are also good wildlife

security areas and add to the diversity of flora and structure in a forest. Not performing steep slope logging must be a continuing practice.

Other organizations made similar comments, as noted in Consideration. We appreciate that steep slope logging is removed from consideration in Alternative 4M. At least, it is not indicated outright. We still see 352 acres of helicopter logging which could include some steep slopes.

We note that p. 278 of the Final EA says, under Fuels Treatments:

Hand piling is also used in steep slope units (> 35%) of helicopter or skyline thinning.

This is indicative of, or easily construed to be, planned steep slope harvesting.

Remedy

To address our concerns and this complaint, we ask ONF to be clear about its intentions for steep slope logging. As we and other groups have noted in our comments, steep slope logging is detrimental to the forest and must not be part of this or any ONF project.

Undeveloped Lands

Regarding Final EA, Under Consideration of Public Comments, under Undeveloped Areas, p. 399ff:

Many organizations made comments about undeveloped lands at both Scoping and Draft. To reiterate, the EA defines undeveloped lands as:

Undeveloped lands are isolated polygons of Forest Service land that are generally free of developments (roads, trails, and past harvest activity) and minimum of 1,000 acres in size. Undeveloped lands are not wilderness or inventoried roadless areas but may have special resource values due to their undeveloped character.

Our organizations and others (JGSC, COBB, BMBP, OW) made comments that expressed our desire that no action take place on these lands, for multiple reasons. Our comments included these statements:

The undeveloped area analyzed beginning on page 228 should receive no treatment. This area is important for winter range, as noted in the DEA. It is also an important security habitat. It also provides a buffer between the developed rural areas and the Wildcat and White Rock campgrounds. Undeveloped areas like this are important moderators of flood waters, slowing meltwater and intense rains, and restoring aquifers.

The undeveloped area should receive no harvest treatment, development, or roads. This area is important for winter range, as noted in the EA. It is important elk security habitat and a buffer between more heavily managed areas and the Wildcat and White Rock campgrounds.

There is no need for ONF to put additional roads in this area for logging, as such intrusions will lead to further disturbance and access both legal and illegal.

This area, as part of this project, must be administratively added as an Inventoried Roadless Area (IRA) since it meets the criteria. Further, these undeveloped areas are important for providing natural habitats, biodiversity, moderating climate impacts, drinking water, and restoring aquifers.

Undeveloped lands and IRAs are critically important and comprise a very low percentage of FS lands. Law et al. (2021) reports that these areas have “crucial biodiversity and carbon benefits”, “currently provide clean drinking water for millions of people, support salmon populations and wildlife, and reduce isolation between protected areas”. They also recommend that undeveloped lands provide the “potential to meet preservation targets by protecting uninventoried roadless areas (e.g., ~2 Mha in Oregon), many of which are candidates for protection and contiguous with IRAs or existing protected areas”. In this case, the undeveloped area’s proximity provides great potential multiplier benefits by its proximity to the Mill Creek Wilderness.

As just one important example, big game species need large patches of security cover which is best provided by large unroaded areas.

The ONF Consideration response is simply that the identified undeveloped area may be managed as ONF determines, as it has no specific rules covering it. This ignores our statements and the greater-good need for this land to be protected as roadless or better, for the many reasons provided in our comments and referenced papers. It also ignores our proven assertion that the creation of temporary roads will result in ongoing illegal intrusion and disturbance by motorized vehicles into this area. Currently, the roads surrounding this area are frequently travelled, but intrusions are minimal.

Remedy

To address our concerns and this complaint, the ONF must administratively designate the area in this polygon a roadless area and not conduct any treatments or construct any roads.

Economics

In the Consideration, from p. 400, item 152, did you intend this as a non-answer or just didn’t understand the comment:

152. Comment: The EA implies that the ONF is under pressure to meet a quota for timber harvesting (page 238). This project should detail this quota and describe how much of this quota is expected to be met in this project area. The cumulative effects of attempting to meet any quota across the whole forest need to be considered by each project. (JGSC)

It’s highly doubtful that a goal of 12 mmbf would be sustainable given climate change, drought, and changing forest uses. (JGSC)

Consideration: There is not a quota for timber harvesting in the project area. Rather the EA provides an estimate of the output by alternative based on the existing condition of the stands that need to be thinned. The economic analysis referred to the in the EA

notes that continuing the level of work and output that has been occurring over the last decade would provide stability to the local industry.

Our comment is that the quota is for the whole forest, not this one project. This was described on p. 238 of the Draft EA as “If the Ochoco National Forest offers 12 MMBF per year it can be assumed that a sustainable yield...”. I was at a Forest Collaborative meeting several years ago where ONF reported that the Federal FS office was putting harvest quotas on each National Forest.

So, the JGSC comment is for a quota on the whole ONF, not on the Mill Creek project as you responded. Thus, we asked what the effect of trying to meet this forest level quota is on each project, and what is the effect on this specific project in terms of timber harvest requirements? If the ONF has a quota of 12 MMBF per year, what portion of that is designated for the Mill Creek project area?

While our other comments regarding economics and resource extraction are addressed in the Consideration with “out of scope” statements, we feel ONF should be willing to consider alternatives that consider actions and results that could not be codified in the current, though outdated, forest plan and other documents used for this EA.

Remedy

To address this complaint, ONF must make public any timber harvest quotas or pressure it is under for resource extraction, including quotas from Federal offices, and how those are distributed across the forest project areas. Such data must be included in project documents.

Cumulative Effects

One of our comments regarding Cumulative Effects was:

The cumulative effects analysis in this EA is limited to the “spatial boundary ... of the project area” (page 22). The justification for this is that this boundary “is of a scale sufficient to encompass historic disturbance regimes” (page 22). This justification is not adequate given the current landscape disturbance regimes across the whole forest that are caused by the ONF, the timber industry, and other human activities.

The Consideration from ONF is that different measures require different scales for analysis. It states in part that at larger scales there are “different disturbance regimes and forest types.” Note that this is also true within the project area for this one project! Slope, aspect, vegetation types, and human impacts vary across this watershed.

We agree that some measures should be considered at a smaller scale, but that these must also be looked at for the cumulative effects at larger scales. That is, a thinning action on this 10 acres, plus 10 over there and 10 farther up the road, what is the cumulative effect on habitat available for wildlife, for example?

We also encourage ONF to look at how this Mill Creek project affects big picture measures, such as animal migration, climate change, species of conservation concern, elk security habitat, recreation, and

overall economic benefits to local communities. All of these measures and more are affected by how ONF manages Mill Creek along with all the other project areas under its control.

In many instances in the Final EA, the ONF said the analysis is too big for it to do, and has used 30 year old methods and data to move forward when new science and larger views (both in area and time) have demonstrated better, more appropriate management practices to benefit both the natural forest and the local community.

Remedy

To address this complaint, ONF must look at the big picture as well as at the project scale and move with the precautionary principal for any actions it prescribes.

Climate Change

Thank you for putting a better effort into responding to the climate change issues raised by our groups and others in our comments. We appreciate you recognizing the new policies promulgated by our national leaders well before the release of the Draft EA for comments. Your efforts to create the 9 pages in the Final EA addressing Carbon and Climate Change (pp. 241ff) which mostly duplicate the information in the 35-page Climate Change Report inform us that our comments had some effect. We can no longer say, “the Mill Creek project Draft EA is woefully bereft of analysis and data” (COBB comments, p. 32).

Our well referenced comments on the Draft EA includes (JGSC comments, pp. 15ff):

The section in the DEA on “Carbon and Climate Change” (p. 231) makes use of adjectives like “infinitesimal” and “negligible” to distance the ONF from responsibility to respond to the national and global efforts to counter anthropogenic climate change. This is blatant disregard for Executive Order 140721 [1]. This is refusal to use the best available science to acknowledge that every effort from every agency and every person can help, or can hurt, the current and future habitability of this planet.

Perhaps ONF should consider that even judicial systems are recognizing the impact of climate change on future generations, with a duty to protect its citizens. [7], [4]

The Final EA no longer uses “infinitesimal” and “negligible” to distance ONF from responsibility, but rather uses an analysis of carbon contributions at various scales. Perhaps ONF could do the same for other cumulative effects analysis (see above) rather than arguing that such analysis does not apply? Of course, an analysis of the ONF contribution to beef production would show a similar small contribution at scale. We also note that by doing various scale analyses, this helps to obfuscate the actions that ONF can take to contribute to slowing climate change.

The Climate Change Report (18 March 2024) in the Final EA project documents states:

This project did not utilize the adaptation workbook during alternative development (USDA 2023a) as it was not available during alternative design. This project also did not 1) have

necessary data to estimate social cost of climate change, 2) utilize all GHG estimators released in 2024 as part of revised USFS guidance in how projects should consider climate change, 3) address upstream or downstream emissions of proposed actions. These data were not reasonably available to the government at the time of this section update. Further work to understand and quantify these effects are needed across the National Forest System.

On the other hand, the bibliography in the report references other resources that were referenced. Our comment also provided ONF with references we sourced for our position. We stated:

The latter part of the section on climate change presents a Forest Service lead paper [9] that suggests the actions proposed in this project are minimally contributing to climate change, and even uses IPCC guidance “for minimizing the impacts of climate change on forest carbon” (DEA p. 232). We note that “minimizing” is not the same as “preventing”. Other research results show that the No Action alternative will be better at sequestering carbon and offsetting anthropogenic climate change (Examples: [3], [8], [16], [17], [23]).

Note that none of our referenced papers are cited by the ONF report. We understand how you would pick reports that best support your objectives. However, the public finds that such bias is eroding our trust in your work. Please note that our comments included references to FS published reports that we were able to access.

We also made this comment for the Draft:

The DEA also speaks to the Project’s ability to aid in carbon dioxide sequestration through timber management by

“(1) by increasing new forests (afforestation), (2) by avoiding their damage or destruction (avoided deforestation), (3) by manipulating existing forest cover (managed forests), and (4) through transferring carbon from the live biomass to the harvested wood product carbon pool.” (DEA p. 232)

The Project, however, does not increase new forests nor avoid damage to the forest. Rather, ...

We acknowledge that the Final EA no longer makes these misleading and wrong statements about “afforestation” and such. We would have hoped not to need to point out such gross errors to ONF scientists.

Remedy

To address our concerns and this complaint: ONF must have a balanced analysis of how its actions affect climate change. ONF must not publish misleading and biased statements without qualifications. ONF must accept responsibility for responding to national and global efforts to counter anthropogenic climate change and provide actions that make this response. ONF must respond to its duty to protect its citizens and future generations from climate change and the loss of biodiversity by providing management actions that do this.

Biodiversity

Examples of our comments to the Draft EA

The Draft EA proclaims that disease, insects, and wildfire need to be “managed” but these in fact are a normal condition of forests and a necessary part of succession, biodiversity, and forest ecosystem processes critical for forest resilience.

The previous century of logging from the 1920s to the 1990s removed the largest and oldest trees across many of the forests in eastern Oregon and impacted biodiversity, soils, water quantity and quality, and many fish and wildlife species that used large old trees for part or all of their life history needs.

This project must account for how it disrupts ecological systems, wildlife habitat, and biodiversity in ways that natural disturbances do not.

For example, a study by Bradley, et. al., [2] found that less management resulted in lower severity fires. As stated by Maloof [15]:

“[it is often]...espoused that forests must be managed to be healthy. Perhaps forests must be managed to get the healthiest economic return, but true biological health is found in the unmanaged old-growth forests.”

Issues and Impacts

The manipulation of over 12K acres of land proposed in this project will have a long, dramatic effect on the ecosystem for many years after the work is completed. We appreciate that ONF has reduced the acreage so affected in this Final 4M Alternative, and we appreciate that ONF is considering many species of concern in managing this project. We remain concerned and object to the focus on resource extraction and lack of full disclosure of the full impact of this large disturbance upon the ecosystem, the food web, ecosystem services, and alternatives that seek to maintain the integrity of the natural forest over the very long term and large spacial scale.

In our comments and in this objection we frequently mention biodiversity as an important aspect of a healthy ecosystem that needs to be addressed. In the Final EA, biodiversity is mentioned once, and is treated as a secondary factor, when conserving for Birds of Conservation Concern, “elements of biodiversity would also be conserved” (p. 146). Even in the Consideration responses to comments that mention biodiversity, ONF chooses to ignore this important biological concept.

Remedy

The ONF must address biodiversity impacts as a separate topic in its action alternatives.

Overall Complaint

ONF does not provide the resource and reference documents it uses as part of the project documents, such as the ONF Forest Plan, the Viable Ecosystems Guide, and other primary documents used in determining project purpose and actions. At a minimum, ONF should provide website access (links) to all documents referenced. The public is under enough time constraints without the additional burden of trying to track down these documents.

Request for Meeting to Discuss Resolution

The Great Old Broads for Wilderness, Bitterbrush Broadband, and the Juniper Group of the Oregon Sierra Club request a meeting to discuss the issues raised in this objection and potential resolutions.

SUMMARY. The Juniper Group of the Oregon Sierra Club and the Bitterbrush Broadband of the Great Old Broads for Wilderness thank you for the opportunity to object to the Mill Creek Final EA and Draft Decision Notice. We look forward to hearing from you.

Sincerely,

Amy M. Stuart

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This bibliography is provided both for references cited in quotes from previous comments and for references cited directly in this document.

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Appendix 1: Referenced Documents

As requested by the Draft Decision Notice, directly referenced documents are included in the electronic submission. This also benefits other members of the public who read this complaint, by not requiring them to search for these documents. This would be a good practice for the Forest Service to follow in the documents it provides with this and every project.

Appendix 1a: GOBW Road Survey, “Surveys for Maintenance Level 1 Closed Roads in the Ochoco National Forest Mill Creek Vegetation Management Project Area: What Did We Learn?”, submitted file: Surveys for Closed Roads in the Mill Creek Vegetation Management Project Area April 1, 2024.pdf.

Appendix 1b: Leinenbach [13], submitted file: Effects of Riparian Management Strategies on Strea.pdf.

Appendix 1c: Millar [18], not required as this is a USFS document, <https://srs.fs.usda.gov/pubs/47361>

Appendix 1d: Roon [21], submitted file: Roon et al. - 2021 - Shade, light, and stream temperature responses to .pdf.