Data Submitted (UTC 11): 10/25/2021 11:00:00 AM
First name: Michael
Last name: Garrity
Organization: Alliance For The Wild Rockies
Title: Executive Director
Comments: 4. Name of the Proposed Project, Responsible Official, National Forest and Ranger District where Project is: Mid-Swan Landscape Restoration and Wildland Urban Interface Project;

Flathead national Forest, Forest Supervisor Kurt Steele is the Responsible Official;

The project is in the Swan Lake Ranger District of the Flathead National Forest. Supervisor Kurt Steele chose the proposed or selected alternative B modified which includes 17,858 acres of commercial logging, 3,446 acres of non-commercial logging and burning on National Forest System lands, 31,874 acres of Non- Mechanized treatments with non-activity fuel treatments and

16.7 miles of new roads in the Draft Record of Decision.

NOTICE IS HEREBY GIVEN that AWR objects pursuant to 36 CFR section 218 to the Responsible Official's adoption of the selected Alternative. As discussed below, the Mid-Swan Project as proposed violates the Clean Water Act, the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Endangered Species Act (ESA), the Flathead Forest Plan and the Administrative Procedure Act (APA).

Location the Mid-Swan project area lies in the heart of the Swan Valley. South of the Mid-Swan Project area is the rural community of Condon, MT, north of the project area is Swan Lake, MT. The Mid-Swan has a project area of 246,000 acres with 174,000 acres of National Forest System lands on the Swan Lake Ranger District in lake and Missoula counties, Montana.

5. Specific Issues Related to the Proposed Projects, including how Objectors believes the Environmental Impact Statement or Draft Record of Decision specifically violates Law, Regulation, or Policy: We included this under number 8 below.

Thank you for the opportunity to object on the Mid-Swan Project. Please accept this objection from me on behalf of the Alliance for the Wild Rockies and Native Ecosystems Council.

6. Suggested Remedies that would Resolve the Objection: We recommend that the "No Action Alternative" be selected. We have also made specific recommendations after each problem.

7. Supporting Reasons for the Reviewing Office to Consider: This landscape has very high wildlife values, including for the threatened grizzly bear, lynx, lynx critical habitat, bull trout, big game species, and wildlife dependent upon unlogged. The project area will be concentrated within some of the best wildlife habitat in this landscape which is an important travel corridor for wildlife such as lynx, bull trout, grizzly bears, and wolverine. The agency will also be exacerbating an ongoing problem of displacing elk to adjacent private lands in the hunting season due to a lack of security on public lands. The public interest is not being served by this project. Suggested Remedies to Resolve the Objection: We recommend that the "No Action Alternative" be selected. We have also made specific recommendations after each problem.

Supporting Reasons for the Reviewing Office to Consider This landscape has very high wildlife values, including for the threatened grizzly bear, bull trout and lynx, big game species, and wildlife dependent upon mature forest habitat. The project area is concentrated within some of the best wildlife habitat in this landscape which is an important travel corridor for wildlife such as lynx, grizzly bears, and wolverine. The agency will also be exacerbating an ongoing problem of displacing elk to adjacent private lands in the hunting season due to a lack of security on public lands. The public interest is not being served by this project. Thank you for the opportunity to object.

NOTICE IS HEREBY GIVEN that, pursuant to 36 CFR Part with the legal notice published on September 10, 2021, including the Responsible Official's adoption of proposed or selected Alternative. AWR is objecting to this project on the grounds that implementation of the Selected Alternative is not in accordance with the laws governing management of the national forests such as the FLPMA, ESA, NEPA, NFMA, the Flathead National Forest Forest Plan and the APA, including the implementing regulations of these and other laws, and will result in additional degradation in already degraded watersheds and mountain slopes, further upsetting the wildlife habitat, ecosystem and human communities. Our objections are detailed below. If the project is approved as proposed, individuals and members of the above-mentioned groups would be directly and significantly affected by the logging and associated activities.

Objectors are conservation organizations working to ensure protection of biological diversity and ecosystem integrity in the Wild Rockies bioregion (including the FNF). The individuals and members use the Flathead National Forest and the project area for recreation and other forest related activities. The selected alternative would also further degrade the water quality, wildlife and fish habitat. These activities, if implemented, would adversely impact and irreparably harm the natural qualities of the Project Area, the surrounding area, and would further degrade the watersheds and wildlife habitat.

Statements that Demonstrates Connection between Prior Specific Written Comments on the Particular Proposed Project and the Content of the Objection
ROADS
We wrote in our June 22, 2000 comments,

Measures implemented beginning in the 1990s for protection of the threatened grizzly bear have decreased the amount of road available for motorized public travel and management activities, while increasing security for grizzly bears as well as other wildlife species.

The well-established scientific consensus is that roads pose the most imminent risk to this grizzly population. Ninety percent of this population's Recovery Zone habitat is located on public National Forest lands. Thus, the federal government has the power to limit road density for grizzly bear protection on the vast majority of its habitat and thereby prevent the extinction of this grizzly population.

However, the U.S. Forest Service has prepared multiple years of monitoring reports regarding its implementation

of road closures in grizzly habitat. These monitoring reports establish that these road closures are routinely violated and therefore

ineffective: members of the public regularly ignore signs, drive around gates or earthen berms, remove obstructions such as boulders or logs, or simply create their own new motorized routes.

Although these monitoring reports are only required for the Recovery Zone, there are incidental observations in these reports regarding closure violations found in grizzly habitat outside of the Recovery Zone, in the government-designated "Bears Outside Recovery Zone" or "BORZ" areas.

Please disclose how often closed roads are monitored for closure violations. Please disclose all of the road closure violations in the Flathead National Forest over the last 5 years.

The recurring problem of road closure failures undermines the foundation of the Flathead Forest Plan management regime, which relies on these road closures to achieve certain densities of open and total roads both inside and outside the Recovery Zone. The agencies must address this problem and its impacts in an updated ESA consultation for the Flathead Forest Plan. The agencies must also address this problem and its impact in an updated ESA consultation and in the special use projects and is another reason that an EIS should be written for the spexial use Projects.

How does the FP complies with the "best available science" on grizzly recovery, or the 2012 Planning Rule that required Forest to emphasize "Connectivity?"

The majority of the Northern Continental Divide Grizzly Bear Ecosystem - is National Forest land, managed by the Forest Service. In terms of all of the human uses that affect grizzly bears, "[r]oads probablypose the most imminent threat to grizzly habitat today. The management of roads is one of the most powerful tools available to balance the needs of people with the needs of bears." Accordingly, the U.S. Fish & Wildlife Service (FWS) states: "It is strongly recommended that road management be given the highest priority within all recovery zones." Roads pose a threat to grizzly bears because roads provide humans with access into grizzly bear habitat, which leads to direct bear mortality from accidental shootings and intentional poachings.

Human access also leads to indirect bear mortality by creating circumstances in which bears become habituated to human food and are later killed by wildlife managers. Human access also results in indirect mortality by displacing grizzly bears from good habitat into areas that provide sub-optimal habitat conditions.

Displacement may have long term effects: "Females who have learned to avoid roads may also teach their cubs to avoid roads. In this way, learned avoidance behavior can persist for several generations of bears before they again utilize habitatassociated with closed roads." Both open and closed

roads displace grizzly bears: "grizzlies avoided roaded areas even where existing roads were officially closed to public use []. Females with cubs remained primarily in high, rocky, marginal habitat far from roads. Avoidance behavior by bears of illegal vehicular traffic, foot traffic, and/or authorized use behind road closures may account for the lack of use of areas near roads by female grizzly bears in this area.

This research demonstrated that a significant portion of the habitat in the study area apparently remained unused

by female grizzlies for several years. Since adult females are the most important segment of the population, this lack of use of both open-roaded and closed-roaded areas is significant to the population." In addition to having a significant impact on female grizzly bears, displacement may also negatively impact the survival rates of grizzly cubs: "survivorship of the offspring of females that lived in unroaded, high elevation habitat was lower than that recorded in other study areas in the [Northern Continental Divide Ecosystem].

The majority of this mortality was due to natural factors related to the dangers of living in steep, rocky habitats. This is important in that the effects of road avoidance may result not only in higher mortality along roads and in avoidance of and lack of use of the resources along roads, but in the survival of young when their mothers are forced to live in less favorable areas away from roads."

Current peer-reviewed science still finds that roads have the most significant impact on grizzly bear survival: "[o]f all the

covariates we examined, the amount of secure habitat and the density of roads in nonsecure habitat on public lands had thegreatest effect on grizzly bear survival."

Roads, even if nominally "temporary," can still have long- lasting generational displacement effects on grizzly bears because females teach their cubs to avoid these areas.

These roads can therefore result in direct mortality, indirect mortality, and reduced cub survival. When applied to an extremely small, endangered2 population of fewer than 50 individuals that is already experiencing high mortality rates, failing recovery targets, and hovering at less than half the numbers needed for viability, these harms are amplified and create a great cause for concern for Alliance's members.

Neither the "imminent harm" posed by roads nor the dire status of this population are acknowledged by the agencies.

The project will not maintaining and enhancing grizzly habitat and will increase the potential for grizzly-human conflicts in violation of NFMA, NEPA, the APA and the ESA.

The Forest does not have a good track record of keeping closed roads closed. The Forest Service does not disclose the road mileage behind these ineffective closures; therefore it is unclear how many miles of additional open and total roads must be added to the existing condition calculations as a result of these ineffective closures.

There are at least three problems with the FNF's record of amount of roads. First, because "undetermined" is a sub-

category of "unauthorized" roads, it is possible that the particular undetermined roads at issue in this case were created[mdash]without authorization from the Forest Service[mdash]in the interim between the measurement of the Access Amendments baseline and the Forest Service's survey of existing roads for the Project.

All. for the Wild Rockies v. Savage, 897 F.3d 1025, 1036, n.18 (9th Cir. 2018). In light of these circumstances that (1) road closures/barriers are regularly breached but the Forest Service conducts no systematic monitoring to determine how many miles of illegal road use are occurring behind barriers each year, and (2) the Forest Service simply ignores illegal "undetermined" roads and does not include them in its calculations for open or total roads in the annual monitoring reports, the open and total road numbers in the monitoring reports are not

accurately reflecting the conditions on the ground. It is therefore reasonable to assume that the baselines in the project area regularly exceeded because the reported conditions hover at or near the baseline.

Chronic recurring road closure breaches cannot reasonably be construed as "temporary;" and illegal road use does not fall within the scope of Access Amendment "temporary" roads.

The Forest Service and FWS have acknowledge that road closure breaches (and resulting illegal road use) are not addressed in the Revised Flathead Forest Plan. Nonetheless, the agencies argue that all road closure breaches regardless of whether they are chronically recurring and regardless of how

long they last on the landscape must be construed as "temporary" road increases. Onto this premise, the agencies then bootstrap an additional argument that because certain specific types of temporary roads were addressed in the Access Amendment, that discussion must also apply to "temporary" road increases from illegal road use.

First, it is not reasonable to construe recurring illegal road use as "temporary" road density increases. The monitoring reports indicate that public users may repeatedly breach the same closure year after year. See, e.g., AR42:000059-62 (noting that boulders placed in 2015 have been removed and unauthorized users are again circumventing gate on Road 2236). Moreover, the Forest Service may take years to act on known violations.

See, e.g., AR42:000061 ("The Clatter Creek gate (268) was included on the 2015 gate repair contract but after the bids came in the Clatter Creek gate was dropped due to repair costs for all gate repairs exceeding available funding. In BY2016 the gate remained damaged and ineffective."); see also AR43:000081-82 (note 2)(during planning for the Hanna Flats logging project in the Idaho Panhandle N.F., the Forest Service found illegal motorized use on 15.7 miles of road that were not included in the baseline but the agency postponed remedial action until implementation of the logging project; in the 2018 monitoring report, the agency concedes it has still not yet eliminated this illegal use); see also AR232:000767 (finding that four barriers did not effectively prevent motorized use but deferring any action to fix the problems).

Thus, while the Forest Service insists that all breaches are temporary, those same breaches may be recurring or may have lasted for many years prior to discovery and remedial action, resulting in a chronic situation. The situation with the BORZ is a good illustration of this problem S although the Forest Service insists that it fixes all breaches as soon as possible, nonetheless at least four out of seven BORZ areas chronically fail to meet both the open and total road baseline conditions from the Access Amendment, as shown above in the table in Section B.

Second, even assuming that illegal road use could be construed as "temporary," it still does not have the same effect as lawful temporary road use. A breach of a closure device that results in public motorized use in effect results in an open road. The Access Amendment severely restricts temporary increases in open roads: "immediately following completion of all mechanized harvest and post- harvest slash activities requiring use of the road, to allow motorized public use during the bear summer season prior to the fall bear hunt (i.e., June 16 - August 31) for activities such as personal firewood collection. This public access would only be provided in cases where the mechanized harvest and/or post-harvest slash activities occurred during the same active bear year."

Thus, temporary increases in open roads are limited to a June 16-August 31 window, and may only occur in the same year in which logging activities have already occurred and used that

particular road, presumably because grizzlies would have already been displaced from those areas. In contrast, illegal motorized use behind road closure breaches is not limited to a June 16-August 31 window, and is not limited to a single year entry on a road along and on which logging activities have already been occurring.

Moreover, illegal road use would also constitute an increase in total roads. However, temporary increases in total roads are only permitted if the roads are "effectively" gated to prevent public use during a project, (2) after project use, the roads are treated so as to "effectively prevent[] motorized access" and require no motorized access for maintenance for at least 10 years, and (3) upon project completion, the area is "returned to or below the baseline levels contained in Table 16" of the Access Amendment ROD. Obviously a road that has illegal road use is not "effectively" gated to prevent public use.

Thus, illegal road use does not comply with the restrictions set for lawful increases in temporary roads neither open nor closed in the Access Amendment and therefore cannot possibly have the same effects. It is simply implausible that unlimited illegal road use occurring at any time in any location would have the same effect on grizzly bears as Access Amendment temporary roads that are significantly restricted in both timing and location. Indeed, illegal road use is illegal precisely because the Forest Service has already closed these specific roads to protect grizzly bears. If illegal motorized use occurs on these roads that were closed to protect grizzly bears, it may

displace grizzly bears from areas that they would otherwise not be displaced from.

Because of the serious impacts to grizzly bears, please demonstrate compliance with Forest Plan standards relevant to grizzly bears, and analyze the direct, indirect, and cumulative impacts to grizzly bears.

The Forest Service must comply with National Forest Management Act ("NFMA") and its implementing regulations. NFMA requires the Forest Service to ensure that site-specific management projects are consistent with the applicable forest plan. 16 U.S.C. [sect] 1604(i). Thus, the Forest Service must ensure that all aspects of the proposed action comply with the Flathead Panhandle National Forests Land Management Plan.

Road density and habitat security standards used by the Flathead NF are patently deficient, partly because they are based on research that conflates behavioral phenomena such as avoidance and displacement with demographic phenomena, notably survival. The scale is wrong as well, given that exposure to mortality hazards logically accrues over years as a consequence of cumulative annual movements of bears vis-[agrave]- vis

hazardous environs.

Compounding prospective problems with the project, proposed activities are concentrated in an area that is vital for facilitating movement of grizzly bears between core habitats.

Project activities will diminish rather than enhance security needed not only to facilitate transit of bears, but also increase odds that exposed bears will survive.

The extent to which poaching, malicious killing, or other suspect circumstances are associated with human-caused deaths is also instructive regarding the overall effectiveness of conflict mitigation efforts during 1999-2017 to offset the problematic effects of road-access and poaching. By its nature, malicious killing/poaching is a criminal act undertaken by criminals. Such behavior is rooted in attitudes and outlooks that are notoriously unresponsive to education and 'outreach'. The phenomenon is about willful malfeasance. As such, limitations on road access coupled with improved law enforcement and successful prosecutions are logically the most appropriate redress[mdash]not, for example, conflict mitigation by a specialist who is not tasked primarily with law enforcement.

Before pursuing this any farther, some clarification of obfuscations in the dead bear database is needed. During 1999-2017 a number of deaths were ascribed to 'Undetermined' human causes, 'Poaching' or listed as 'Under

investigation'. The first and last categories are not explicit, but nonetheless strongly suggestive. Certainly, 'Under investigation' suggests that the death occurred under suspicious circumstances warranting investigation[mdash]with a

strong likelihood of either poaching or other unwarranted lethal action by the involved people. Such suspicions are rarely definitively resolved. 'Undetermined' is also more suggestive of malfeasance rather than innocence on the part of the involved people. Given the alternatives, such deaths are more defensibly allocated to causes more resistant than not to

1) malicious or otherwise suspect causes account for a large portion[mdash]if not majority[mdash]of grizzly bear deaths in the Northern Contential Divide Ecosystem; (2) that aggressive limitations to road access by the USFS are needed, especially in areas with concentrations of productive habitat (Proctor et al. 2015, 2017).

F. Access Management is Critical to Limiting Malicious & Other Unjustified Killing

The consensus of relevant research is unambiguous about the link between road access and grizzly bear mortality. The more access, the more dead bears there are, with disproportionate concentrations near roads (Brannon et al. 1988; Benn & Herrero 2002; Nielsen et al. 2004; Wakkinen & Kasworm 2004; Boulanger & Stenhouse 2014; McLellan 2015; Proctor et al. 2017, 2018). Dead bears tend to be concentrated within 100 to 500 m of roads, averaging around 300 m ([plusmn] 195 m) among studies where distance was noted.

Unfortunately, there is a common conflation of the extent to which radio-marked grizzly bears spatially avoid

roads with the geospatial configuration of mortality risk and, even more important, decrements in survival and population growth.

These parameters are not synonymous. Even though a bear

might underuse habitats within a certain distance of roads, this does not translate into a 1:1 correlation with exposure to risk of human-related mortality during a bear's lifetime.

Conflation of avoidance with mortality risk has led to the unstated assumption that the former can be used to set standards for the latter.

Please examine the cumulative effects of this project.

The Forest Service could unequivocally benefit grizzly bears in this area by the closure and retirement of roads.

The Forest Service responded:

This includes a detailed analysis of how the commercial treatments and road use comply with grizzly bear direction related to temporary decreases in grizzly bear habitat during project activities (see FEIS section 3.9)

As stated in comment response: Wildlife - Grizzly Bear, the Flathead National Forest has monitored the effectiveness of road closure efforts since 1993, and those results are reported in annual A19 monitoring reports as well as summarized in project file exhibit H -010. This monitoring has documented that 1) the rate of road closure violations has decreased over the past 15 years and 2) observed rates of road closure violation are not high enough to exceed the levels of take accounted for in the Forest Plan Biological Opinion. Over the past 10 years, the rate of road closure effectiveness has averaged 94% (see project file exhibit R-012). Because the breaching of road closures is unpredictable, it was not factored

into the evaluation of habitat availability for big game. Instead, the Forest Plan requires road closure effectiveness monitoring into the future (MON-IFS-01, IND-IFS-01), ensuring that sites with violations can be addressed as needed.

The Response to Comments fails to adequately address our comments and concerns and does not answer many of our questions. Moreover, it fails to clearly identify which of the Responses in its 105 pages respond to our comments, even though this was done for comments on the revised Flathead Forest Plan DEIS and virtually every project EA on the Forest. RTC page 1 describes how each comment letter was carefully coded for its content, yet then fails to provide the public a code keying the Responses to individual comment letters. It is as though the Forest Service is making this as difficult and time- consuming as possible for the people that took time out of their daily lives to review and comment on the DEIS.

In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Fish and Wildlife Service violated the ESA by not considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

How many road closure violations have occurred in the Swan Lake Ranger District in the last 5 years? Since road closure violations are pervasive throughout the project area and the Forest, the FNF is in violation of not only the Forest Plan but also the big game security standards.

It is fair to assume that there are many more violations that regularly occur and are not witnessed and reported. It is also fair to assume that you have made no effort to request this available information from your own law enforcement officers, much less incorporate it into your analysis. Considering your own admissions that road density is the primary factor that degrades elk and grizzly habitat, this is a material and significant omission from your analysis- all of your ORD and HE calculations are wrong without this information.

The veracity of the FS's inventory of system and non system ("undetermined" or "unauthorized") roads is at issue here also. This is partly because the FS basically turns a blind eye to the situation with insufficient commitment to monitoring, and also because violations are not always remedied in a timely manner.

The Forest Service is asking the public to review and Object to the MSP DROD and FEIS (which are dependent upon and must be consistent with the Flathead Forest Plan, its Biological Opinion and its Incidental Take Statement) at a time when it has no lawful Forest Plan, no lawful BiOpon its Forest Plan, and no lawful ITS for grizzly bears. Significant portions of these documents and provisions were struck down by U.S. District Judge Donald Molloy on June 24, 2021 (see DROD DVD; Molloy 2021-06-24 Doc. 116 OPINION AND ORDER.pdf). But

the FS and FWS have yet to issue a legally adequate Flathead Forest Plan, Plan BiOp or Plan ITS. Therefore,

the public and Objectors are unable to compare the MSP with the requirements of a legally adequate Plan,BiOp and ITS because none currently exist.

The FEIS does not disclose how many years the secure grizzly habitat areas have provided the habitat benefits assumed under the Forest Plan. As pointed out, some has been lost (due to "private infrastructure development") and we're not told of other likely and forseeable reductions.

The EIS and DROD do not take a hard look as road closure violations. It also shows the inadequacy of Forest Plan road density metrics.

Since we are awaiting the results of a lawsuit against the Forest Plan, the issuance of the Stovepipe draft DN is premature and subverts NEPA, NFMA, the APA and the ESA.

Have you closed or obliterated all roads that were promised to be closed or obliterated in the Travel Plan? Or, are you still

waiting for funds to close or obliterate those roads? This distinction matters because you cannot honestly claim that you are meeting road density standards promised by the Travel Plan if you have not yet completed the road closures/obliterations promised by the Travel Plan. Furthermore, as noted above, you have a major problem with recurring, chronic violations of the road closures created by the Travel Plan, which means that your assumptions in the Travel Plan that all closures would be effective has proven false. For this reason, you cannot tier to the analysis in the Travel Plan because it is invalid.

Christensen et al (1993) states: "Any motorized vehicle use on roads will reduce habitat effectiveness. Recognize and deal with all forms of motorized vehicles and all uses, including administrative use." Please disclose this to the public and stop representing that roads closed to the public should not be included in habitat effectiveness calculations. The facts that (a) you are constructing or reconstructing over 15.3 miles of new system roads for this project, (b) you have problems with recurring illegal use, which means that your conclusion that this Project will have no effect on open road density or habitat effectiveness is implausible to the point of being disingenuous.

You cannot exclude these roads simply because you say they are

closed to the public. Every road receiving motorized use must be included in the HE calculation. You must consider all of this road use in order to take a hard look that is fully and fairly informed regarding habitat effectiveness. In the very least you must add in all "non-system" roads, i.e. illegal roads, as well as recurring illegal road use (violations) in your ORD calculations.

Remedy: Choose the No Action Alternative or you must either complete new NEPA analysis with an EIS on this issue and reconsult with the FWS on this project and on the revised Forest Plan. Either way, you must update your open road density calculations to include all roads receiving illegal use. Declare the Mid-Swan DROD and FEIS inadequate because they are based on a legally deficient Flathead Forest Plan, its BiOp and its ITS, as detailed in Judge Molloy's Order.

The science is clear that motorized access via trail, road, or oversnow adversely impact habitat for the elk. Servheen, et al., 1997 indicate that motorized trails increase elk vulnerability and reduce habitat effectiveness, and provide scientific management recommendations.

Also, the EA fails to provide a meaningful analysis of cumulative impacts of recreational activities on elk. Wintertime is an especially critical time for elk, and stress from avoiding motorized activities takes its toll on elk and populations.

Scientific information recognizes the importance of thermal cover, including Lyon et al, 1985. Christensen et al., 1993 also emphasize "maintenance of security, landscape management of coniferous cover, and monitoring elk use..." This USFS Region 1 document also states, "management of winter range to improve thermal cover and prevent harassment may be as important as anything done to change forage quantity or quality."

You cannot exclude roads simply because you say they are closed to the public. Every road receiving motorized use must be included in the HE calculation. You must consider all of this road use in order to take a hard look that is fully and fairly informed regarding habitat effectiveness. In the very least you must add in all "non-system" roads, i.e. illegal roads, as well as recurring illegal road use (violations) in your ORD calculations.

Conditions Based management

We wrote in our comments with Swan View Coalition:

We find the DEIS lacking in detail to adequately describe the effects this massive "landscape restoration" project will have on the environment. Nor does it adequately describe the specific locations or effects of any of the individual timber sales and associated road-building that would produce nearly

30,000 - 60,000 truckloads of logs under the action alternatives (DEIS at 176). The public will be denied the opportunity to review those timber sales and road projects under the NEPA (DEIS at A-4), which is a violation of NEPA recently confirmed by the U.S. District Court of Alaska in its decision on the Prince of Wales Landscape Level Analysis Project.

The Forest Service responded:

Some commenters identified concerns over conditions-based management, suggesting that this project fits that classification by deferring parts of the public involvement process and field survey work to after the decision. Further comparisons were made to the Prince of Wales Landscape Level Analysis Project in Alaska and how a recent court ruling challenged its conditions-based approach. The Mid-Swan Project complies with NEPA and its

implementing regulations by providing site-specific effects analysis of the actions being proposed. The actions are described in detail with corresponding maps that display where the actions are being implemented. This level of detail combined with the estimated implementation schedule provides the public with sufficient information to inform the responsible official of any environmental issues and concerns with the actions being planned. The very detailed site-specific comments received on the Draft Environmental Impact Statement reflect the site- specific nature of the Mid-Swan environmental analysis.

Based upon this feedback, the IDT further refined the alternatives to better reflect and minimize site-specific effects.

The final environmental impact statement includes detailed discussion of the site-specific effects (including for example, sediment delivery from log hauling and demonstrating compliance with forest plan direction for grizzly bears when commercial timber sales are being implemented). The implementation guide, specifically its design criteria and decision trees, also ensure compliance with law, regulation, and policy, and clearly state that the proposed actions will not be implemented if on-the-ground conditions cannot stay within the geographic and anticipated environmental effects analyzed.

The Forest Service persists in its pursuit of flawed Condition- Based Management, calling the Mid Swan Project FEIS adequate final NEPA for 15+ years of project implementation, rather than calling it a Programmatic FEIS to be followed by further NEPA documentation and public processes for project implementation. This approach was fully faulted by the U.S. District Court of Alaska, as described in this Objection and our prior comments.So the Flathead NF rushes headlong into a similar legal dispute over MSP, while it has yet to remedy the legal deficiencies of its Forest Plan, its BiOp and its ITS described by Judge Molloy in June. We obviously remain concerned that the Mid-Swan will harm water quality, fish, wildlife, and our members' interests.

Riparian indicator species are also totally ignored in the Mid- Swan analysis. Again, stemming from the new Planning Rule's elimination of concrete measures to protect biological diversity. While there were weaknesses in the old (1982)

Planning Rule, at least there was some attempt at preserving biological diversity using generally-accepted scientific methodology. Now, under the new Rule, there is no concern for biological diversity at all, especially when a program like the Mid-Swan is mischaracterized as a "Project."

There is NO fine-filter analysis.

If this (Program masquerading as Project) "sleight of hand" is permitted, and repeated habitually, there will never be any "fine filter" analysis, and no sensitive species monitoring to measure adverse ecological impacts of logging, thinning, burning and other cumulative environmental impacts that are known causes of loss to biological diversity in forest ecosystems.

Please see the article below about a similar timber sale in Alaska which a federal district court ruled was illegal.

Federal court blocks timber sale in Alaska's Tongass National Forest

https://www.adn.com/alaska-news/2020/06/25/federal-court- blocks-timber-sale-in- alaskas-tongass-national-forest/

JUNEAU [mdash] A federal judge has blocked what would have been the largest timber sale in Alaska's Tongass National Forest in decades.

Wednesday's ruling ends the U.S. Forest Service's plan to open

37.5 square miles of old- growth forest on Prince of Wales Island to commercial logging, CoastAlaska reported.

The ruling by Judge Sharon L. Gleason also stops road construction for the planned 15- year project.

Conservationists had already successfully blocked the federal government's attempt to clear large amounts of timber for sale without identifying specific areas where logging would have occurred.

Gleason allowed the forest service to argue in favor of correcting deficiencies in its re- view and moving forward without throwing out the entire project, but ultimately ruled against the agency.

Gleason's ruling said the economic harm of invalidating the timber sales did not outweigh "the seriousness of the errors" in the agency's handling of the project.

The method used in the Prince of Wales Landscape Level Analysis was the first time the agency used it for environmental review on an Alaska timber sale.

The forest service, which can appeal the decision, did not return calls seeking comment.

Gleason's decision affects the Prince of Wales Island project and the Central Tongass Project near Petersburg and Wrangell.

The ruling triggers a new environmental review under the National Environmental Policy Act, said Meredith Trainor,

executive director of the Southeast Alaska Conservation Council.

The ruling in the lawsuit brought by the council includes a requirement for public input on specific areas proposed for logging, Trainor said.

Tessa Axelson, executive director of the Alaska Forest Association, said in a statement that the ruling "threatens

the viability of Southeast Alaska's timber industry."

The project is in violation of NEPA, NFMA, the Clean Water Act, the APA and the ESA.

Remedy

Withdraw the draft Record of Decision and Final EIS until site specific prescriptions, new roads are mapped and unit boundaries are firmed up, then write an EIS and take public comments.

The agency needs to identify all existing old growth stands, where roads will be built and logging units will be in the Project Area, and define their individual patch size, and map their locations across the project area. The agency also needs to identify what the proposed logging and/or burning treatment is for each of these old growth stands, is required by the NEPA for project decisions.

LYNX

We wrote in our comments:

What science shows that logging and road building will enhance lynx habitat?

On page 325 of the EA, it discusses "Correlates of Canada Lynx Reproductive Success in Northwestern Montana" by Megan K. Kosterman.

And "Understanding and predicting habitat for wildlife conservation: the case of Canada lynx at the range periphery" by HOLBROOK et al that confirms Kosterman's findings.

Does the action alternative comply with Kosterman and Holbrook's recommendations?

1) USFS needs to take a hard look at impacts to lynx under NEPA, apply the lynx conservation measures and

standards of the NRLMD, and consult on lynx via section 7 of the ESA b/c the best available science -- including recent tracking surveys conducted by WTU -- confirm lynx's presence and use of the area;

(3) USFS has failed to survey for lynx as required by the

Biological Opinion on the Northern Rockies Lynx Management Direction (NRLMD).

In order to meet the requirements of the FS/USFWS Conservation Agreement, the FS agreed to insure that all project activities are consistent with the Lynx Conservation Assessment and Strategy (LCAS).

LCAS requirements include:

Project planning[mdash]standards.

1. Within each LAU, map lynx habitat. Identify potential denning habitat and foraging habitat (primarily snowshoe hare habitat, but also habitat for important alternate prey such as red squirrels), and topographic features that may be important for lynx movement (major ridge systems, prominent saddles, and riparian corridors). Also identify non-forest vegetation (meadows), shrub-grassland communities, etc.) adjacent to and intermixed with forested lynx habitat that may provide habitat for alternate lynx prey species.

2. Within a LAU, maintain denning habitat in patches generally larger than 5 acres, comprising at least 10 percent of lynx habitat. Where less than 10 percent denning habitat is currently present within a LAU, defer any management actions that would delay development of denning habitat structure.

3. Maintain habitat connectivity within and between LAUs. Programmatic planning-standards.

1. Conservation measures will generally apply only to lynx habitat on federal lands within LAUs.

2. Lynx habitat will be mapped using criteria specific to each geographic area to identify appropriate vegetation and environmental conditions. Primary vegetation includes those types necessary to support lynx reproduction and survival. It is recognized that other vegetation types that are intermixed with the primary vegetation will be used by lynx, but are considered to contribute to lynx habitat only where associated with the primary vegetation. Refer to glossary and description for each geographic area.

3. To facilitate project planning, delineate LAUs. To allow for assessment of the potential effects on an individual lynx, LAUs should be at least the size of area used by a resident lynx and contain sufficient year-round habitat.

4. To be effective for the intended purposes of planning and monitoring, LAU boundaries will not be adjusted for individual projects, but must remain constant.

5. Prepare a broad-scale assessment of landscape patterns that compares historical and current ecological processes and vegetation patterns, such as age-class distributions and patch size characteristics. In the absence of guidance developed from such an assessment, limit disturbance within each as follows: if more than 30 percent of lynx habitat within an LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result o vegetation management activities by federal agencies.

Project planning-standards.

1. Management actions (e.g., timber sales, salvage sales) shall

not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10- year period.

Programmatic planning-standards.

1. Identify key linkage areas that may be important in providing landscape connectivity within and between geographic areas, across all ownerships.

2. Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project.

Please demonstrate that project activities are consistent with above and all other applicable programmatic and project requirements.

The U.S. Court of Appeals for the Ninth Circuit hold that "[o]nce an agency is aware that an endangered species may be present in the area of its proposed action, the ESA requires it to prepare a biological assessment . . . ." Thomas v. Peterson, 753 F. 2d 754, 763 (9thCir. 1985). If the biological assessment concludes that the proposed action "may affect" but will "not adversely affect" a threatened or endangered species, the action agency must consult informally with the appropriate expert agency. 50 C.F.R. [sect][sect] 402.14 (b)(1), 402.12(k)(1).

Canada lynx are listed under the ESA.

Canada lynx may be present in the project area and the proposed project may affect lynx by temporarily increasing road density, removing vegetative cover, and engaging in mechanized activities that could displace lynx.

Please complete a biological assessment for lynx and formally consult with USFWS regarding the project's potential impacts on lynx.

The Forest Service responded:

Canada lynx - may affect, likely to adversely affect[bull]Canada lynx critical habitat - may affect, not likely to adversely affect

The Northern Rockies Lynx Management Direction in appendix A, as modified by the Flathead National Forest's forest plan record of decision, shall be applied.The updated EA displays the potential effects of the proposed activities on lynx habitat. The project activities are in compliance with FW-STD- WL-04.

"Approximately 56 percent of these LAUs is designated as Canada lynx critical habitat. Alternative B would decrease potential lynx feeding habitat (PCE1a) by approximately 178 acres between both LAUs. Potential denning habitat (PCE1c) would be reduced by approximately 615 acres through a variety of treatments only in the Lost Tally LAU." (pg.25)

We wrote in our comments:

"Alternative B would implement 940 acres of precommercial thinning in areas in the WUI that function as stand initiation foraging habitat for lynx. These treatments would take about 20 years to result in predicted lynx use." (pg. 29)

Canada lynx and critical habitat
The biological assessment found that the Stovepipe project would be likely to adversely affect both Canada lynx and Canada lynx critical habitat. This determination was made because project activities would decrease lynx foraging habitat by 1,741 acres throughvegetation management activities. While this decrease in lynx foraging habitat in the critical habitat area is adverse it was not considered significant because the Flathead National Forest is still providing adequate critical habitat outside of the wildland- urban interface that would not jeopardize the overall population of Canada lynx. Landscape-level travel connections would also be maintained. (DDN p. 12).

The Lynx Amendment has not undergone any Forest Plan amendments to allow the changed definitions of lynx structural stages the agency is now using, including those used in the Stovepipe analysis. The Lynx Amendment needs to be amended to provide the current best science definitions of lynx habitat, and include standards for each of these 4 habitat categories as defined by the current best science (Holbrook et al. 2019).

A big problem with the Forest Plan and the NRLMD is that it allows with few exceptions the same level of industrial forest management activities that occurred prior to Canada lynx ESA listing. The FS approval and implementation of the NRLMD and

the revised Flathead National Forest Forest Plan is arbitrary and capricious, violates NEPA's hard look requirement and scientific integrity mandate and fails to apply the best available science necessary to conserve lynx. The NRLMD or the revised Flathead Forest Plan contain no protection or standard for conservation of winter lynx habitat (old growth forests).

The EIS doesn't disclose if the FS conducted lynx occurrence surveys of habitat in the LAUs.

The EIS doesn't disclose if surveys target snowshoe hare occurrence data in these stands newly considered unsuitable for lynx. Also, the EA doesn't indicate if the FS surveyed any areas (proposed for logging and/or burning or not) thought to not be lynx habitat based on mapping or stand data were surveyed to confirm unsuitable habitat conditions.

The EIS explains the project area is within Lynx Critical Habitat Unit.

The current science demonstrates that lynx must travel between areas of high hare densities and resist traveling through low cover areas in winter. The EA fails to identify the amount of non-cover or low-cover areas that will be created from the project.

It appears the FS doesn't have a coherent strategy for recovering lynx from their Threatened status, including linking currently populated areas with each other through important linkages such as project area LAUs.

The EIS fails to analyze and disclose cumulative impacts of recreational activities on lynx, such as snowmobiles. As the KNF's Galton FEIS states, "The temporal occurrence of forest uses such ... winter (skiing and snowmobiling) ... may result in a temporary displacement of lynx use of that area..."

The Mid-Swan EIS and DROD fail to quantify and disclose the cumulative effects on Canada lynx due to trapping or from use of the road and trail networks in the project area.

In failing to properly analyze and disclose cumulative effects, the EIS and DROD violates NEPA and the ESA.

The EIS claims that sufficient denning habitat occurs in the LAU, but it fails to explain how it arrived at that conclusion. Habitat capacity for denning will be impaired by project activities.

The USFWS listed the Canada lynx as a threatened species under the Endangered Species Act in 2000 due to "lack of guidance for conservation of lynx and snowshoe hare habitat..." and subsequent authorization of actions that may cumulatively adversely affect the lynx. Relatively little is known about lynx in the contiguous United States. Historically, lynx inhabited states spanning from Maine to Washington, but it is unknown how many lynx remain.

Lynx are highly mobile and generally move long distances [greater than 60 mi. (100 km.)]; they disperse primarily when snowshoe hare populations decline; subadult lynx disperse even when prey is abundant, presumably to establish new home ranges; and lynx also make exploratory movements outside their home ranges. 74 Peg. Reg. at 8617. The contiguous United

States is at the southern edge of the boreal forest range, resulting in limited and patchy forests that can support snowshoe hare and lynx populations.

Lynx subsist primarily on a prey base of snowshoe hare, and survival is highly dependent upon snowshoe hare habitat, forest habitat where young trees and shrubs grow densely. In North America, the distribution and range of lynx is nearly "coincident" with that of snowshoe hares, and protection of snowshoe hares and their habitat is critical in lynx conservation strategies.

Since more often than not when the FS conducts logging projects in LAUs surveys of stands for lynx habitat result in less suitable habitat than previously assumed, the FS needs to take a few steps backward and consider that its range-wide Canada lynx suitable habitat estimations were too high.

Squires et al. (2013) noted that long-term population recovery of lynx, as well as other species as the grizzly bear, require maintenance of short and long-distance connectivity. The importance of maintaining lynx linkage zones is also recognized by the FS's Lynx Conservation Assessment and Strategy (LCAS), as revised in 2013, which stresses that landscape connectivity should be maintained to allow for movement and dispersal of lynx.

Squires et al. (2013) noted in their research report that some lynx avoided crossing highways; in their own report, they noted that only 12 of 44 radio-tagged lynx with home ranges including 2- lane highways crossed them.

The current best science indicates that lynx winter foraging habitat is critical to lynx persistence (Squires et al. 2010), and that this habitat should be "abundant and well-distributed across lynx habitat." (Squires et al. 2010; Squires 2009.) Existing openings such as clearcuts not yet recovered are likely to be avoided by lynx in the winter. (Squires et al. 2010; Squires et al. 2006a.)

Lynx winter habitat, provided only in older, multi-storied forests, is critical for lynx preservation. (Squires et al. 2010.) Winter is the most constraining season for lynx in terms of resource use; starvation mortality has been found to be the most common during winter and early spring. (Squires et al. 2010.) Prey availability for lynx is highest in the summer. (Squires et al. 2013.)

Openings, whether small in uneven-aged management, or large with clearcutting, remove lynx winter travel habitat on those affected acres, since lynx avoid openings in the winter. (Squires et al. 2010.)

Squires et al., 2010 reported that lynx winter habitat should be "abundant and spatially well- distributed across the landscape." Those authors also noted that in heavily managed landscapes, retention and recruitment of lynx habitat should be a priority.

The LCAS (Ruediger et al. 2000) recommends, until conclusive information is developed concerning lynx management, the agencies retain future options; that is, choose to err on the side of maintaining and restoring habitat for lynx and their prey. To err on the side of caution, the KNF would retain all remaining stem exclusion forests for recruitment into lynx winter habitat,

so that this key habitat would more closely resemble historic conditions.

As early as 2000, the LCAS noted that lynx seem to prefer to move through continuous forest (1- 4); lynx have been observed to avoid large openings, either natural or created (1-4); opening and open forest areas wider than 650 feet may restrict lynx movement (2-3); large patches with low stem densities may be functionally similar to openings, and therefore lynx movement may be disrupted (2-4). Squires et al. 2006a reported that lynx tend to avoid sparse, open forests and forest stands dominated by small-diameter trees during the winter. Squires et al. 2010 again reported that lynx avoid crossing clearcuts in the winter; they generally avoid forests composed of small diameter saplings in the winter; and forests that were thinned as a silvicultural treatment were generally avoided in the winter.

Squires et al. 2010 show that the average width of openings crossed by lynx in the winter was 383 feet, while the maximum width of crossed openings was 1240 feet.

Recent scientific findings undermine the Forest Plan/NRLMD direction for management of lynx habitat. This creates a scientific controversy the FS fails to resolve, and in fact it essentially ignores it.

For one, Kosterman, 2014 found that 50% of lynx habitat must be mature undisturbed forest for it to be optimal lynx habitat where lynx can have reproductive success and no more than 15% of lynx habitat should be young clearcuts, i.e. trees under 4 inched dbh. Young regenerating forest should occur only on

10-15% of a female lynx home range, i.e. 10-15% of an LAU.

This renders inadequate the agency's assumption in the Forest Plan/NRLMD that 30% of lynx habitat can be open, and that no specific amount of mature forest needs to be conserved.

Kosterman, 2014 demonstrates that Forest Plan/NRLMD standards are not adequate for lynx viability and recovery.

Also, the Forest Plan essentially assumes that persistent effects of vegetation manipulations other than regeneration logging and some intermediate treatments are essentially nil. However, Holbrook, et al., 2018 "used univariate analyses and hurdle regression models to evaluate the spatio-temporal factors influencing lynx use of treatments." Their analyses

"indicated ...there was a consistent cost in that lynx use was low up to ~10 years after all silvicultural actions." (Emphasis added.) From their conclusions:

First, we demonstrated that lynx clearly use silviculture treatments, but there is a ~10 year cost of implementing any treatment (thinning, selection cut, or regeneration cut) in terms of resource use by Canada lynx. This temporal cost is associated with lynx preferring advanced regenerating and mature structural stages (Squires et al., 2010; Holbrook et al., 2017a) and is consistent with previous work demonstrating a negative effect of precommercial thinning on snowshoe hare densities for

~10 years (Homyack et al., 2007). Second, if a treatment is implemented, Canada lynx used thinnings at a faster rate post- treatment (e.g.,~20 years posttreatment to reach 50% lynx use) than either selection or regeneration cuts (e.g., ~34-40 years post-treatment to reach 50% lynx use). Lynx appear to use regeneration and selection

cuts similarly over time suggesting the difference in vegetation impact between these treatments

made little difference concerning the potential impacts to lynx (Fig. 4c). Third, Canada lynx tend to avoid silvicultural treatments when a preferred structural stage (e.g., mature, multi- storied forest or advanced regeneration) is abundant in the surrounding landscape, which highlights the importance of considering landscape-level composition as well as recovery time. For instance, in an area with low amounts of mature forest in the neighborhood, lynx use of recovering silvicultural treatments would be higher versus treatments surrounded by an abundance of mature forest (e.g., Fig. 3b). This scenario captures the importance of post-treatment recovery for Canada lynx when the landscape context is generally composed of lower quality habitat. Overall, these three items emphasize that both the spatial arrangement and composition as well as recovery time are central to balancing silvicultural actions and Canada lynx conservation.

So Holbrook et al., 2018 fully contradict Forest Plan assumptions that clearcuts/regeneration can be considered useful lynx habitat as early as 20 years post-logging.

Results of a study by Vanbianchi et al., 2017 also conflict with Forest Plan/NRLMD assumptions: "Lynx used burned areas as early as 1 year postfire, which is much earlier than the 2-4 decades postfire previously thought for this predator." The NRLMD erroneously assumes clearcutting/regeneration logging have basically the same temporal effects as stand-replacing fire as far as lynx re-occupancy.

Kosterman, 2014, Vanbianchi et al., 2017 and Holbrook, et al., 2018, Holbrook 2019 demonstrate that Forest Plan direction is not adequate for lynx viability and recovery, as the FS assumes.

Holbrook 2019 such all lynx habitat must be surveyed. You have not done this.

The Forest Plan/FEIS fail to describe the quantity and quality of habitat that is necessary to sustain the viability of the Canada lynx.

The WUI exception is arbitrary and capricious and in violation of NEPA, NFMA, the APA, and the ESA. There is no scientific evidence that lynx can withstand a loss of 15% of an LAU.

Remedy: Choose the No Action Alternative or withdraw the DROD and write an EIS for the project that fully complies with the law and a SEIS for the Forest Plan to reflect the best available science and fully complies with the law.

Roadless Areas

We wrote in our comments:

The Roadless areas in the project area would be designated as Wilderness under the Northern Rockies Ecosystem Protection Act or (NREPA). Currently, sixteen Senators are sponsoring NREPA in the Senate (S. 827) and Forty-four Representatives are sponsoring NREPA in the House (H.R. 1321). NREPA recognizes this areas as an important wildlife corridor because

of their importance as habitat for grizzly bears and lynx and connecting corridors for native species. Please find a copy of

S. 827 and H.R. 1321 attached.

How would the project affect the wilderness potential of roadless lands and unroaded lands adjacent to roadless areas in the project area?

The Forest Service responded:

In response to treating recommended wilderness the same as designated wilderness, in general, the areas are managed with somewhat similar desired conditions but have different management requirements for regulating actions within the respective areas. For example, the desired conditions in the Forest Plan state: The Forest maintains and protects the ecological and social characteristics that provide the basis for wilderness recommendation (3-89).However, the Forest Plan also states the following: Recommended wilderness areas are suitable for restoration activities where the outcomes will protect the wilderness characteristics of the areas, if the ecological and social characteristics that provide the basis for wilderness recommendation are maintained and protected. (MA1b-SUIT-03). Analysis in the FEIS shows that the proposed actions would improve terrestrial and aquatic biodiversity across the project area, including in recommended wilderness All actions are proposed to be consistent with forest plan management direction including recommended wilderness management area direction (1b), as amended,

where restoration needs include the support of motorized equipment and mechanized transport. In addition, the Wilderness Act and wilderness management policy are adhered to in designated wilderness

The cutting of generally small diameter trees is consistent with roadless rule exceptions. Sections 2.5 and 3.16 of the FEIS indicate that treatments within the inventoried roadless areas consist of thinning and prescribed fire to increase vigor of large and desirable trees, reduce unnatural fuel loadings, improve

 wildlife habitat and promote western white pine or whitebark pine on suitable sites. Treatments include cutting of generally small sized trees that will be disposed on site (with fuel treatments if needed).

The Forest Service did not respond to our comments in violation of NEPA, NFMA, and the APA.

Whitebark pine has not declined below the natural historic range of variability and restoration is therefore not "needed" under the Roadless Rule (b)(1)(ii) exemption. Thus, the Roadless Rule (b)(1)(ii) exemption does not apply and therefore does not exempt 844 acres of "whitebark pine restoration" tree-cutting from the Roadless Rule ban on tree- cutting.

Remedy:

Choose the No Action Alternative or Withdraw the DROD and write a SFEIS that responds to our questions.

Bull trout

We wrote in our comments:

What are the redd counts in bull trout critical habitat in the project area? Please also provide the all the historical bull counts that you have in the project area?

Page 163 of the DEIS states: "It is likely that bull trout would be adversely affected by the implementation of either alternative B and C. A limited amount of short-term pulses of fine-grained sediment are expected to be delivered to bull trout habitat as roads within RMZs are constructed, decommissioned or stored, and when IRMZ are treated with prescribed fire. This sediment would potentially be delivered to bull trout critical habitat and primary spawning reaches and would likely result in reduced spawning/juvenile rearing success in the short-term, with long-term beneficial effects."

The EIS must fully and completely analyze the impacts to bull trout critical habitat and westslope cutthroat trout habitat. What is the standard for sediment in the Forest Plan? Sediment is one

of the key factors impacting water quality and fish habitat. [See USFWS 2010]

The introduction of sediment in excess of natural amounts can have multiple adverse effects on bull trout and their habitat (Rhodes et al. 1994, pp. 16-21; Berry, Rubinstein, Melzian, and Hill 2003, p. 7). The effect of sediment beyond natural background conditions can be fatal at high levels. Embryo survival and subsequent fry emergence

success have been highly correlated to percentage of fine material within the stream-bed (Shepard et al. 1984, pp. 146, 152). Low levels of sediment may result in sublethal and behavioral effects such as increased activity, stress, and emigration rates; loss or reduction of foraging capability; reduced growth and resistance to disease; physical abrasion; clogging of gills; and interference with orientation in homing and migration (McLeay et al. 1987a, p. 671; Newcombe and MacDonald 1991, pp. 72, 76, 77; Barrett, Grossman, and

Rosenfeld 1992, p. 437; Lake and Hinch 1999, p. 865; Bash et al. 2001n, p. 9; Watts et al. 2003, p. 551; Vondracek et al. 2003,

p. 1005; Berry, Rubinstein, Melzian, and Hill 2003, p. 33). The effects of increased suspended sediments can cause changes in the abundance and/or type of food organisms, alterations in fish habitat, and long-term impacts to fish populations (Anderson et al. 1996, pp. 1, 9, 12, 14, 15; Reid and Anderson 1999, pp. 1, 7-15). No threshold has been determined in which fine sediment addition to a stream is harmless (Suttle et al.

2004, p. 973). Even at low concentrations, fine-sediment deposition can decrease growth and survival of juvenile salmonids.

Aquatic systems are complex interactive systems, and isolating the effects of sediment to fish is difficult (Castro and Reckendorf 1995d, pp. 2-3). The effects of sediment on receiving water ecosystems are complex and multi-dimensional, and further compounded

by the fact that sediment flux is a natural and vital process for aquatic systems (Berry, Rubinstein, Melzian, and Hill 2003, p. 4). Environmental factors that affect the magnitude of sediment impacts on salmonids include duration of exposure, frequency of exposure, toxicity, temperature, life stage of fish, angularity and size of particle, severity/magnitude of pulse, time of occurrence, general condition of biota, and availability of and access to refugia (Bash et al. 2001m, p. 11). Potential impacts caused by excessive suspended sediments are varied and complex and are often masked by other concurrent activities (Newcombe 2003, p. 530). The difficulty in determining which environmental variables act as limiting factors has made it difficult to establish the specific effects of sediment impacts on fish (Chapman 1988, p. 2). For example, excess fines in spawning gravels may not lead to smaller populations of adults if the amount of juvenile winter habitat limits the number of juveniles that reach adulthood. Often there are multiple independent variables with complex inter- relationships that can influence population size.

The ecological dominance of a given species is often determined by environmental variables. A chronic input of sediment could tip the ecological balance in favor of one species in mixed salmonid populations or in species communities composed of salmonids and nonsalmonids (Everest et al. 1987, p. 120). Bull trout have more spatially restrictive biological requirements at the individual and population levels than other salmonids (USFWS (U.S. Fish and Wildlife Service) 1998, p. 5). Therefore, they are especially vulnerable to environmental changes such as sediment deposition.

Aquatic Impacts

[bull] Classify and analyze the level of impacts to bull trout and westslope cutthroat trout in streams, rivers and lakes from sediment and other habitat alterations:

Lethal: Direct mortality to any life stage, reduction in egg-to- fry survival, and loss of spawning or rearing habitat. These effects damage the capacity of the bull trout to produce fish and sustain populations.

Sublethal: Reduction in feeding and growth rates, decrease in habitat quality, reduced tolerance to disease and toxicants, respiratory impairment, and physiological stress. While not leading to immediate death, may produce mortalities and population decline over time.

Behavioral: Avoidance and distribution, homing and migration, and foraging and predation. Behavioral effects

change the activity patterns or alter the kinds of activity usually associated with an unperturbed environment. Behavior effects may lead to immediate death or population decline or mortality over time.

Direct effects:

Gill Trauma - High levels of suspended sediment and turbidity can result in direct mortality of fish by damaging and clogging gills (Curry and MacNeill 2004, p. 140).

Spawning, redds, eggs - The effects of suspended sediment, deposited in a redd and potentially reducing water flow and smothering eggs or alevins or impeding fry emergence, are related to sediment particle sizes of the spawning habitat (Bjornn and Reiser 1991, p. 98).

Indirect effects:

Macroinvertebrates - Sedimentation can have an effect on bull trout and fish populations through impacts or alterations to the macroinvertebrate communities or populations (Anderson, Taylor, and Balch 1996, pp. 14-15).

Feeding behavior - Increased turbidity and suspended sediment can affect a number of factors related to feeding for salmonids, including feeding rates, reaction distance, prey selection, and prey abundance (Barrett, Grossman, and Rosenfeld 1992, pp. 437, 440; Henley, Patterson, Neves, and Lemly 2000, p. 133; Bash et al. 2001d, p. 21).

Habitat effects - All life history stages are associated with complex forms of cover including large woody debris, undercut banks, boulders, and pools. Other habitat characteristic important to bull trout include channel and hydrologic stability, substrate composition,

temperature, and the presence of migration corridors (Rieman and McIntyre 1993, p. 5).

Physiological effects - Sublethal levels of suspended sediment may cause undue physiological stress on fish, which may reduce the ability of the fish to perform vital functions (Cederholm and Reid 1987, p. 388, 390).

Behavioral effects - These behavioral changes include avoidance of habitat, reduction in feeding, increased activity, redistribution and migration to other habitats and locations, disruption of territoriality, and altered homing (Anderson,

Taylor, and Balch 1996, p. 6; Bash et

al. 2001t, pp. 19-25; Suttle, Power, Levine, and McNeely 2004, p. 971).

[bull] How will this project affect native fish? What is the current condition in the riparian areas?

How will this project protect rather than adversely impact fish habitat and water quality? No logging or road building should be done in riparian areas. There should not be any stream crossings. Roads should be decommissioned and removed, not upgraded and rebuilt.

[bull] Hauer, et al. (1999) found that bull trout streams in wilderness habitats had consistent ratios of large to small and attached to unattached large woody debris. However, bull trout streams in

watersheds with logging activity had substantial variation in these ratios. They identified logging as creating the most substantive change in stream habitats.

"The implications of this study for forest managers are twofold: (i) with riparian logging comes increased unpredictability in the frequency of size, attachment, and stability of the LWD and (ii) maintaining the appropriate ratios of size frequency, orientation, and bank

attachment, as well as rate of delivery, storage, and transport of LWD to streams, is essential to maintaining historic LWD characteristics and dynamics. Our data suggest that exclusion of logging from riparian zones may be necessary to maintain natural stream

morphology and habitat features. Likewise, careful upland management is also necessary to prevent cumulative effects that result in altered water flow regimes and sediment delivery regimes. While not specifically evaluated in this study, in general, it appears that

patterns of upland logging space and time may have cumulative effects that could additionally alter the balance of LWD delivery, storage, and transport in fluvial systems.

These issues will be critical for forest managers attempting to prevent future detrimental environmental change or setting restoration goals for degraded bull trout spawning streams."

Muhlfeld, et al. (2009) evaluated the association of local habitat features (width, gradient, and elevation), watershed characteristics (mean and maximum summer water temperatures, the number of road crossings, and road density), and biotic factors (the distance to the source of hybridization and trout density) with the spread of hybridization between native westslope cutthroat trout Oncorhynchus clarkii lewisi and introduced rainbow trout O. mykiss in the upper

Flathead River system in Montana and British Columbia.

They found that hybridization was positively associated with mean summer water temperature and the number of upstream road crossings and negatively associated with the distance to the main source of hybridization. Their results suggest that hybridization is more likely to occur and spread in streams with warm water temperatures, increased land use disturbance, and proximity to the main source of hybridization.

The EIS must use the best available science to analyze how logging riparian habitat will impact native fish and water quality.

We wrote in our scoping comments:

The following article from the 9/25/15 Missoulian

disagrees with the Forest Service and says it is habitat destruction causing bull trout declines.

http://missoulian.com/news/local/montana-fwp-biologist- despite-successes-bull-trout-populations-still-in/article_2798e4c6-0658-522f-be4c-4274f903129e.html

Montana FWP biologist: Despite successes, bull trout populations still in peril

Ladd Knotek is disturbed by the lack of attention being paid to the many western Montana streams where bull trout populations are struggling to survive.

The fisheries biologist with Montana Fish, Wildlife and Parks knows people love to latch on to the success stories

from streams like Fish Creek and several Blackfoot tributaries, where bull trout populations are viable.

"But what nobody talks about is all these other populations that, 50 years ago, these were all viable populations,"

he said Tuesday as part of a presentation on bull trout in Rattlesnake Creek. "You know, Gold Creek, Belmont Creek, Trout Creek, there's a whole list of them. There's a whole bunch of them that are just basically on the verge of disappearing. And what we like to talk about are the ones that are doing OK. But in places like Lolo Creek and some Bitterroot tributaries, bull trout there are just barely hanging on."

Bull trout have faced a long, slow decline over the past century, to the point where they are now listed as a threatened species under the Endangered Species Act. Success is

a relative term even in the places where they are doing well.

"They're nowhere near what they were historically," Knotek said of the tributaries where the populations are relatively healthy. "But they have a fair number of adult spawners coming in. People see them in the fishery. But we need to start looking at all these other tributaries that used to be bull trout spawning tributaries and recognize what's going on in the bigger picture. We're just looking at a very thin slice instead of looking at the whole thing. A lot of this stuff is just symptoms of what's going on at the larger scale.

Bull trout are the canary. They're very susceptible to environmental change, whether it's temperature, whether it's physical, whether it's sediment. There's something going on in these drainages and the symptoms we're seeing are the bull trout distribution is shrinking, we're losing populations and we're seeing expansion of nonnatives."

Bull trout - which are native to the Columbia River Basin and are only found west of the Continental Divide in Montana - need clear, cold mountain waters to spawn and require clean gravel beds, deep pools, complex cover, good in-stream flows in the fall and large systems of in-

terconnected waterways for their migrations. Rising temperatures and falling water levels trigger their migration to spawning tributaries in June, and they hang out until they spawn in the fall. They are much more susceptible to

warming temperatures and habitat change than nonnative species such as brown and rainbow trout.

Knotek was the featured presenter Friday for a discussion on restoration efforts and the importance of

Rattlesnake Creek as a bull trout habitat. The event was organized by the Clark Fork Coalition, a nonprofit in Missoula that aims to protect water quality for the 22,000-square-mile Clark Fork River Basin.

Knotek explained that because Rattlesnake Creek is south- facing and doesn't have much groundwater recharging, it has much less of a buffer against a warming climate than other streams.

"The water temperatures are significantly higher than they were 10 years ago," he said. "The types of temperatures we're seeing in late summer and early fall, we never saw those 10 to 15 years ago. Water temperature is driving a lot of what we're talking about. It's definitely stressful on fish. It doesn't spell good news for bull trout."

Knotek said it's a common misconception that brown trout

and rainbows are driving out bull trout, and he explained that those nonnative species are simply moving in because the native species is dying off.

"It's replacement rather than displacement," he said.

In Rattlesnake Creek, biologists have conducted redd counts of the migratory population in the lower reaches since 1999. There is a healthy resident population in the upper reaches, but researchers are more interested in the fish that actually migrate to the Clark Fork River.

The results have been disturbing.

They found a high of 36 in 2006 and 24 in 2008, before Milltown Dam was removed. There was an expected drop to just four redds - spawning beds - after the dam was removed in 2009, because of the massive disturbance.

However, the number of redds has not bounced back since, and researchers found just six last year.

"That tells us that it wasn't just the dam removal that caused it, because they should be recovering by now," Knotek said. "And there are lots of populations like this stream that are not doing well but need more attention. We've got a problem here, but it's not inconsistent with other tributaries. There's something bigger going on."

Knotek said that Rattlesnake Creek was historically

braided before the area was developed, and that eliminated a lot of the back channels the juvenile fish need to grow.

"You need complexity," he said. "When you have a straight ditch in a system that used to be braided, it ain't good."

He's also seen much more algae growth in the upper sections, something that is obviously related to higher temperatures and added nutrients.

"We have browns and rainbows progressing upstream, and we attribute that to water temperature," he said. "That's consistent with other streams, too. It's very obvious something is going on here."

Knotek believes that a "ramping up" of current conservation work is the only thing that can save bull trout populations.

Fish screens, the removal of dams, awareness of

anglers and water conservation - especially by people us- ing stream irrigation to water their lawns - is crucial.

"Bull trout are the canary," he said. "But there are a lot of other species that we could be looking at as indicators as well. A lot of research needs to be done. There's a lot of species being affected."

As Knoteck pointed out, bull trout need clear, cold mountain waters to spawn and require clean gravel beds, deep pools, complex cover, good in-stream flows in the fall and large systems of interconnected waterways for their migrations.

Page 66 of the EA shows the total amount of sediment currently going into the streams in the project area per

year is 286 tons. Under Alternative 2 this will increase to 511 tons of sediment per year. Under Alternative 3 is will increase to 461.3 tons per year and under alternative 4 it will increase to 516 tons per year. The amount of sediment going into the streams will barely go down post project. Assuming your table is accurate, how many years it will take post-project to make up for all of the increase in sediment during the project? Will there be any bull trout left in the streams by then? How many bull trout will be killed during the implementation of the project?

How will the Mid-Swan project make the waters clearer in the short term?

How will the Mid-Swan project make the waters colder in the short term?

How will the Mid-Swan project make the gravel beds of the streams int he project area cleaner in the short and long term?

How will the Mid-Swan project make the affect deep pools in streams in the project area in the short and long term?

How will the Mid-Swan project make the affect complex cover over the streams in the project area in the short and long term?

How will the Mid-Swan project make the affect the in-stream flows in the fall in the short and long term?

How will the Mid-Swan project make the affect large systems of interconnected waterways for bull trout migrations?

Critical habitat receives protection under section 7 of the Endangered Species Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. There is no exception for the short run? How long is the project scheduled to last?

Will this project adversely modify bull trout critical habitat in the short run?

How will the Mid-Swan project affect the temperature of the streams in the project area including bull trout critical

habitat?

Will all of the proposed logging increase the temperature of the streams in the project area?

Will all of the proposed road building and road use by log truck, clearcutting, and other logging put more sediment into streams in the project area?

How will this affect bull trout and bull trout critical habitat?

When was the last time the project area was surveyed for bull trout?

What was the results of these surveys?

The EIS does not characterize or evaluate the project area watersheds based on the Watershed Condition Framework or the baseline condition developed for bull trout. We do not know what the current condition of streams are in the project area, i.e., are they functioning acceptably, at risk or at unacceptable risk? And for what ecosystem parameters? How will this project affect stream function, i.e., degrade, maintain, restore?

[bull] The project relies on BMPs to protect water quality and fish habitat. First, there is no evidence that application of BMPs actually protects fish habitat and water quality.

[bull] Second, BMPs are only maintained on a small percentage of roads or when there is a logging project.

BMPs fail to protect and improve water quality because of the allowance for "naturally occurring degradation." In Montana,

"naturally-occurring degradation" is defined in ARM 16.20.603(11)

as that which occurs after application of "all reasonable land, soil and water conservation practices have been

applied." In other words, damage caused directly by sediment (and other pollution) is acceptable as long as BMPs are applied. The result is a never-ending, downward spiral for water quality and native fish.

Here's how it works:

[bull] Timber sale #1 generates sediment damage to a bull trout stream, which is "acceptable" as long as BMPs are applied to project activities.

[bull] "Natural" is then redefined as the stream condition after sediment damage caused by Timber Sale #1.

[bull] Timber sale #2 - in the same watershed - sediment damage would be acceptable if BMPs are

applied again - same as was done before.

[bull] "Natural" is again redefined as the stream condition after sediment damage caused by Timber

Sale#2.

The downward spiral continues with disastrous cumulative effects on bull trout, westslope cutthroat trout and most aquatic life. BMPs are not "reasonable." Clearly, beneficial uses are not being protected. In Montana, state water quality policy is not being followed. [sect] 75-5-101 et seq. and ARM 16.20.701 et seq.

[bull] How will the project affect climate change ?

The U.S. Fish and Wildlife Service found that bull trout are exceptionally sensitive to the direct, indirect, and cumulative effects of roads. Dunham and Rieman demonstrated that disturbance from roads was associated with reduced bull trout occurrence. They concluded that conservation of bull trout should involve protection of larger, less fragmented, and less disturbed (lower road density) habitats to maintain important strongholds and sources for naturally recolonizing areas where populations have been lost. (USFS 2000, page 3-82.

Hitt and Frissell showed that over 65% of waters that were rated as having high aquatic biological integrity were found within wilderness-containing subwatersheds.

Trombulak and Frissell concluded that the presence of roads in an area is associated with negative effects for both terrestrial and aquatic ecosystems including changes in species composition and population size. (USFS

2000, pages 3-80-81).

"High integrity [forests] contain the greatest proportion of high forest, aquatic, and hydrologic integrity of all are dominated by wilderness and roadless areas [and] are the least

altered by management. Low integrity [forests have] likely been altered by past management are extensively roaded and have little wilderness." (USFS 1996a, pages 108, 115 and 116).

"Much of this [overly dense forest] condition occurs in areas of high road density where the large, shade-intolerant, insect-, disease- and fire-resistant species have been harvested over the past 20 to 30 years. Fires in unroaded areas are not as severe as in the roaded areas because of less surface fuel, and after fires at least some of the large trees survive to produce seed that regenerates the area. Many of the fires in the unroaded areas produce a forest structure that is consistent with the fire regime, while the fires in the roaded areas commonly produce a forest structure that is not in sync with the fire regime. In general, the effects of wildfires in these areas are much lower and do not result in the chronic sediment delivery hazards exhibited in areas that have been roaded." (USFS 1997a, pages 281-282).

"Increasing road density is correlated with declining aquatic habitat conditions and aquatic integrity An intensive review of the literature concludes that increases in sedimentation [of streams] are unavoidable even using the most cautious roading methods." (USFS 1996b, page 105).

"This study suggests the general trend for the entire Columbia River basin is toward a loss in pool habitat on managed lands and stable or improving conditions on unmanaged

lands." (McIntosh et al 1994).

"The data suggest that unmanaged systems may be more structurally intact (i.e., coarse woody debris, habitat diversity, riparian vegetation), allowing a positive interaction with the stream processes (i.e., peak flows, sediment routing) that shape and maintain high-quality fish habitat over time." (McIntosh et al 1994).

"Although precise, quantifiable relationships between long- term trends in fish abundance and land-use practices are difficult to obtain (Bisson et al. 1992), the body of literature concludes that land-use practices cause the simplification of fish habitat." (McIntosh et al 1994).

"Land management activities that contributed to the forest health problem (i.e., selective harvest and fire suppression) have had an equal or greater effect on aquatic ecosystems.

If we are to restore and maintain high quality fish habitat, then protecting and restoring aquatic and terrestrial ecosystems is essential." (McIntosh et al 1994).

"Native fishes are most typically extirpated from waters that have been heavily modified by human activity, where native fish assemblages have already been depleted, disrupted, or stressed []." (Moyle et al 1996).

"Restoration should be focused where minimal investment can maintain the greatest area of high-quality habitat and diverse aquatic biota. Few completely roadless, large watersheds remain in the Pacific Northwest, but those that continue relatively undisturbed are critical in sustaining sensitive native species and important ecosystem processes (Sedell, et. al 1990; Moyle and Sato 1991; Williams 1991; McIntosh et al. 1994;

Frissell and Bayles 1996). With few exceptions, even the least disturbed basins have a road network and history of logging or other human disturbance that greatly magnifies the risk of deteriorating riverine habitats in the watershed." (Frissell undated).

"[A]llocate all unroaded areas greater than 1,000 acres as Strongholds for the production of clean water, aquatic and riparian-dependent species. Many unroaded areas are isolated, relatively small, and most are not protected from road construction and subsequent timber harvest, even in steep

areas. Thus, immediate protection through allocation of the unroaded areas to the production of clean water, aquatic and riparian-dependent resources is necessary to prevent degradation of this high quality habitat and should not be postponed." (USFWS et al 1995).

"Because of fire suppression, timber harvest, roads, and white pine blister rust, the moist forest PVG has experienced great changes since settlement of the project area by Euroamericans. Vast amounts of old forest have converted to mid seral stages."(USFS/BLM 2000, page 4-58).

"Old forests have declined substantially in the dry forest PVG []. In general, forests showing the most change are those that have been roaded and harvested. Large trees, snags, and coarse woody debris are all below historical levels in these areas."

(USFS/BLM 2000, page 4-65).

"High road densities and their locations within watersheds are typically correlated with areas of higher watershed sensitivity to erosion and sediment transport to streams. Road density also is correlated with the distribution and spread of exotic annual grasses, noxious weeds, and other exotic plants.

Furthermore, high road densities are correlated with areas that have few large snags and few large trees that are resistant to both fire and infestation of insects and disease. Lastly, high road densities are correlated with areas that have relatively high risk of fire occurrence (from human caused fires), high hazard ground fuels, and high tree mortality." (USFS 1996b, page 85, parenthesis in original).

In simpler terms, the Forest Service has found that there is no way to build an environmentally benign road and that roads and logging have caused greater damage to forest ecosystems than has the suppression of wildfire alone. These findings indicate that roadless areas in general will take adequate care of themselves if left alone and unmanaged, and that concerted reductions in road densities in already roaded areas are absolutely necessary.

Indeed, other studies conducted by the Forest Service indicate that efforts to "manage" our way out of the problem are likely to make things worse. By "expanding our efforts in timber harvests to minimize the risks of large fire, we risk expanding what are well established negative effects on streams and native salmonids. The

perpetuation or expansion of existing road networks and other activities might well erode the ability

of [fish] populations to respond to the effects of large scale storms and other disturbances that we clearly cannot change." (Reiman et al 1997).

The following quotes demonstrate that trying to restore lower severity fire regimes and forests through logging and other management activities may make the situation worse, compared to allowing nature to reestablish its own equilibrium. These statements are found in "An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volume 3 (ICBEMP):

"Since past timber harvest activities have contributed to degradation in aquatic ecosystems, emphasis on timber harvest and thinning to restore more natural forests and fire regimes represent risks of extending the problems of the past." (ICBEMP page 1340).

"Proposed efforts to reduce fuel loads and stand densities often involve mechanical treatment and the use of prescribed fire. Such activities are not without their own drawbacks -- long-term negative effects of timber harvest activities on aquatic ecosystems are well documented (see this chapter;

Henjum and others 1994; Meehan 1991; Salo and Cundy 1987)." (ICBEMP page 1340).

"Species like bull trout that are associated with cold, high elevation forests have probably persisted in landscapes that were strongly influenced by low frequency, high severity fire regimes. In an evolutionary sense, many native fishes are likely well acquainted with large, stand-replacing fires." (ICBEMP page 1341).

"Attempts to minimize the risk of large fires by expanding timber harvest risks expanding the well-established negative effects on aquatic systems as well. The perpetuation or expansion of existing road networks and other activities might well erode the ability of populations to respond to the effects of fire and large storms and other disturbances that we cannot predict or control (National Research Council 1996). (ICBEMP page 1342).

"Watersheds that support healthy populations may be at greater risk through disruption of watershed processes and degradation of habitats caused by intensive management than through the effects of fire." (ICBMP page 1342).

"Timber harvest, through its effects on forest structure, local microclimate, and fuels accumulation, has increased fire severity more than any other recent human activity. If not accompanied by adequate reduction of fuels, logging (including salvage of dead and dying trees) increases fire hazard by increasing surface dead fuels and changing the local microclimate. Fire intensity and expected fire spread rates thus increase locally and in areas adjacent to harvest". (USFS 1996c, pages 4-61-72).

"Logged areas generally showed a strong association with increased rate of spread and flame length, thereby suggesting that tree harvesting could affect the potential fire behavior within landscapes...As a by-product of clearcutting, thinning, and other tree-removal activities, activity fuels create both short- and long-term fire hazards to ecosystems. Even though these hazards diminish over time, their influence on fire behavior can linger for up to 30 years in dry forest ecosystems of eastern Oregon and Washington". (Huff et al 1995).

The answer, therefore, is not to try managing our way out of this situation with more roads and timber harvest/ management. In summary:

[bull] Roads have adverse effects on aquatic ecosystems. They facilitate timber sales which can reduce riparian cover, increase water temperatures, decrease recruitment of coarse woody debris, and disrupt the hydrologic regime of watersheds by changing the timing and quantity of runoff. Roads themselves disrupt hydrologic processes by intercepting and diverting flow and contributing fine sediment into the stream channels which clogs spawning gravels. High water temperatures and fine sediment degrade native fish spawning habitat.

According to the U.S. Forest Service 82% of all bull trout populations and stream segments range-wide are threatened by degraded habitat conditions. Roads and forest management are a major factor in the decline of native fish species on public lands in the Northern Rockies and Pacific Northwest.

The Forest Service Responded:

The Mid-Swan project tiers to a region-wide vulnerability assessment conducted by the USFS Region 1(Halofsky et al. 2018a;b). This document outlines the risks posed by climate change to a variety of resources and systems including aquatic species. This assessment predicts earlier spring peakflows of higher magnitude with decreased flows in the summer, and

increased stream temperatures, reducing available habitat for cold-water dependent species such as bull trout. It recommends protecting groundwater and springs, restoring riparian areas and beaver populations to maintain summer baseflows, removing fish passage barriers, decreasing road/ stream connectivity, decommissioning roads, reducing road- related erosion, reducing surface fuels and forest stand densities, and reducing non-native fish species. These recommendations are directly incorporated into the design of the Mid-Swan project, except for non-native fish reductions, which is outside of the scope of this analysis. Design criteria are in place to protect springs and riparian areas, and the other recommendations are distinct actions included in the project.

The Forest Service did not adequately respond to our comments in violation of NEPA and the APA.

The DROD is a violation the Clearwater Act, the ESA and NFMA.

In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Revised Forest Plan departed from Amendment 19's culvert removal requirements and violated the ESA as it relates to bull trout. He also wrote that the Plaintiffs also succeed on their ESA claim that the Forest Service improperly relied on the flawed aspects of the 2017 BiOp.

Road 5206 serves as an example of the lengths the FS is going to preserve road access, even where it has already removed stream-aligned culverts from steep avalanche country, just because it finds that 77% of the Mid-Swan Project landscape needs "restoration" treatments of one sort or other that require road access (FEIS at 29). Take a look at DROD DVD Folder "Lost N 5206,"North Lost Tributary Question.jpg and ourphotos of Road 5206 in Subfolder "North Lost Rd 160604" to see if it looks like this area needs more logging for "restoration" or instead needs all of the rest of the culverts removed to protect the downstream habitats of bull trout and westslope cutthroat!

This is also a clear example of why Judge Molloy found the Forest Plan and its BiOp unlawful for abandoning A19's road "reclamation" standards, which require the removal of all stream-aligned culverts, in favor of"impassable" road standards that do not. Though the Mid-Swan Project FEIS may attempt to make clear that such culverts will be removed from "decommissioned" roads in the MSP, the Forest Plan definition of "decommission" does not require culvert removal (as noted by Judge Molloy).In this regard, the FEIS Response to Public Comments, at C-62 and C-63, provides little comfort in attempting to beef up the definition of a decommissioned road and claiming that leaving "up to 10 existing culverts" in an ISS/ impassable road is "minor implementation flexibility" for where "economic/access needs are greater than the potential risk posed to the aquatic ecosystem." Allowing the retention of risky culverts for economic reasons is not "landscape restoration."

The undoing of true watershed restoration by rebuilding roads and reinstalling culverts creates more damage than any vegetative "restoration" that would be conducted using those roads. This is simply a matter of the FS making money fixing something, then making more money screwing it up, and then making more money by fixing it again -all at taxpayer expense!

Remedy:

Choose the No Action Alternative or write an EIS that fully complies with the law and reconsult with the FWS on this project and the Revised Forest Plan on the effects on bull trout.

Old Growth

We wrote in our comments:

How specifically with the Mid-Swan project Protect, enhance, and restore large trees, old forest structure, lynx

habitat, western white pine and whitebark pine?

We wrote in our comments with Swan View Coalition:

The stands may qualify as old growth and per Forest Plan guidance and design criteria in IGOR we are trying to avoid road construction in old growth. But without these roads we would have few tools available for actively managing this part

of the project area and this would leave these older groups of trees at risk of a stand replacing fire and its within the WUI. Alternative C does not build these roads and does retain this area, but with a high canopy fire risk.

The stands may qualify as old growth and per Forest Plan guidance and design criteria in IGOR we are trying to avoid road construction in old growth. But without these roads we would have few tools available for actively managing this part of the project area and this would leave these older groups of trees at risk of a stand replacing fire and its within the WUI. Alternative C does not build these roads and does retain this area, but with a high canopy fire risk.The Travel Analysis Process is obviously flawed if this proposal to build three more parallel roads across a hillside of old growth in a key "critical habitat" bull trout watershed already damaged by road building and logging even makes it into an action alternative in the DEIS(Jim Creek had 39.1% fine sediment in 2018 and is stillon Montana's list of "impairedwater bodies." See DEIS page 19 and the DEIS comments submitted by FOWS).

Moreover, the roads would be built to facilitate commercial logging in old growth, which has survived wildfire for a very long time to become old growth, as though logging is needed to keep the old growth from being destroyed by wildfire.

The result will be the fragmentation of old growth by roads, a reduction in old growth characteristics by logging, and an increased risk of fire due to thinning and drying of the now-

less-shady old growth forest -which will nonetheless remain susceptible to large stand-replacing fires driven by drought, heat and wind. (See Exhibit A).It is not enough for the Forest Service to state "per Forest Plan guidance and design criteria in IGOR we are trying to avoid road construction in old growth" and then propose to construct roads in old growth.

The inadequacies of the Forest Plan, the Mid-Swan DEIS and its IGOR could not be more clearly described than by this failure of the DEIS and Travel Analysis Process to strike these roads from serious consideration.

The Forest Service responded:

The forest plan for the Flathead National Forest, the guiding document for the Mid-Swan project area, is promoting the same objectives by protecting old growth (FW-STD-TE&V-01), increasing patch sizes of old growth (FW-GDL-TE&V-06) and establishing desired conditions for vegetation composition and structure of forests (FW-DC-TE&V-07, 08, 10, 11, 12). The above standards and guidelines from the forest plan were incorporated into design criteria for the project (FEIS appendix A).

The Forest Service did not adequately respond to our comments and questions and did not demonstrate that the project is in compliance with the old growth standards in the Forest Plan.

Therefore the DROD and FEIS are in violation of NEPA, the Forest Plan, NFMA, and the APA.

There is a lack of vital environmental analysis that stemsdirectly from deficiencies\

Example: Old growth and old-growth habitat are not analyzed because "Indicator Species" that for decades represented man- caused change in old-growth habitat no longer exist in the Forest Plan. Viability of old-growth species is no longer analyzed, even though decades of monitoring created mountains of data which could be used as a baseline to monitor and analyze and disclose ecological impacts to old-growth habitat.

The FEIS states, "Verification of old growth status following Green et al. (2011) would happen during the implementation of this project." Green et al. is a flawed old-growth definition. (Juel, 2021.)And as discussed in our DEIS comments, NEPA is being violated with the FS lacking data[mdash]and therefore leaving the public and decisionmaker uninformed on the presence and extent of old growth.The FEISstates, "Alternative B proposes to reduce the loss of old growth to stand replacing wildfires or insect activity by decreasing tree density, reducing understory fuels, and burning with prescribed fire." Such treatments are not supported by best available science, and would result in damage to old growth, old-growth associated wildlife, and old-growth landscapes. (Juel, 2021.)The FS lacks any established way of maintaining a publicly accessible inventory of old growth, or forest identified as being managed for futureold growth.

Remedy:1. Ultimately, the FNF must amend its forest plan, incorporating the ecological principles of old-growth landscapes discussed in Juel, 2010 and in the Friends of theWild Swan/ Swan View Coalition"Back to the Futureof Old Growth"

alternative submitted for the Amendment 21 Final EIS (seeUSDA Forest Service, 1998).2. Prepare a Supplemental EIS to design and implement the ecological principles of old-growth landscapes discussed in Juel,

2010 and in the Friends of the Wild Swan/Swan View Coalition"Back to the Future of Old Growth" Amendment 21 alternative at the scale of the MSP landscape.3.

Maintain a fully transparent, publicly accessible forest wide inventory of old growth which facilitates complete, independent forest wide mapping of all categories of old growth including existing old growth and forest designated for management to attain old growth status within 200 years.

Please find Old Growth Works Juel Jeff 2021 attached.

Management of Old Growth in the U.S. Northern Rocky Mountains:Debasing the concept and subverting science to plunder national forests. Friends of the Clearwater, October 21, 2021.

USDA Forest Service, 1998.

Forest Plan Amendment 21: Management Direction Related to Old Growth Forests. Final Environmental Impact Statement.

Flathead National Forest, September 1998.

Whitebarked Pine

We wrote in our comments:

Page x of the DEIS states one of the purposes of the project is to: "Protect, enhance, and restore large trees, old forest structure, lynx habitat, western white pine and whitebark pine;"

How specifically with the Mid-Swan project Protect, enhance, and restore large trees, old forest structure, lynx habitat, western white pine and whitebark pine?

The Forest Service responded:

There are native trees in the Inland Northwest that have shown natural resistance to blister rust; the Forest Service uses such identified trees to collect cones and grow the rust resistant seedlings used in restoration efforts. To allow natural selection to slowly increase resistance to white pine blister rustover multiple generations is likely not a viable option for areas with high mortality, such as the Northern Rocky Mountains (see comment response Whitebark Pine and FEIS section 3.2). As for management actions outside of wilderness, approximately 90% of all remaining whitebark pine areas occur in designated or recommended wilderness (FEIS section 3.2). The distribution of suitable whitebark pine restoration

areas is similar. Planting solely outside of wilderness would not solve the continuing mortality of whitebark pine inside wilderness and would be restricted to few suitable sites in the Mid-Swan project area.

Whitebark pine has not declined below the natural historic range of variability and restoration is therefore not "needed" under the Roadless Rule (b)(1)(ii) exemption. Thus, the Roadless Rule (b)(1)(ii) exemption does not apply and therefore does not exempt 844 acres of "whitebark pine restoration" tree-cutting from the Roadless Rule ban on tree- cutting.
Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the presence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting whitebark pine seedlings). White pine blister rust, an introduced disease, has caused rapid mortality of white- bark pine over the last 30 to 60 years.

Please find Keane and Arno (1993) attached. They reported that 42 percent of whitebark pine in western Montana had died in the previous 20 years with 89 percent of remaining trees being infected with blister rust. The ability of whitebark pine to reproduce naturally is strongly affected by blister rust infection;

the rust kills branches in the upper cone bearing crown, effectively ending seed production. \

Montana is currently experiencing a mountain pine beetle epidemic. Mountain pine beetle prefer large, older white-bark pine, which are the major cone producers. In some ar-eas the few remaining whitebark that show the potential for blister rust resistance are being attacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone-bearing trees.

Are whitebark pine seedlings and saplings present in the subalpine forests proposed for burning and logging? In

the absence of fire, this naturally occurring whitebark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies

(Mahalovich et al 2006). Due to the severity of blister rust infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock. Although prescribed burning can be useful to reduce areas of high-density sub- alpine fir and spruce and can create favorable ecological conditions for whitebark pine regeneration and growth, in the absence of sufficient seed source for natural regeneration maintaining the viability and function of whitebark pine would not be achieved through burning. Planting of rust-resistant seedlings would likely not be sufficient to replace whitebark pine lost to fire activities.

Remedy: Choose the No Action alternative or pull the draft decision and write an EIS that follow all laws and requirements in the Forest Plan. Since Whitebark pine are now proposed to be listed under the ESA, you must formally re-consult with the FWS on the impact of the project on whitebark pine. To do this the Forest Service will need to have a complete and recent survey of the entire project area for whitebark pine and consider planting whitebark pine as the best available science by Keene et al. states is the only way to get new whitebark pine to plant them.

The Forest Service response is incorrect that the project area does not contain high elevation stands.

There are whitebark pine stands in the project area.

On December 2, 2020, the U.S. Fish and Wildlife Service issued a rule proposing to list whitebark pine (Pinus albi-caulis) under the Endangered Species Act. The Project area includes whitebark pine. The whitebark pine present in the Project area represents a major source within the larger geographic area.

Hundreds of acres of clearcutting and burning around individual whitebark pine trees are proposed for the Project, including clearings around individual whitebark pines. The Forest Service fails to disclose the incredibly high failure rate of these practices as a technique for natural regeneration of whitebark pine under these conditions.

The Forest Service fails to provide any discussion of the high failure rate of planting seedlings in clearcuts. The Forest Service does not disclose or address the results of its only long- term study on the effects of tree cutting and burning on whitebark pine. This study, named "Restoring Whitebark Pine Ecosystems," included prescribed fire, "thinning", "selection cuttings," and "fuel enhancement cuttings" on multiple different sites.

The results were that "[a]s with all the other study results, there was very little whitebark pine regeneration observed on these plots." See U.S. Forest Service, General Technical Report RMRS-GTR-232 (January 2010). These results directly undermine the representations the Forest Service makes in the Project EIS. More specifically, the Forest Service's own research at RMRS-GTR-232 finds: "the whitebark pine regeneration that was expected to result from this [seed] caching [in new openings] has not yet materialized. Nearly all sites contain very few or no whitebark pine seedlings." Thus, even ten years after cutting and burning, regeneration was "mar-ginal."

Moreover, as the Forest Service notes on its website: "All burn treatments resulted in high mortality in both whitebark pine and subalpine fir (over 40%)." Accordingly, the only proven method of restoration of whitebark pine is planting: "Manual planting of whitebark pine seedlings is required to adequately restore these sites."

We wrote in our comments:

Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area;.

Disclose the amount of big game (moose and elk) hiding cover, winter range, and security during Project implementation;.

Disclose the amount of big game (moose and elk) hiding cover, winter range, and security after implementation;. Disclose the method used to determine big game hiding cover, winter range, and security, and its rate of error as determined by field review;.

Disclose and address the concerns expressed by the ID Team in the draft Five-Year Review of the Forest Plan regarding the failure to monitor population trends of MIS and the failure to compile data to establish a reli able inventory of sensitive species on the Forest.

The Forest Service responded:

The FEIS further discusses overlap between proposed activities and winter range, as well as the effects to big game foraging habitat.

There is no map of the big game winter range in the Mid-Swan Project area, or any information of where remain-

ing thermal cover exists, or where it will be removed with this project. The current condition of thermal cover in this project area is important information to the public, as it demonstrates how the agency is implementing the forest plan.

There are no maps provided of where existing or planned security areas will be in the Mid-Swan project area, in violation of the NEPA. There is also no analysis of how only 15% security (at best) is affecting elk displacement to private lands, given a minimum of 30% security is recommended by the current best science. The agency claims there is no impact of this lack of security based on the current best science (draft EA 99-100). It is not clear how there can be a huge increase in the number of motorized routes in the Mid-Swan Project Area, as well, and still maintain what is the current level of big game security.

Remedy:

Withdraw the draft decision and until site specific prescriptions, new roads are mapped and unit boundaries are firmed up, then write an SEIS and take public comments or choose the No Action Alternative.

Thank you for your time and consideration of our concerns. Sincerely yours,

Mike Garrity

/s/

(Lead Objector) Executive Director

Alliance for the Wild Rockies

P.O. Box 505 Helena, MT 59624

406-459-5936

And for

Sara Johnson

Native Ecosystems Council

P.O. Box 125

Willow Creek, MT 59760