

Draft Decision Notice and Finding of No Significant Impact for the Crystal Cedar Project

USDA Forest Service
Hungry Horse-Glacier View Ranger District
Flathead National Forest
Flathead County, Montana

Introduction

The project area is approximately 27,249 acres in size and is bounded to the south by the community of Columbia Falls and to the west by the Flathead River. This area includes Crystal Creek, Cedar Flats, Spoon Lake, Blankenship Road, and Teakettle Mountain and is located on the Hungry Horse-Glacier View Ranger District.

The purpose of the Crystal Cedar Project is to move the project area towards the desired conditions defined by the 2018 Flathead National Forest Land Management Plan (forest plan). The difference between the existing condition and the desired condition creates a need for management action on the ground. The purposes for the Crystal Cedar project are identified below, which compel the need for action.

- Provide sustainable trail-based recreation opportunities close to local communities that are compatible with other resources.
- Reduce tree densities and fuel loadings within the wildland-urban interface to result in less intense fire behavior near communities and facilitate safe wildland fire operations.
- Improve the diversity and resilience of forest vegetative communities and associated wildlife habitat.
- Provide a mix of forest products to contribute to economic sustainability, providing jobs and income to local economies.

The updated environmental assessment documents the analysis of a proposed action and no-action alternative to meet this need. This draft decision notice identifies the activities I have selected to include in my decision and the rationale for that decision, including the finding of no significant impact that shows that an environmental assessment is the appropriate level of analysis. This document two maps of the selected alternative and two appendices. Appendix A describes the selected alternative and the design features included and appendix B provides responses to public comment received on the June 2019 environmental assessment.

Decision and Rationale for the Decision

Based upon my review of the alternatives, I have decided to implement the selected alternative which includes 3,722 acres of vegetation management and construction of approximately 25 miles of trails on National Forest System lands. A summary of the selected alternative is

displayed in Table 1 and a description of the activities included in the selected alternative is found in appendix A of this draft decision notice. The effects of these activities are described in the Crystal Cedar Updated Environmental Assessment November 2019, with supporting information in the project file.

Table 1. Selected alternative summary of activities

Proposed trail construction	Miles
Nonmotorized trail	24.2
Motorized trail	0.4
Proposed road management	Miles
Temporary roads	6
NFS system road construction	0.9
NFS system road reroute	0.2
NFS system road aquatic organism passage structures	1
Proposed vegetation treatments	Acres
Commercial thin	1,886
Seed tree	458
Shelterwood	32
Clearcut	13
Overstory removal	46
<i>Total proposed commercial treatment</i>	2,435
<i>Estimated sawtimber volume</i>	18,811 CCF (9.4 MMBF)
	Acres
Sapling thin	558
Understory removal	292
Live birch cutting along open roads ^a	280
Prescribed burning (ecosystem burns)	157
<i>Total proposed noncommercial treatment</i>	1,287

a. Acres of live birch cutting along open roads overlap with acres of other types of vegetation treatment

I have decided to implement the selected alternative after consideration of information provided in the environmental assessment and project file; the purpose and need of the project; public comments; and the finding of no significant impact. The selected alternative includes many of the activities included in the proposed action, analyzed in the updated EA, with modifications made due to public comment and resource concerns. I have made the following changes in the selected alternative:

- Units 54 and 109 have been modified to drop riparian areas adjacent to private property.
- Units 119 and 119a will have hand piling of fuels treatments to address landowner concerns about equipment operating during the non-winter season
- Trail 11A was dropped to address concerns about potential effects to a fen and sensitive plant species.

- Units 11, 27, 29, 31, 46a, 81, 82a, 222, and temporary road M were dropped due to feasibility and further field review.

I believe that with these changes, the selected alternative will be the most effective in meeting the purpose and need for the project.

How the selected alternative addresses the purpose and need

As stated in the updated environmental assessment (pp. 5-7), the purpose of the Crystal Cedar project is to move the project area towards the desired conditions defined by the forest plan. The updated environmental assessment identifies the four purposes for the project which compelled the need for action. The purposes of the project and the desired conditions applicable to the project include:

Provide sustainable trail-based recreation opportunities close to local communities that are compatible with other resources.

The forest plan desired conditions relevant to the trails need for this project include:

FW-DC-IFS-08	The Forest's trail system provides a variety of high-quality motorized and non-motorized recreational opportunities during summer and winter. Forest system trails access destinations, provide for loop opportunities that connect to larger trail systems, provide linkages from local communities to the Forest, and are compatible with other resources.
FW-DC-P&C-11	The Forest partners with local groups to develop and maintain a trail system as well as trail infrastructure, where compatible with other resources.
FW-DC-SREC-06	The summer roaded natural recreation opportunity spectrum is managed as natural in appearance with nodes and corridors of development that support higher concentrations of use, user comfort, and social interaction. The road system is well defined and can typically accommodate passenger car travel. Sanitation, potable water, interpretive signing, and other amenities are strategically placed to serve as destination points and/or portals to adjacent backcountry settings. Signing, facilities, bridges, and other infrastructure are constructed of native materials or natural-appearing materials that blend with and complement the surrounding natural setting.
FW-DC-S&E-03	Opportunities connect people, including youth, with the natural and cultural resources across the Forest through recreation and/or employment opportunities.
FW-DC-WL-03	The risk of grizzly bear-human conflicts is reduced by information, education, and design features or criteria for management activities.
MA7-DC-01	Focused recreation areas provide sustainable recreational opportunities and settings that respond to increasing recreation demand. Local communities can readily access these areas for a variety of motorized and nonmotorized experiences.

GA-NF-MA7-Crystal-Cedar-DC-01

Recreational opportunities within the Crystal-Cedar Area provide a diversity of year-round recreational activities that are close to local communities.

GA-NF-MA7-Cedar Flats-OHV-DC-01

The Cedar Flats Off-Highway Vehicle Area provides a system of mechanized and motorized trails for mountain biking and off-highway vehicles on designated routes linking local communities to easily accessed recreation opportunities.

I have decided to include approximately 25 miles of new trail and new trailheads in the selected alternative because it expands the existing system of trails by providing motorized and nonmotorized loop opportunities close to the community of Columbia Falls, to address the increasing demand for recreation opportunities (FW-DC-IFS-08, MA7-DC-01). The selected alternative will improve motorized trail loop opportunities through the addition of 0.4 miles of new OHV trail (GA-NF-MA7-Cedar Flats-OHV-DC-01) and provide approximately 24 miles of new nonmotorized trail to be designed in consideration of wildlife habitat, connectivity, aquatic resources, plant species of conservation concern, and other user groups (FW-DC-IFS-08). These new trails will be constructed and maintained through partnerships (FW-DC-P&C-11) and will provide opportunities to connect community members, including youth, to natural resources (FW-DC-S&E-03, GA-NF-MA7-Crystal-Cedar-DC-01). The project design features that I am including in my decision will reduce the potential for grizzly bear-human conflict by providing information at trailheads, maintaining sight distances, limiting speeds, and avoiding areas of dense vegetation (FS-DC-WI-03). This project does not foreclose opportunities for future projects to address other desired conditions identified in the forest plan. Although I have decided that changes to over-the-snow use in the project area is outside the scope of this project, I believe that the trailheads proposed will provide an opportunity for improved winter access to the Cedar Flats area through partnerships (GA-NF-MA7-Crystal-Cedar-DC-01, FW-DC-P&C-11).

Reduce tree densities and fuel loadings within the wildland-urban interface to result in less intense fire behavior near communities and facilitate safe wildland fire operations.

The forest plan desired conditions relevant to the fuels reduction need for this project include:

- FW-DC-FIRE-02 In areas where wildfires on NFS lands pose a threat to communities and community assets (e.g., power lines, communication towers, developed recreation sites, recreation residences, adjacent private land, and structures), wildland fuel is reduced so the expected fire behavior is reduced.
- FW-DC-TE&V-13 ...Forests at lower densities (i.e., less than 40 percent canopy cover) occur on up to 50 percent of the forested area and are most commonly located in the warm-dry potential vegetation type; on the drier and colder sites within the cool-moist and cold potential vegetation types; and in the wildland-urban interface.
- Forest densities contribute to ecological, social, and economic desired conditions at the stand and landscape scales, including:

- Wildlife habitat, e.g., providing cover and foraging conditions for many species including Canada lynx and flammulated owl, and facilitating tree growth for development of very large trees and future old-growth forest.
- Forest resilience, e.g., reducing competition, improving tree vigor and growth, and reducing forest fuels in areas of the wildland-urban interface.
- Timber productivity on lands suitable for timber production, e.g., maintaining adequate tree growth rates and stocking levels

The 3,722 acres of vegetation management I have included in the selected alternative are focused on reducing forest densities (FW-DC-TE&V-13) and wildland fuel to change fire behavior in the wildland-urban interface and adjacent to private lands (FW-DC-FIRE-02). As is detailed in the updated EA and response to comments, modifying fuel conditions provides the greatest chance in stopping a wildfire start. The modifications I made to units to address public concern, will still allow vegetation treatments to meet the purpose and need for reducing fuel loading.

Improve the diversity and resilience of forest vegetative communities and associated wildlife habitat.

FW-DC-RMZ-06	Cover conditions in riparian management zones contribute to habitat connectivity for a variety of wildlife species (e.g., Canada lynx, grizzly bear, marten, and fisher).
FW-DC-TE&V-01	Within the NCDE primary conservation area, the amount, type, and distribution of vegetation provides for the ecological, social, and economic sustainability of NFS lands while also providing habitat components that contribute to sustaining the recovery of the grizzly bear population in the NCDE. See also FW-DC-WL-02.
FW-DC-TE&V-02	Within the NCDE primary conservation area, there is a mosaic of successional stages to provide for grizzly bear habitat needs over the long term.
FW-DC-TE&V-07	The Forest has a diversity of native tree species, with most stands composed of more than one tree species...(see forest plan pp.26-27 for more information on desired conditions for coniferous forests).
FW-DC-TE&V-08	Presence of tree species within each potential vegetation type meets or trends towards desired conditions, as described in table 4....(see forest plan pp.27-29 for more information on desired conditions for potential vegetation types).
FW-DC-TE&V-09	Non-coniferous vegetation types are present across the Forest and meet the characteristics described in table 5. These communities provide habitat for associated wildlife species...(see forest plan pp. 29-30 for description of the hardwood and shrub communities desired conditions).
FW-DC-TE&V-10	A diversity of forest size classes occurs across the Forest. Desired conditions forestwide for forest size class proportions are described in table 6 (forest plan p.30). Forest size class amount and distribution

fluctuate over time and space as forests develop through natural succession and/or change in response to disturbances and may be limited by site productivity, species composition, and forest density.

- FW-DC-TE&V-11 A diversity of forest size classes occurs within each potential vegetation type. The desired range forestwide is described in table 7 (forest plan p.31). Forest size classes fluctuate over time and space as forests develop through natural succession and change in response to disturbances. These desired conditions, in combination with those described for composition, pattern, and other vegetation components in this plan, create habitat that supports a wide variety of wildlife associated with forests in the potential vegetation type.
- FW-DC-TE&V-12 Very large live trees (greater than 20 inches d.b.h.) are present not only in the very large forest size class (see FW-DC-TE&V-10 and 11) but are also distributed throughout other forest size classes across the matrix of Forest lands, including areas where timber harvest activities occur....
- FW-DC-TE&V-15 Desired conditions for snag densities across the Forest are displayed in table 10 (see forest plan p.34). At the landscape scale, snag presence, distribution, density, size, and species are highly variable both spatially and over time. Individual stands or sites may have no snags in these size categories or a much higher number of snags per acre, depending upon the unique conditions and disturbance history...
- FW-DC-TE&V-16 Snags contribute to cavity habitat distribution in managed areas of the Forest in the short and long term. Snags or decaying and broken-topped live trees greater than 20 inches d.b.h. are present, predominantly ponderosa pine or western larch (which have the greater longevity and value as snags), providing habitat for primary cavity nesters (a variety of woodpecker species), secondary cavity-nesters (such as flammulated owls), and mammals (such as marten and fisher). These and other snags greater than 15 inches d.b.h. are also available for boreal owls, chickadees, bluebirds, and numerous other species associated with tree cavities.
- FW-DC-TE&V-17 Downed wood, especially the larger material (9 inches or larger in diameter), is present across the matrix of forested lands, contributing to forest structural diversity, soil ecological function, and habitat for wildlife species associated with downed wood for feeding, denning, resting, and cover such as pollinators, Canada lynx, grizzly bears, pileated woodpeckers, marten, and fisher. The desired condition for downed wood is displayed in table 11 (see forest plan p.34), which is expressed as a forestwide minimum average amount across all forested acres within each potential vegetation type...
- FW-DC-TE&V-19 Forest patterns contribute to connectivity of habitat for wildlife (e.g., Canada lynx, marten), movement within and between home ranges, and dispersal between populations. Desired conditions related to forest

patterns across the landscape and within potential vegetation types are described below (see forest plan p.35-39).

- FW-DC-WL-01 Within the NCDE primary conservation area and zone 1 (including the Salish demographic connectivity area; see figure B-10), bear attractants on NFS lands are stored in a manner that reduces the risk of grizzly bear-human conflicts in the NCDE.
- FW-DC-WL-02 Within the NCDE primary conservation area and zone 1 (including the Salish demographic connectivity area), grizzly bear habitat on NFS lands contributes to sustaining recovery of the grizzly bear population in the NCDE and contributes to connectivity with neighboring grizzly bear recovery zones.
- FW-DC-WL DIV-01 Ecological conditions provide for wildlife diversity (including species of conservation concern¹⁵) and wildlife habitat connectivity (including seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long-distance range shifts of species). For desired conditions for select wildlife species, see table 14 (see forest plan p.46-48).
- GA-NF-DC-06 The Haskill Basin connectivity area (see figure B-30) provides habitat connectivity for wide-ranging wildlife species (e.g., grizzly bear, Canada lynx, wolverine) moving north-south between the Swan Range and the Whitefish Range.

The vegetation treatments that I have included in the project area will move stands towards the desired conditions for terrestrial ecosystems and vegetation as described in the updated EA (pp. 21-39). This includes activities that will increase the percent of western larch and western white pine in the project area (FW-DC-TE&V-07, FW-DC-TE&V-08) and increase the percent of the project area with large and very large forest size classes (FW-DC-TE&V-10, FW-DC-TE&V-11, FW-DC-TE&V-12). These treatments will reduce forest densities to improve tree growth and improve fuels conditions in the wildland-urban interface (FW-DC-TE&V-13). The selected alternative includes vegetation treatments within the outer riparian management zone to promote the growth of large trees and increase the diversity of forest age classes, species composition, and forest density. Following treatment, riparian management zones will contribute to habitat connectivity for wildlife (FW-DC-RMZ-06) and will contribute to habitat connectivity within the Haskill Basin connectivity area (GA-NF-DC-06). The vegetation treatments will allow the landscape to develop a mosaic of successional states and maintain the habitat components that provide for grizzly bear habitat needs and contribute to recovery (FW-DC-TE&V-01, FW-DC-TE&V-02). The project design features that are included in my decision (appendix A) will retain and improve the densities of snags in the project area (FW-DC-TE&V-15, FW-DC-TE&V-16) and provide downed wood forest structural diversity, soil ecological function, and habitat for wildlife (FW-DC-TE&V-17). The project design features will also ensure that the landscape continues to provide for ecological conditions for wildlife diversity and habitat connectivity (FW-DC-WL DIV-01).

Provide a mix of forest products to contribute to economic sustainability, providing jobs and income to local economies.

- FW-DC-TIMB-01 Production of timber and timber harvest contributes to ecological sustainability and contributes to the achievement of vegetation desired conditions (such as species composition, size class, forest density, vegetation diversity, landscape pattern, and forest resilience to disturbances).
- FW-DC-TIMB-02 Production of timber and timber harvest contribute to economic sustainability, providing jobs and income to local economies. A mix of timber products (including both sawtimber and nonsawtimber) is offered under a variety of contract methods in response to market demand.
- FW-DC-TIMB-07 Although natural disturbances (for example, wildfire, insects, and disease) occur on lands suitable for timber production, active management of these lands results in conditions that are resilient and/or resistant to such disturbances, with less potential loss of timber to natural disturbances compared to lands designated unsuitable for timber production.
- FW-DC-OFP-03 Vegetation management activities augment the firewood program, providing opportunities for collecting firewood.

The 2,435 acres of commercial harvest that my decision authorizes will provide a mix of timber products which contribute to the achievement of vegetative desired conditions (FW-DC-TIMB-01). Although I am not authorizing selected activities based on economic value alone, my decision will contribute to the economic sustainability of local economies (FW-DC-TIMB-02).

As documented in the finding of no significant impact, I determined the proposed action will not have a significant effect on the quality of the human environment. Therefore, preparation of an environmental impact statement is not required. The finding of no significant impact also documents how my decision is consistent with all applicable law, regulations, and agency policies, including how the proposed action is consistent with the forest plan, in accordance with the National Forest Management Act. Following a final decision, timber harvest and associated activities could take approximately five years to implement and prescribed burning and trail work could take up to ten years to implement.

Other Alternatives Considered

In addition to the proposed action, I considered an alternative to change over-snow use in the project area; an alternative to add more trails; and the no-action alternative.

Throughout the project development and environmental analysis process, we received public comments requesting a range of winter recreation opportunities be included in the Crystal Cedar Environmental Assessment. Those opportunities included a new snowmobile route, groomed fat bike trail, and groomed Nordic trails. In response to the Crystal Cedar EA, we received comments regarding groomed Nordic ski trails, including a map that identified potential trails within the Cedar Flats area (see appendix B. Response to comments and project file exhibit F-27). This proposed network overlaps an area where over-the-snow vehicle use is allowed (project file exhibit M-1). Establishing groomed Nordic trails here would necessitate closing the area to

snowmobiles. I also received comments from members of the public who enjoy the area under current winter management and want these roads and trails to remain ungroomed in the winter. After considering all these comments, I determined that changes to over-snow management was outside the scope of the Crystal Cedar Project and would not be analyzed in detail in the environmental analysis. Given that individuals and organizations have recently expressed interest in developing additional groomed Nordic skiing in other places on the forest besides the Crystal Cedar planning area, the forest welcomes a larger discussion about changes to over-the-snow use and looks forward to working with the Nordic ski community and other interested parties as part of this discussion. My decision will create infrastructure to provide improved winter parking opportunities at the 10815 trailhead, if a partner group is interested in maintaining winter access for the public.

We also received public comments requesting additional trails, mountain bike-specific trails, and a trail to the top of Teakettle Mountain. I considered these comments and decided that a downhill-specific trail would not meet the focus on trails for a wide variety of users and a trail to the top of Teakettle Mountain was located outside of management area 7 lands and would not be fully analyzed as an alternative to the proposed action.

The interdisciplinary team analyzed the no-action alternative. The no-action alternative assumes that no implementation of any elements of the proposed action would take place within the Crystal Cedar project area. This alternative would not respond to the purpose and need for action or concerns identified during scoping for this project. There would be no effort to make progress towards the desired condition for recreation opportunities near Columbia Falls. Fuels reductions would not occur to meet the desired conditions for less intense wildfire behavior and safe wildland firefighting operation. Vegetation management to move towards the desired condition for forest composition would not occur. Ongoing activities, such as recreation, public firewood gathering, fire suppression, and normal road maintenance would continue in this alternative. Ongoing processes, such as the spread of invasive species, and fire would continue to impact the project area over time. The no-action alternative serves as a point of comparison between the existing condition and the potential effects of the proposed action.

Public Involvement and Scoping

The project has been listed on the Forest Service Schedule of Proposed Actions since January 2018.

In July 2017, the Cedar Flats Trail Group, a committee of the Gateway to Glacier Trail organization, submitted a draft proposal to establish a trail network for a wide variety of users north of Columbia Falls. Their proposal encompassed input from a variety of users in the community, nongovernmental organizations, and City of Columbia Falls leadership.

The ranger district asked the public for input on management activities in November 2017 when we sent out approximately 700 letters to landowners located within one-half of a mile of the project area and 100 emails to individuals and organizations who said they were interested in the project. We met with individuals and organizations who had questions about the project or wanted to share information about management on National Forest System lands. We received 72 written responses to this request for information.

Considering the trails proposal from the Gateway to Glacier Trail organization and input received from the public, we drafted a proposed action. On October 15, 2018, we sent letters announcing

the release of the proposed action to approximately 270 individuals and landowners within one-tenth of a mile of proposed management activities within the project area. Emails were sent to 238 individuals and organizations. Approximately 140 individuals and organizations provided comments on the proposed action.

A public open house to provide additional information and answer questions about the project was held on October 30, 2018. Over 100 individuals attended the open house. Following the open house, various landowners, communities, and homeowners associations requested follow-up meetings with the district. We met with landowners interested in discussing access and management around their property and user groups asking for additional recreational opportunities within the Crystal Cedar project area.

Using the comments from the public, other agencies, and organizations, the interdisciplinary team identified several issues regarding the effects of the proposed action. Main issues of concern include that potential that trails could facilitate trespass onto private property and potential effects of units 119 and 119a. In addition, public comments expressed desire for additional acres of vegetation treatment near private land to reduce fuel loading; interest in building accessible trails for handcycles; and modification of trail locations to improve user experience (see the updated environmental assessment pp. 8-9 for how the interdisciplinary team addressed these issues).

Some public comments were considered but not analyzed in detail, including changes to over-snow use and the addition of more trails. My rationale for not analyzing these alternatives in detail is expressed on pp. 9-10 of the updated environmental assessment and is addressed elsewhere in the draft decision notice.

On June 5, 2019, we released the Crystal Cedar Environmental Assessment and initiated a 30-day comment period. See appendix B of this draft decision notice for response to comments received on the June 2019 environmental assessment. We received approximately 150 comments on the environmental assessment and made site visits to the project area to discuss site specific activities with members of the public. We heard both support for the project and concerns about the potential effects of proposed activities. We have responded to specific written comments in appendix B of this decision notice.

Finding of No Significant Impact

The following is a summary of the project analyses to determine significance, as defined by the Council on Environmental Quality regulations (40 CFR 1508.27) and Forest Service Handbook 1909.15_05. The significance of environmental impacts must be considered in terms of context and intensity. The significance of an action must be analyzed in the context of effects occurring on a local, regional, or global scale and the affected interests. Intensity refers to the severity of degree of impact.

Context

For the proposed action and no-action alternative, the context of the environmental effects is based on the environmental analysis in the environmental assessment.

Context means that the significance of an action must be analyzed in several contexts (i.e. local regional, worldwide), and over short and long time frames. For site-specific actions, significance

usually depends upon the effects in the local rather than in the world as a whole. Both short- and long-term effects are relevant (40 CFR 1508.27).

The effects of the selected alternative are limited in context. These activities occur within a project area 27, 249 acres in size and are limited in duration. The project includes 3,722 acres of vegetation management and construction of approximately 25 miles of trails on National Forest System lands. Effects are local in nature and significant impacts to regional or national resources are not likely.

On the Flathead National Forest, elsewhere across the Northern Region, and the National Forest System as a whole, similar projects occurred to address similar purposes. In this regard, this project will be a continuation of on-going efforts. Short-term adverse effects will be avoided as much as possible through implementation of the standards and guidelines in the forest plan, best management practices, and the project-specific design features (appendix A of the updated environmental assessment and appendix A of this draft decision notice.).

The design features minimize and avoid adverse impacts to the extent that such impacts are almost undetectable and immeasurable, even at the local level. Design features for the Crystal Cedar Project include, but are not limited to the following:

- Timing limitations on in-stream activities to protect westslope cutthroat trout;
- Rehabilitation of all temporary roads following project activities;
- Protection of plant species of conservation concern during project implementation;
- Required cleaning of equipment and reseeding of disturbed areas with native seed mix to reduce the spread of non-native invasive plant species;
- Retention of prescribed types of snags, recruitment snags and downed wood to protect wildlife habitat components and soil productivity;
- Retention of full-crowned trees in the overstory of select vegetation treatment units to provide snow intercept cover within elk or mule deer winter range;
- Restrictions on new openings in riparian management zones to provide wildlife habitat structural diversity, connectivity, and cover;
- Restriction on activities during spring time period for grizzly bears; and
- Restrictions on equipment and timing within some vegetation treatment units to minimize potential detrimental soil disturbance.
- Requirements for trail design and information posted at trailheads to reduce potential for bear-human conflict.

All of the project design features can be found in appendix A. details of the selected alternative in this draft decision notice and appendix A of the updated environmental assessment.

Intensity

Intensity is a measure of the severity, extent, or quantity of effects, and is based on information from the effects analysis of the environmental assessment and the references in the project record. The effects of this project have been considered with an analysis that is responsive to concerns and issues raised by the public. The agency has taken a hard look at the environmental effects using relevant scientific information and knowledge of site-specific conditions gained from field

visits. My finding of no significant impact is based on the context of the project and intensity of effects using the ten factors identified in 40 CFR 1508.27(b).

1) Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on the balance the effects will be beneficial.

Adverse and beneficial impacts were assessed and were not found to be significant. The analysis considered the direct and indirect effects of the proposed action, as well as the cumulative effect of past, ongoing, and reasonably foreseeable activities (see appendix B of the environmental assessment). The specific direct, indirect, and cumulative effects of the proposed action are not significant and this action does not rely on beneficial effects to override any adverse environmental effects. Adverse and beneficial impacts, as documented in the updated environmental assessment, include:

“Implementation of the proposed action would improve the diversity and resilience of forest vegetative communities and associated wildlife habitat. Treatments will also reduce forest density, contributing to the fuels reduction objective of the project” (p. 21).

“Through planting and natural regeneration of regeneration harvest units, species composition will be improved and diversified. Intermediate treatments will also contribute to improved species composition through preferred leave tree selection” (p. 21).

“Existing lynx feeding habitat would not be affected by vegetation management included in the proposed action... Proposed vegetation treatment would convert 153 acres of ‘other’ habitat (potential denning habitat) to the early stand initiation structural stage. The proposed action would retain a mosaic of forest habitats for lynx to travel and forage throughout lynx habitat in the Teakettle LAU” (p. 39).

“There would be temporary changes to access conditions during implementation of proposed activities, including a 9 percent increase in open motorized route density (OMRD) and a 2 percent increase in total motorized route density (TMRD), if all roads were being used to implement activities at the same time. Access conditions would be restored to pre-project levels within one year after completion of the project in order to reduce the duration of grizzly bear displacement or disturbance (FW-GDL-IFS-01). The proposed action would retain a mosaic of forest habitats for grizzly bears to travel and forage throughout the subunit” (p. 51).

“Recreational improvements are proposed in areas known to receive seasonal use by bears due to high quality forage, therefore the likelihood of a human-bear conflict is moderate” (p. 51).

“Implementation of the proposed action (or no-action alternative) either individually or cumulatively would not alter the current finding for watershed condition framework (class 1-functioning properly), would not impair water quality beneficial uses, and has no effect on listed or proposed threatened and endangered species or their habitats” (pp. 70-71).

“Increased sediment delivery associated with AOP replacement, new road construction, increased traffic levels during haul, and BMP application are anticipated to be short term (less than 3 years)” (p. 79).

“Water quality reductions or measurable increases in sediment delivery, and associated nutrients, would not reach the Flathead River system due to the spatial distribution of potential sediment sources, scale of predicted sediment delivery, and local hydro-

geologic setting (e.g. hydrologic sinks, high permeability surface geology, discontinuous nature of surface water features)” (p. 79).

“The wetland/riparian habitat group would have short-term impacts from ground disturbing activities in the RMZs until vegetation recovers. Road construction, reconstruction, and maintenance have the potential of weed introduction and spread into the wetland/riparian habitat group” (p. 80).

“The proposed action would have a limited risk of introducing new weed species into the project area. However, it would have a high risk of spread throughout the project area due to the number of existing weed infestations in the project area, the amount of potential soil disturbance, the existing roads, the proposed recreation, the amount of private land, the timing of activities, and the use of equipment in those areas moving from site to site without cleaning between sites” (p. 86).

“Soil function and long-term productivity would be maintained by minimizing cumulative detrimental soil conditions in proposed activity areas” (p. 96).

“The new nonmotorized trail system would provide additional and easier access for hunters and berry pickers. As use patterns change in the area to include additional trails development and trailheads, these developments may also indirectly affect forest users such as hunters and berry pickers if recreational use of the area increases along trails. These effects to dispersed use are consistent with the roaded natural summer ROS settings for both focused recreation areas, which supports dispersed recreational experiences with higher concentrations of use, user comfort, and social interactions.” (p.111)

Appendix A of the updated environmental assessment and this draft decision notice include design features that were developed by the interdisciplinary team to address public concerns and avoid or reduce potential environmental impacts.

2) The degree to which the proposed action affects public health or safety.

The proposed action is not expected to significantly affect public health or safety. The project provides for public health and safety in various ways, including but not limited to:

- The Flathead National Forest participates in the Montana/Idaho Airshed Group, which regulates prescribed burns within the state of Montana (project file exhibit J-4).
- Vegetation treatments are designed to result in less intense fire behavior in the project area where there are numerous residences and forest visitors. This will also facilitate safe wildland fire operations in the event of a wildland fire event (see the effects to fire and fuels section of the updated environmental assessment).
- To protect the safety of the public using the area, contractors will be required to post signs warning the public of activities and traffic associated with the treatments (appendix A. details of the selected alternative).
- Use of herbicides for the treatment of invasive plants would be consistent with label directions and with the strategy outlined in the Noxious and Invasive Weed Control Environmental Assessment and Finding of No Significant Impact (USDA 2001).
- Project activities may result in a short-term increase in sediment delivery but are not anticipated to be measurable beyond the reach scale and surface diversion for private water

rights do not exist within the affected downstream zone (appendix B. response to comments – Aquatics).

- Project design features require that trails should be constructed to limit the risk of bear-human conflict by avoiding areas of dense vegetation, such as that found in riparian habitat, maintaining sight distances, and limiting speed of travel. In addition, information on how to avoid and respond to bear-human encounters should be posted at trailheads (updated EA, p.134 and draft DN, p.52).

I believe that my decision protects public health and safety through project design and design features (appendix A. Details of the selected alternative).

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The project area does not include parklands or prime farmlands.

There are four vegetation management units (units 121, 123, 130, and 131) within the North Fork and Middle Fork Flathead River recreation river segments. Management activities will have no effect to the outstandingly remarkable values identified for these segments of river (project file exhibit M-6).

Cultural resources having scientific, cultural, or social values would be preserved and protected for their cultural importance and sites identified under the National Historic Preservation Act would be inventoried, protected, and, if warranted, nominated to the National Register of Historic Places (FW-STD-CR-01). All proposed ground disturbing activities can pose a potential threat to cultural resources. However, with the implementation of design features, the proposed action will result in no negative impacts to cultural resource values (see appendix A of the updated environmental assessment for design features, p. 117 of the environmental assessment for a summary of the cultural resources analysis, and project file exhibit N-4 for an expanded analysis of effects to cultural resources).

Vegetation treatments within portions of riparian management zones will occur to promote growth of large trees and increase the diversity of forest age classes, species composition, and forest density. Only hand removal of vegetation will occur within the mapped inner RMZ (FW-STD-RMZ-06) and no treatment would occur within fen RMZs. The forest plan FEIS analysis and modeling incorporated treatments in RMZs. Complying with plan components related to treatments will protect values and maintain habitat conditions for associated plant, animal, and aquatic species. Vegetation treatments proposed in RMZs would not have measurable effects to sediment delivery (project file exhibit L-16 and updated EA p.79).

The updated environmental assessment displays the effects to resources and different habitat types found in the project area. This analysis determines that the activities included in the selected alternative would not have significant effects to habitats used by threatened species such as Canada lynx or grizzly bears. Activities will maintain habitat connectivity through the project area for species like wolverines, Canada lynx, and grizzly bears. Project design features maintain winter range components for forest ungulates and important habitat components for other wildlife and plant species. I find that the selected alternative will not significantly effect ecologically critical areas.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The term “controversial” in this context refers to cases where substantial scientific dispute exists as to the size, nature, or effects of a major Federal action on some human environmental factor, rather than to public opposition of a proposed action or alternative.

Recently, there has been public debate about recreation, specifically use of mountain bikes, in grizzly bear country. Some of the trails are proposed in areas known to receive seasonal use by bears due to high quality forage. The potential for a human-bear conflict may increase, particularly along trails that pass through huckleberry patches or riparian habitats or that cross loud streams. However, project design features maintain consistency with FW-GDL-IFS-015 to decrease the potential for human-bear conflict.

Based on the limited context of the project and my review of the environmental assessment and project file, I do not find any highly controversial effects to the human environment.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Based on my review of public comments and the analysis documented in the environmental assessment and project file, I find the possible effects on the human environment that are uncertain or involve unique or unknown risks are minimal or non-existent.

The Crystal Cedar Project is similar to other projects conducted across the Flathead National Forest. Analysis of this project considered the effects of past projects as a frame of reference in conjunction with scientifically accepted analytical techniques, available information and best professional experience and judgement to estimate effects to the human environment.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Crystal Cedar Project represents a site-specific project that does not set precedence for future actions or present a decision in principle about future considerations. Any proposed future project must be evaluated on its own merits and effects. Management actions are compatible with the forest plan and the capabilities of the land, and are not expected to set precedent for future actions.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The cumulative effects of past, ongoing, and reasonably foreseeable activities were considered and are summarized in each resource section. In order to have cumulative effects, the effects of activities must overlap in space and time; therefore, each resource may have a different set of past, present, and reasonably foreseeable actions associated with it. Appendix B of the updated environmental assessment provides a summary of the actions considered in the cumulative effects analyses for the Crystal Cedar Project. Each action was evaluated by the appropriate resource specialist to determine whether it would have a cumulative impact on the resource (see cumulative effects worksheets by resource area in the project file and each resource section’s cumulative effects analysis in the environmental assessment).

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant cultural or historical resources.

With the implementation of design features, the proposed action will result in no negative impacts to cultural resource values (see appendix A of this draft decision notice and the updated environmental assessment for design features, p. 117 of the environmental assessment for a summary of the cultural resources analysis, and project file exhibit N-4 for an expanded analysis of effects to cultural resources). A field inventory was completed for the project and a recommendation was made to the state historic preservation office that “no historic properties are affected”. The Section 106 process of the National historic Preservation Act of 1966 will be completed prior to the expenditure of federal funds to implement the proposed action.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act.

There are no documented occurrences for water howellia or Spalding’s catchfly on the Glacier View Ranger District in either the Montana Natural Heritage Program (MNHP) rare plants database or the NRM database.

Canada lynx and critical habitat

The biological assessment prepared for the Crystal Cedar project found that there would be a may affect-not likely to adversely affect determination for both Canada lynx and Canada lynx critical habitat. This determination was made because project activities would temporarily decrease lynx denning habitat by 153 acres and 355 acres of “other” lynx habitat would be affected by vegetation management activities. Landscape-level travel connections would be maintained and a mosaic of stand conditions would persist to allow for lynx travel corridors within the project LAU. The USFWS service found that “once those acres begin to regenerate, we expect snowshoe hare habitat to increase, and thus increase lynx foraging opportunities.” They concluded that the overall effects to Canada lynx and Canada lynx critical habitat as a result of the implementation of the Crystal Cedar project would be insignificant and discountable (project file exhibit G-13).

Grizzly bears

The biological assessment prepared for the Crystal Cedar project found that there would be a may affect-likely to adversely affect determination for grizzly bears. This determination was made because motorized access parameters would be temporarily affected by project activities in the Cedar Teakettle subunit, which does not currently meet research benchmarks. The proposed activities would temporarily reduce hiding cover, but cover would remain well distributed for travel and security during and after project implementation. The USFWS found that “other than existing access conditions, no activities under the proposed action are likely to adversely affect grizzly bears” (project file exhibit G-13). They also state that the adverse effects related to the baseline condition were adequately analyzed in the biological opinion for the 2018 Forest Plan (project file exhibit R-7) and that the proposed activities conform to the incidental take statement in that opinion.

Wolverine

In 2014, USFS Region 1 prepared a programmatic Biological Assessment for wolverine for a variety of projects routinely conducted on NFS lands (project file exhibit G-14) such as timber harvest, mechanical equipment use, roads and road maintenance, silvicultural activities, recreation management, forest products, prescribed fire, weed control, and administrative uses proposed in the Crystal Cedar project. The US Fish and Wildlife Service concurred with this finding and in 2016 determined that this concurrence was still valid (project file exhibit G-14). In 2017, the US Fish and Wildlife Service also concurred with the conclusion of no-jeopardy for the Flathead National Forest's Forest Plan due to plan components that maintain, improve, and restore ecological conditions within the plan area to contribute to conservation of the wolverine by reducing the risk of future threats, including consideration of potential future changes in climate. See the FEIS for the 2018 Forest Plan (Volume 2 pp. 250-262), its Biological Assessment (project file exhibit R-6), the concurrence with "no jeopardy" in its Biological Opinion (project file exhibit R-7), and the ROD for the Forest Plan (USDA Forest Service 2018a, pp. 41 and 54).

A consultation summary was prepared for wolverine to determine that the activities proposed in the Crystal Cedar project would not result in jeopardy for this proposed species (project file exhibit G-31).

Bull trout and bull trout critical habitat

Because measurable effects to water quality, aquatic habitat, and channel morphology are not anticipated in designated bull trout critical habitat in the Flathead River, and bull trout are not present in affected stream reaches, effects to the species or their habitat are not anticipated (p. 79, project file exhibit L-15).

I have found that while the activities included in my decision will affect some threatened species, the degree of these effects are not significant and are temporary in nature.

10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The proposed action is consistent with all applicable federal, state, and local laws or requirements imposed for the protection of the environment. Applicable laws and regulations are considered in the environmental assessment and compliance is described in the *Findings Required by Other Laws and Regulations* section of this draft decision notice.

Conclusion

After considering the environmental effects described in the updated environmental assessment, I have determined that the proposed action will not have significant effects on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared.

Findings Required by Other Laws and Regulations

National Forest Management Act (NFMA)

Consistency with Forest Plan Desired Conditions and Objectives

NFMA requires the development, maintenance, amendment, and revision of land management plans (forest plans) for each unit of the National Forest System. These plans provide for multiple use and sustained yield of renewable resources in accordance with the Multiple Use Sustained Yield Act of 1960 and include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. Subject to valid existing rights, all project and activities authorized by the Forest Service after approval of the forest plan must be consistent with the applicable plan components (16 USC 1604).

On April 9, 2012, the Department of Agriculture issued a final planning rule for National Forest System land management planning (2012 Planning Rule) [77 FR 68 [21162-21276]]. Except for the plan consistency requirements in 36 CFR 219.15, none of the requirements of the 2012 Planning Rule apply to projects or activities (36 CFR 219.2(c)). On December 24, 2018, the Forest Supervisor signed the record of decision for the Flathead National Forest's revised forest plan utilizing the 2012 Planning Rule regulations. This plan became effective 30 days later and per the record of decision, all project or activity approval documents after the effective date must describe how the project or activity is consistent with the Forest Plan by the criteria listed at 36 CFR 219.15(d). Page 3 of the 2018 Forest Plan provides additional direction for project and activity plan component consistency.

The 2018 Forest Plan establishes management direction for the Flathead National Forest. This management direction is achieved through the establishment of Forest-wide desired conditions, objectives, standards, and guidelines. Additional desired conditions and accompanying standards and guidelines have been established for specific management areas (MAs) and geographic areas (GAs) across the Forest. Project implementation consistent with this direction is the process in which desired conditions described by the Forest Plan are achieved. The following sections show how my decision meets the requirements at 16 USC 1604.

Desired Conditions and Objectives

The Crystal Cedar project contributes to making progress in achieving the following forest plan desired conditions and contributes to meeting several Forest Plan objectives. No part of the Crystal Cedar project forecloses the opportunity to achieve any other forest plan desired conditions or objectives over the long term.

Recreation: FW-DC-IFS-08, FW-DC-P&C-11, FW-DC-SREC-06, FW-DC-S&E-03, FW-DC-WL-03, MA7-DC-01, GA-NF-MA7-Crystal-Cedar-DC-01, GA-NF-MA7-Cedar Flats-OHV-DC-01

Fire and Fuels: FW-DC-FIRE-02

Terrestrial ecosystems and vegetation: FW-DC-RMZ-06, FW-DC-TE&V-01, FW-DC-TE&V-02, FW-DC-TE&V-07, FW-DC-TE&V-08, FW-DC-TE&V-09, FW-DC-TE&V-10, FW-DC-TE&V-11, FW-DC-TE&V-12, FW-DC-TE&V-13, FW-DC-TE&V-15, FW-DC-TE&V-16, FW-DC-TE&V-17, FW-DC-TE&V-19

Wildlife: FW-DC-WL-01, FW-DC-WL-02, FW-DC-WL DIV-01, GA-NF-DC-06

Timber: FW-DC-TIMB-01, FW-DC-TIMB-02, FW-DC-TIMB-07, FW-DC-OFB-03

These desired conditions are discussed in the purpose and need section of the updated environmental assessment and in the decision rationale section of this draft decision notice. The Crystal Cedar project will contribute to the following forest plan objectives:

GA-NF-OBJ-02: Complete one to three trails that provide for mountain bike opportunities in the Whitefish Range vicinity.

My decision approves approximately 24 miles of trails open to mountain biking in the Whitefish Range. See appendix A. details of the selected alternative and Map 2 Crystal Cedar Selected Alternative for details and maps of the proposed trails and their managed uses.

FW-OBJ-TE&V-01: Vegetation management treatments (e.g., timber harvest, planned ignitions, thinning, planting) occur on 62,000 to 174,000 acres of the Forest to maintain or move towards achieving desired conditions for coniferous forest types and associated wildlife species, and for other resources.

Vegetation management treatments in this decision would contribute towards achievement of this objective. The vegetation management treatments are designed to work towards obtaining desired conditions for terrestrial ecosystems and vegetation listed above in the decision rationale. All 3,722 acres of vegetation treatments would contribute to this objective.

FW-OBJ-FIRE-01: Move towards or maintain the desired conditions for fuel management by treatment (such as mechanical or prescribed fire) of forest vegetation on approximately 50,000 to 75,000 acres, utilizing all available management opportunities that contribute to reducing fire impacts to private property and NFS infrastructure, with an emphasis on the wildland-urban interface.

Vegetation management treatments in this decision would contribute towards achievement of this objective. Reducing fire impacts to private land was considered during the design of all of the vegetation management treatments. Of the 3,722 acres of vegetation treatments, approximately all but 44 acres would occur in the WUI (see Map 1 Crystal Cedar Selected Alternative) however, all treatments will reduce fire impacts.

Consistency with Forest Plan Standards, Guidelines, and Suitability

The project file includes a complete evaluation of forest wide, management area, and geographic area standards and guidelines by resource. All activities associated with the Crystal Cedar project are consistent with the Forest Plan (project file exhibit r-1). The Crystal Cedar project complies with all applicable standards and is designed to meet the purpose of all relevant guidelines. Below we have highlighted a few standards and guidelines that were related to public comment received.

Standards

FW-STD-RMZ-01

The entire width of the riparian management zones shall be delineated as follows.

Category 1 Fish-bearing streams: Riparian management zones consist of the stream and the area on both sides of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet total, which includes both sides of the stream channel), whichever is greatest.

Category 2 Permanently flowing non-fish-bearing streams: Riparian management zones consist of the stream and the area on both sides of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet total, which includes both sides of the stream channel), whichever is greatest.

Category 3 Seasonally flowing or intermittent streams and lands identified as potentially unstable or landslide prone: This category includes features with high variability in size and site-specific characteristics. At a minimum, the riparian management zone must include (1) the intermittent stream channel and the area to the top of the inner gorge; (2) the intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation; (3) the area from the edges of the stream channel, wetland, or landslide-prone terrain to a distance equal to the height of one site-potential tree or 100 feet slope distance (200 feet total, which includes both sides of the stream channel), whichever is greatest; or (4) the extent of unstable and potentially unstable areas (including earthflows).

Category 4a Ponds, lakes, reservoirs, and wetlands greater than 0.5 acre and all sizes of howellia ponds and fens/peatlands: Riparian management zones consist of the body of water or wetland and the area to the outer edges of the riparian vegetation; or to the extent of the seasonally saturated soil; or to the distance of the height of one site-potential tree; or 300 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond, or lake—whichever is greatest. For management direction related to water howellia, refer to the following plan components: FW-DC-PLANT-01 and 02, FW-GDL-PLANT-01, 02, and 03, FW-DC-NNIP-01, MA3b-Special Area-DC-04, and GA-SV-DC-01 and 02.

Category 4b Ponds, lakes, reservoirs, and wetlands less than 0.5 acre (except howellia ponds and fens/peatlands; see category 4a): Riparian management zones consist of the body of water or wetland and the area to the outer edges of the riparian vegetation; or to the extent of the seasonally saturated soil; or to the distance of the height of one site-potential tree; or 100 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond, or lake—whichever is greatest.

The riparian management zone is divided into two areas called the inner and outer riparian management zones. Management direction may differ in these two zones. The inner riparian management zones are defined as follows:

For category 1 and 2 streams, the width of the inner riparian management zone shall be a minimum of 150 feet on each side of the stream.

For category 3 streams where side slopes are greater than 35 percent, the width of the inner riparian management zone shall be a minimum of 100 feet on each side of the stream or to the top of the inner gorge slope break, whichever is greater. Exceptions are allowed if the slope within the 100 foot riparian management zone decreases to 15% or less for a distance of at least 30 feet (forming a bench). The boundary of the inner riparian management zone may then be located at the toe of the bench. However, under no circumstance shall the inner riparian management zone be less than 50 feet on each side of the stream. See appendix C for a diagram illustrating this exception.

For category 3 streams where side slopes are less than 35 percent, the inner riparian management zone shall be a minimum of 50 feet on each side of the stream.

For category 4a and 4b ponds, lakes, reservoirs, and wetlands, the width of the inner riparian management zone shall be a minimum of 50 feet except for peatlands, fens, and bogs, where the minimum width is 300 feet.

In all categories the width of the inner riparian management zone in the descriptions above can be increased to protect sensitive resources. If an already established road is located within the riparian management zone, a site-specific determination shall be made as to the width of the inner riparian management zone. The portion of the riparian management zone that lies below the road may become the inner riparian management zone, and the portion above the road would become the outer riparian management zone.

The updated EA discusses the proposed vegetation treatments within the riparian management zone on p.14-15. Project design feature 01 specifies how vegetation treatments and tree removal would be in compliance with this standard for riparian management zones. Compliance with the RMZ standards is also discussed in aquatic section appendix B. Response to comments of this draft decision notice. The project activities will be in compliance with FW-STD-RMZ-01.

FW-STD-SOIL-01

Vegetation management activities do not create detrimental soil conditions on more than 15 percent of an activity area. In activity areas where less than 15 percent detrimental soil conditions exist from prior activities, the cumulative detrimental effect of the current condition and proposed activity must not exceed 15 percent following project implementation and restoration. In areas where more than 15 percent detrimental soil conditions exist from prior activities, the effects from project implementation and restoration must address currently impaired soil functions to improve the long-term soil condition.

The updated EA explains the effects to soils resources on pp. 99-105 and displays the anticipated detrimental soils disturbance in Table 56. The analysis determines that the proposed activities will meet FW-STD-SOIL-01.

FW-STD-SOIL-03

Soil function shall be restored on temporary roads (and decommissioned road prisms used as temporary roads) when management activities that use these roads are completed. Restoration treatments shall be based on site characteristics and methods that have been demonstrated to measurably improve soil productivity.

Project design feature 41 identifies what types of site appropriate techniques will be used for rehabilitating temporary roads following use (appendix A. Details of the selected alternative, draft decision notice) to meet FW-STD-SOIL-03.

FW-STD-IFS-02

In each bear management subunit within the NCDE primary conservation area, there shall be no net decrease to the baseline (see glossary) for secure core and no net increase to the baseline open motorized route density or total motorized route density on National Forest System lands during the non-denning season (see glossary). The following conditions are not considered a net increase/decrease from the baseline: (see Forest Plan p.65)

FW-STD-IFS-03

In each bear management subunit within the NCDE primary conservation area, temporary changes in the open motorized route density, total motorized route density, and secure

core shall be allowed for projects (as defined by “project (in grizzly bear habitat in the NCDE)” in the glossary).

The 10-year running average for open motorized route density, total motorized route density, and secure core numbers shall not exceed the following limits per bear management subunit:

- 5 percent temporary increase in open motorized route density in each subunit (i.e., open motorized route density baseline plus 5 percent);
- 3 percent temporary increase in total motorized route density in each subunit (i.e., total motorized route density baseline plus 3 percent);
- 2 percent temporary decrease in secure core in each subunit (i.e., secure core baseline minus 2 percent).

The updated EA discusses temporary changes to access conditions as a result of project activities on pp. 50-59 and shows that there will be no net increase in open motorized density, total motorized density, or decrease in security core post project. The project design features 70-73 also address project requirements for access management in the project area. The project activities are in compliance with FW-STD-WL-03, FW-STD-IFS-02, and FW-STD-IFS-03.

FW-STD-WL-04

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 discusses compliance with the Northern Rockies Lynx Management direction on pp. 39-45 and displays the potential effects of the proposed activities to “other” lynx habitat, which does not have a dense understory and provide hare habitat. The project activities are in compliance with the NRLMD and FW-STD-WL-04.

GA-NF-STD-01

Within timber harvest areas, snags or live replacement trees shall be retained at or above the minimum levels displayed in table 42. All snags of western larch, ponderosa pine, and black cottonwood trees greater than 20 inches d.b.h. shall be retained. If sufficient snags to meet the minimum levels in each column of table 42 are not present, live replacement trees shall be substituted for each snag. Live replacement trees shall be of the largest size present above 15 inches d.b.h., decayed or decadent trees if present, and the following species if present: western larch, ponderosa pine, Douglas-fir, cottonwood, aspen, birch, or western redcedar. In regeneration harvest units, suitable replacement trees include those that would not cause unacceptable impacts to the conifer tree regeneration (e.g., dwarf mistletoe infection or potential dysgenic seed source).

Project design features 46 specifies the snags and live reserve trees that should be left in vegetation management units to meet GA-NF-01. Project design features 44 and 45 ensure that project activities meet FW-GDL-TE&V-06

MA2-STD-02

Designated rivers must be managed to protect the free-flowing character, water quality, and outstandingly remarkable values for which they were designated.

Project design feature 53 and 57 address the scenic remarkable value identified in the wild and scenic river corridor and ensure that vegetation management will meet MA2-STD-02.

Guidelines

FW-GDL-RMZ-09

If new openings are created in riparian management zones through even-aged regeneration harvest (see glossary) or fuel reduction activities, each created opening's distance to cover (see glossary) should not exceed 350 feet to provide wildlife habitat structural diversity, connectivity, and cover.

Project design feature 61 addresses this guideline.

FW-GDL-RMZ-10

If harvest activities occur within riparian management zones, all snags greater than or equal to 12 inches d.b.h. should be retained within the harvest area to contribute towards more diverse forest structure and desired habitat conditions by providing higher snag and downed wood densities (once the snags fall) as compared to areas outside riparian management zones. Exceptions to this guideline and development of an alternative snag prescription may be considered where there are issues of human health and safety (i.e., developed recreation sites, sites adjacent to landings) or where a decreased amount of wildland fuels is desired to protect communities and community assets (i.e., within the wildland-urban interface). Due to the high density and variability in snags and landscape conditions created by wildfire, exceptions and alternative prescriptions may also be considered in areas burned by stand-replacing fire based on a site-specific analysis.

Project design feature 62 addresses this guideline.

FW-GDL-SOIL-04

To maintain organic matter for soil function, vegetation management activities should conserve coarse woody debris at levels described in FW-DC-TE&V-17 and FW-GDL-TE&V-08 in the Vegetation and Terrestrial Ecosystems section. Management activities should either retain forest floor at half the current thickness or no less than 1 centimeter thick on average across activity areas.

Project design features 48, 49, and 50 ensure retention of down woody debris.

FW-GDL-TE&V-01

Within the NCDE primary conservation area, measures to reduce the risk of disturbance to the grizzly bear population should be incorporated into vegetation and fuels project design criteria, which vary on a site-specific basis (e.g., some activities should be restricted in spring habitat during the spring time period; areas with low levels of human activity should be provided adjacent to areas with high levels of disturbance). Note: Management activities such as pre-commercial thinning, burning, weed spraying, and implementation of road best management practices may need to be completed during the spring time period in order to meet resource objectives (especially if needed to prevent resource damage), in which case other measures should be used to reduce the risk of disturbance (e.g., limiting the duration of the activity or limiting the use of closed roads).

Project design feature 66 requires spring habitat timing restrictions.

FW-GDL-TE&V-06

To increase the patch size of old-growth forest in the future, if managing vegetation within 300 feet of existing old-growth forest, treatment prescriptions that would promote the development of old-growth forest in the future should be considered. At a minimum, the following structural and composition components associated with old-growth forest should be retained if present within at least 300 feet of the old-growth forest patch:

- larger live trees (e.g., greater than 17 inches d.b.h.) of species and condition that will persist over time (such as western larch, ponderosa pine, Douglas-fir) and not cause unacceptable impacts to future stand conditions (e.g., dwarf mistletoe infection or potential dysgenic seed source);
- large downed wood (greater than 9 inches diameter); and/or
- snags and decayed, decadent trees greater than 15 inches d.b.h.

Exceptions to this guideline may occur to protect human health and safety and within portions of the wildland-urban interface where decreased fuels are determined necessary to protect values at risk.

Project design features 44, 45, and 50 ensure that project activities meet FW-GDL-TE&V-06.

FW-GDL-PLANT DIV-02

To avoid adverse impacts to plant species of conservation concern, heavy, ground-based equipment should not be used in areas with known plant species of conservation concern populations.

Project design features 21, 22, and 23 will meet FW-GDL-PLANT DIV-02.

FW-GDL-WL DIV-01

Vegetation management activities should maintain, where present, an overstory canopy of full-crowned trees to provide snow intercept cover in key winter big game habitats, determined in cooperation with Montana Fish, Wildlife and Parks (MFWP). Since the amount of canopy needed varies on a site-specific basis according to factors such as tree species, aspect, or elevation, and changes over time, specific areas and prescriptions for management activities should be identified at the project level.

Project design features 58 and 78 will meet FW-GDL-WL DIV-01

FW-GDL-WL DIV-05

To reduce the risk of disturbance, new projects or new special-use authorizations for activities that are known to disrupt the select species listed in table 15 should not occur in key habitats during key time periods (see table 15) unless they include strategies designed to mitigate new disturbance. Exceptions to this guideline may occur for public health and safety or emergency activities.

Project design features 67, 68, and 69 will meet the timing restrictions for wildlife species identified in FW-GDL-WL DIV-05.

FW-GDL-FIRE-05

To reduce the negative impacts of wildfires or improve fire control opportunities, treatments should be designed to remove or rearrange the material necessary to achieve at least one of the following outcomes: reduce flame length, rate of spread, or torching and crowning indices.

The updated EA discusses how vegetation management activities will result in decreased flame lengths and torching on pp.91 and 93 to meet FW-GDL-FIRE-05.

FW-GDL-IFS-02

Within the NCDE primary conservation area, levels of secure core, open motorized route density, and total motorized route density should be restored to pre-project levels (as defined by “project (in grizzly bear habitat in the NCDE)” in the glossary) within one year after completion of the project in order to reduce the duration of grizzly bear

displacement or disturbance due to project-related activities. Exceptions may be made where necessary to accommodate, for example,

- actions where existing rights preclude or constrain agency discretion (e.g., certain contracts, permits, leases);
- prescribed burning (including slash disposal), best management practices to protect water quality, or required reforestation activities; or
- emergency situations as defined by 36 CFR § 218.21.

If an extension to the one-year time limitation is made (e.g., to meet contractual obligations or to complete on-the-ground treatments), the reasons should be documented in writing prior to authorization of the extension.

Project design feature 71 ensures that the project meets FW-GDL-IFS-02

FW-GDL-IFS-015

When designing, constructing, or reconstructing system trails, information on how to avoid and respond to bear-human encounters should be posted at trailheads. In addition, site-specific trail design should include one or more methods to limit the risk of bear-human conflicts such as, but not limited to,

- locating trails outside of riparian management zones or avalanche chutes unless it is necessary to cross or to access an existing developed recreation site, and
- designing and/or maintaining trails to increase sight distance and/or to address speed of travel consistent with site-specific conditions for the managed use of the trail.

Project design feature 74 ensures that trail construction will implement measures to limit the risk of bear-human conflict.

Suitability

Management areas (MAs) help clarify the general suitability of various parts of the Forest for different activities and management practices. Suitability is discussed further on p.119 of the Forest Plan.

2a. Designated wild and scenic river

The Crystal Cedar project proposes four vegetation management units totaling 132 acres within the North Fork and Middle Fork Flathead River recreation river segments to reduce fuels, diversify vegetation, and reduce discernable edges between land ownerships. Although these lands are not suitable for timber production; timber harvesting is allowed to achieve the desired vegetation conditions (MA2a-SUIT-02). Proposed management activities will have no effect to the outstandingly remarkable values identified for these segments of river (project file exhibit M-6).

6a. General forest low-intensity vegetation management

The Crystal Cedar project proposes approximately 27 acres of treatment in management area 6a. Approximately 7 acres of treatment will use hand treatments to reduce fuels and improve tree growth. Approximately 20 acres of commercial thinning will occur to remove conifers and release aspen in the remaining forest stand and reduce fuels near private property. Although MA6a is unsuitable for timber production, timber harvest to achieve desired vegetation conditions and other multiple-use purposes could occur.

6b. General forest medium-intensity vegetation management

The Crystal Cedar project proposes approximately 595 acres of treatment in MA6b, which is suitable for timber production. These treatments include approximately 343 acres of commercial harvest and 252 acres of noncommercial harvest. My decision approves 0.2 miles of road construction to reroute an existing road in MA6b which is suitable for road construction.

6c. General forest high-intensity vegetation management

The Crystal Cedar project proposes approximately 197 acres of treatment in MA6c, which is suitable for timber production. These treatments include approximately 79 acres of commercial harvest and 115 acres of noncommercial harvest

7. Focused recreation area

The Crystal Cedar project proposes approximately 2,770 acres of treatment in MA7. All of the Cedar Flats Off-Highway Vehicle Focused Recreation Area is suitable for timber production and portions of the Crystal Cedar Focused Recreation Area are suitable for timber production (forest plan figure B-33). All of the vegetation management activities proposed in MA7 are occurring on lands suitable for timber production (see project file exhibit r-9). These treatments include approximately 1,858 acres of commercial harvest and 913 acres of noncommercial treatments. My decision also approves 0.9 miles of road construction in MA7 which is suitable for permanent road construction. My decision approves approximately 25 miles of new trail construction, all of which is located within MA7 areas with recreation opportunity spectrum roaded natural, which provides for a natural-appearing landscape that supports higher concentrations of use, user comfort, and social interactions with a well-defined road system.

Timber Resource Management Specific Forest Plan Components

Consistency with Forest Plan standards and guidelines assures the proposed vegetation management will be carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource (16 USC 1604(g)(3)(F)(v)). In addition, the project is specifically consistent with:

FW-DC-TIMB-03:

In areas suitable for timber production, timber harvest, thinning, and planting have a primary role in achieving the desired vegetation conditions.

FW-DC-TIMB-05:

In areas suitable for timber production, sanitation or salvage harvest may occur and contribute to the overall economic benefits of harvest while achieving desired conditions and management direction for other resources (e.g., wildlife habitat, snags) and providing for human safety along open roads and trails.

FW-DC-TIMB-06:

On lands identified as not suitable for timber production but where timber harvesting is allowed to achieve multiple-use values, timber harvest contributes to achieving desired conditions while providing economic and social services and benefits to people. Timber harvest on these lands occur to protect multiple-use values other than timber production, such as salvage, sanitation, public health, or safety.

Stands identified for harvest treatment in the draft decision were examined for suitability by a certified silviculturist, soil scientist, and other resource specialists. Timber harvest is located in five management areas. Management area 6b (general forest moderate intensity vegetation management), management area 6c and sections of management area 7 (focused recreation areas)

are suitable for long-term timber production. The portions of management area 7 that have commercial harvest in the Crystal Cedar project are suitable for timber production. Management area 2a and 6a are not suitable for timber production, but vegetation management is proposed in these areas to reduce fuels, diversify vegetation, and reduce the discernable edges between land ownership.

FW-STD-SOIL-02:

Project-specific best management practices and design features shall be incorporated into land management activities as a principle mechanism for protecting soil resources.

FW-STD-SOIL-03:

Soil function shall be restored on temporary roads when management activities that use these roads are completed. Restoration treatments shall be based on site characteristics and methods that have been demonstrated to measurably improve soil productivity.

FW-GDL-SOIL-01:

Ground-based equipment for vegetation management should only operate on slopes less than 40 percent to protect soil quality. Exceptions will be considered only with site-specific analysis where soil, slope, and equipment are determined appropriate to maintain soil functions.

FW-GDL-SOIL-02:

To maintain soil quality and stability, ground-disturbing management activities should not occur on landslide-prone areas.

FW-STD-WTR-02:

Project-specific best management practices (including both Federal and State of Montana practices) shall be incorporated into project plans as a principle mechanism for controlling non-point pollution sources in order to meet soil and watershed desired conditions and to protect beneficial uses.

FW-STD-TIMB-01:

Timber shall not be harvested on lands where soil, slope, or other watershed conditions may be irreversibly damaged, as identified in project-specific findings.

Design features include the application of BMPs to all harvest units and haul routes (project design feature 03). In addition, temporary road construction/reclamation will occur during dry conditions to allow effective implementation of BMPs to reduce or eliminate effects to water quality. Monitoring of BMPs would be incorporated into many different phases of the project. The sale administrator would review the location of all proposed temporary roads to assure compliance with BMPs. A sale administrator would visit each active cutting unit at a frequency necessary to assure compliance with the BMPs and the timber sale contract. Minor contract changes or contract modifications would be agreed upon and enacted, when necessary, to meet objectives and standards on the ground. No units with slopes greater than forty percent would be treated with ground-based equipment (project file exhibit k-3).

FW-STD-TIMB-02:

Timber harvesting shall only be done when there is reasonable assurance of restocking within five years after final regeneration harvest. Restocking level is prescribed in a site-specific silvicultural prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the plan area. In some instances, such as when stands are treated to reduce fuel loadings, to create openings for scenic vistas, or to remove encroaching trees to meet desired vegetation or wildlife habitat conditions, it is acceptable not to restock or to restock at very low tree densities.

Previous regeneration harvests in the analysis area have been successfully stocked within five years. Forest Plan Monitoring Reports indicate that the Forest is consistently successful at regenerating stands after harvest in the desired timeframe and with the desired number and species of trees (Project File Exhibit H-15). The most appropriate method for site preparation and regeneration will be selected at the time the detailed prescription to assure regeneration.

FW-STD-TIMB-03:

Silvicultural treatments shall not be selected based solely on their ability to provide the greatest dollar return.

Although timber harvest associated with this project will generate revenue, all treatments have been designed to meet project objectives, which include cost efficiency, but are not solely designed to generate revenue.

FW-GDL-SCN-02:

To be consistent with the Forest's scenic integrity objectives, deviations that are visible in some areas of the Forest should generally be subordinate to the surrounding landscape and should diminish over time.

All units meet or exceed scenic integrity objectives in the long-term.

FW-STD-TIMB-04:

Clearcutting shall be used as a harvest method only where it has been determined to be the optimum method, and other types of even-aged harvest shall be used only where determined to be appropriate. Determinations shall be based on site-specific conditions and the desired conditions for vegetation, wildlife habitat, scenery, and other resources.

Clearcutting was deemed the optimal regeneration method in unit 121 due to the lack of suitable leave trees. The stand consists of lodgepole approximately 90 years old, with a few individuals of desirable species. Even-aged methods are appropriate for this landscape, which has been shaped by fire, as have most of the Northern Rocky Mountain ecosystems. Mixed severity fire regimes dominate in the project area; fires that would burn both at low and high severity in a complex patch pattern across the landscape create the kind of stand structures and species compositions that also result from even-aged harvest methods.

Even-aged methods are appropriate for mature, even-aged stands originating from the Half Moon Fire of 1929 (project file exhibit J-2). Intermediate or uneven-aged regeneration treatments in the proposed even-age harvests would be ineffective due to the species composition and age of the stands. Mature lodgepole pine is very susceptible to wind throw following intermediate treatments. Uneven-age regeneration treatments are not an effective method to regenerate desirable shade intolerant tree species needed to meet forest plan desired conditions.

FW-STD-TIMB-06:

Even-aged stands shall generally have reached or surpassed culmination of mean annual increment of growth prior to regeneration harvest unless at least one of the following conditions have been identified during project development:

- Such harvesting would modify fire behavior to protect identified resource, social, or economic values.
- Harvesting of stands will trend the landscape towards vegetation desired conditions.
- Harvest uses uneven-aged silvicultural systems, thinning, or other intermediate stand treatments that do not regenerate even-aged or two-aged stands.

- Harvest is for sanitation or salvage of timber stands that have been substantially damaged by fire, windthrow, or other catastrophe or that are in imminent danger from insect or disease attack.
- Harvest is on lands not suited for timber production and the type and frequency of harvest is due to the need to protect or restore multiple-use values other than timber production.

All even-aged regeneration harvests comply with this standard. Stands proposed for regeneration originated approximately 100-200 years ago.

FW-STD-TIMB-07:

The maximum opening size created by clearcutting, seedtree cutting, shelterwood seed cutting, or other cuts designed to regenerate an even-aged stand of timber in a single harvest operation shall be 40 acres. This standard applies to newly created harvest openings on NFS lands only and need not consider existing recently created openings on NFS, adjacent private, or other agency lands.

Exceptions to the 40 acre maximum opening size standard may occur when determined necessary to help achieve desired ecological conditions for the plan area. These desired conditions include providing for forest patterns and patch sizes that are consistent with natural disturbance regimes (see FW-DC-TE&V-03, FW-DC-TE&V-18; FW-DC-TE&V-19, FW-DC-SCN-01), providing for habitat that contributes to long-term persistence of native plant and animal species (see FW-DC-TE&V-04), maintenance of instream channel conditions (see FW-DC-WTR-04 and 08), and maintaining or creating forests resistant and resilient to future disturbances (see FW-DC-TIMB-01 and -07).

Maximum opening size exceptions to the standard are displayed in Table 21.

Table 21. Maximum opening size (acres) created by even-aged harvest in one harvest operation.

Potential vegetation type	Maximum opening size
Warm-dry and warm-moist	80
Cool-moist	150
Cold	90

All openings are under the maximum opening size for the appropriate potential vegetation type, as displayed in Table 21 from the Forest Plan.

Consistency with Other NFMA Components

Analysis

The potential environmental, biological, esthetic, engineering, and economic impacts of the timber sales associated with the Crystal Cedar Project, as well as the consistency with the activities with the multiple uses of the general area, were assessed by an interdisciplinary review team consistent with (16 USC 1604(g)(3)(F)(ii)).

Roads

In consideration of 16 USC 1608(b), temporary roads shall be designed with the goal of reestablishing vegetative cover on the roadway and areas where the vegetative cover has been disturbed by the construction of the road, within ten years after the termination of the timber sale contract either through artificial or natural means. Such action shall be taken unless it is later travel analysis determines the road is needed for use as a part of the National Forest transportation system or it has been determined that the road should be collocated with a future system trail.

In addition, roads constructed and reconstructed on the Forest shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources (in compliance with 16 USC 1608(c) and to make progress toward achieving FW-DC-IFS-06).

Approximately 1.1 miles of new system road and 6 miles of temporary road will be constructed according to this draft decision. The system roads will be used for project activities and closed to public travel. Temporary roads will be rehabilitated after project activities and will be impassable to motorized vehicles. A project level travel analysis was completed for this project (see Project File Exhibit P-3) and effects from these roads were evaluated in the environmental assessment. I have determined we meet the requirements of 16 USC 1608 (b) and (c).

Diversity

The National Forest Management Act directs the Forest Service to “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” The 2012 Planning Rule requires the inclusion of plan components, including standards or guidelines, that address social and economic sustainability, ecosystem services, and multiple uses integrated with the plan components for ecological sustainability and species diversity.

In response, the 2018 Forest Plan adopted a complementary ecosystem and species-specific approach (also called a coarse filter/fine filter approach) to maintain the diversity of plant and animal communities and the persistence of native species in the plan, including but not limited to at-risk species. Specifically, the record of decision for the 2018 Forest Plan concludes that “[e]cosystem and species-specific plan components in the revised land management plan will be sufficient to maintain the biological diversity of the Forest and the integrity of its ecosystems, including composition, structure, function, and connectivity,” (USDA FS 2018d, p. 18).

Based on consideration of consistency with the Forest Plan, the monitoring and design criteria of the selected alternative, analysis of effects, and the biological assessments (project file exhibits G-12), I find this decision will continue to provide for a diversity of species and communities.

Endangered Species Act (ESA)

Under the provisions of this Act, Federal agencies are directed to seek to conserve endangered and threatened species and to ensure that actions are not likely to jeopardize the continued existence of any of these species. Biological assessments, which disclose effects of the project on endangered and threatened species, were prepared by our biologists with following ESA determinations:

- Wolverine – no jeopardy
- Bull trout – no effect
- Bull trout critical habitat – no effect
- Meltwater Lednian Stonefly – no effect
- Grizzly bear – may affect, likely to adversely effect
- Canada lynx – may affect, not likely to adversely affect
- Canada lynx critical habitat – may affect, not likely to adversely affect

We consulted with the USFWS on these determinations and received their concurrence and biological opinion on October 31, 2019 (project file exhibit G-13).

National Environmental Policy Act (NEPA)

NEPA provisions have been followed as required by 40 CFR 1500. The project's decision notice complies with the intent and requirements of NEPA.

Scoping for the project included public meetings, mailings that provided information about the project and solicitation for comments, public notices (legal advertisements), and field visits with affected landowners. Issues identified during pre-scoping and proposed action scoping for the Crystal Cedar Project assisted the interdisciplinary team and me in project design and with the analysis process. Project file exhibit folders D, E, and F contain public involvement documentation (mailings, news releases, social media postings, newspaper articles) and comments received. Appendix B of the draft decision notice provided my responses to comments received during the environmental assessment comment period. This decision notice describes my decisions and rationale.

Clean Water Act and Montana State Water Quality Standards

The Crystal Cedar project area does not contain water quality impaired streams and the project specific design features and BMPs will ensure that water quality is protected. Upon review of the environmental assessment and project record, I find that activities associated with my decision will comply with Montana State water quality standards. Water quality effects would be limited to the reach scale and may include temporary exceedance of state water quality standards for turbidity and total suspended sediment (Montana Department of Environmental Quality 2014, 2012) during road maintenance and construction, although changes to existing beneficial use classifications or water quality categories would not be anticipated (updated EA, p.79). My decision includes project design features and measures to protect the water resource (appendix A of the environmental assessment) and applicable BMPs to achieve water quality standards.

Clean Air Act

Upon review of the Crystal Cedar Environmental Assessment, I find that the activities in the decision will be coordinated to meet the requirements of the State Implementation Plans, Smoke Management Plan, and Federal air quality requirements.

National Historic Preservation Act, American Indian Religious Freedom Act, and Native American Graves Protection and Repatriation Act

Cultural resource reviews will be completed on all areas to be impacted by ground-disturbing activities. The Section 106 process of the National historic Preservation Act of 1966 will be completed prior to the expenditure of federal funds to implement the proposed action. No cultural resources are expected to be affected by this action. Recognizing that the potential exists for unidentified sites to be encountered or disturbed during project activity, special provisions for their protection will be included in all contracts used to implement this project (see appendix A, design features, in the environmental assessment). These provisions will allow the Forest Service to unilaterally modify or cancel a contract to protect cultural resources, regardless of when they are identified. This provision will be used if a site is discovered after a harvest operation has

begun. This project complies with the Region 1 programmatic agreement (1995) with the State Historic Preservation Office and the Advisory Council on Historic Preservation.

Government to Government Relations

The Crystal Cedar Project was included in the 2018 cultural program consultation with affiliated Native American Tribes as per regulatory requirement, Executive Order 13175 Consultation and Coordination with Indian Tribal Government. The proposed action would not infringe on the inherent rights invoked by the American Indian Religion Freedom Act of 1978, as amended. Further, there are no sacred sites identified in the project area at this time (Executive Order 13007 Indian Sacred Sites).

Predecisional Administrative Review Process

Hardcopies of the Crystal Cedar Draft DN and Updated EA are available upon request. Electronic versions of the documents are available on the Flathead National Forest's webpage:

<https://www.fs.usda.gov/project/?project=52844>.

The responsible official for this decision is Forest Supervisor Chip Weber. Individuals or organizations who submitted specific, written comments in response to scoping or the comment period provided for the environmental assessment have standing to object under 36 CFR 218, Subparts A and B. Issues raised in objections must be based on previously submitted timely, specific written comments regarding the proposed project unless the issue is based on new information arising after the designated comment opportunities.

Objections shall be sent to:

Objection Reviewing Officer
USDA Forest Service, Northern Region
26 Fort Missoula Road
Missoula, MT 59804

Office hours are Monday through Friday, 8:00am to 4:30pm, excluding Federal holidays. Objections can be faxed to the Objection Reviewing Officer at (406) 329-3411. The fax coversheet needs to include a subject line with "Crystal Cedar Project Objection" and should specify the number of pages being submitted.

Electronic objections must be submitted to the Objection Reviewing Officer via email to appeals-northern-regional-office@usda.gov, with "Crystal Cedar Project Objection" in the subject line. Electronic submissions must be submitted in a format that is readable with optical character recognition software (e.g. Word, PDF, Rich Text) and be searchable. An automated response should confirm your electronic objection has been received.

The objection must meet the content requirements of 36 CFR 218.8(d), and include the following information: 1) the objector's name and address, with a telephone number or email address, if available; 2) a signature or other verification of authorship upon request (a scanned signature for email may be filed with the objection); 3) when multiple names are listed on an objection, identification of the lead objector as defined in 36 CFR 218.2 (verification of the identity of the lead objector shall be provided upon request); 4) the name of the project being objected to, the name and title of the responsible official, and the name of the national forest and ranger district on which the project will be implemented; 5) a description of those aspects of the project

addressed by the objection, including specific issues related to the project and, if applicable, how the objector believes the environmental analysis or draft decision specifically violates law, regulation, or policy; suggested remedies that would resolve the objection; and supporting reasons for the reviewing officer to consider; and 6) a statement that demonstrates the connection between prior specific written comments on the particular project or activity and the content of the objection, unless the objection concerns an issue that arose after the designated opportunity for formal comment. With certain exceptions (36 CFR 218.8(b)), all documents referenced in the objection must be included with the objection.

An objection, including attachments, must be filed with the appropriate reviewing officer within 45 calendar days following publication of the legal notice of the objection filing period in the newspaper of record, *Daily Inter Lake*. The publication date in the newspaper of record is the exclusive means for calculating the time to file an objection. Objectors should not rely upon dates or timeframe information provided by any other source. It is the objector's responsibility to ensure timely filing of a written objection with the reviewing officer pursuant to 36 CFR 218.9. All objections are available for public inspection during and after the objection process. Responses that do not adhere to these requirements make review of an objection difficult and are conditions under which the reviewing officer may set aside an objection pursuant to 36 CFR 218.10.

For more information or to request a copy of the Crystal Cedar Draft Decision Notice or Updated Environmental Assessment, please contact Project Leader Sarah Canepa at (406) 387-3800 or by email at sarah.canepa@usda.gov.

Approved by:

CHIP WEBER
Forest Supervisor
Flathead National Forest

Date

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Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

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Appendix A. Details of the Selected Alternative

Vegetation treatments, which include commercial harvest, noncommercial treatment, and prescribed burning, would occur on 3,722 acres under the proposed action. Approximately, 24.6 miles of trail would be added to the National Forest System trail network. Associated treatments include post-harvest fuels treatment and site preparation activities, as well as reforestation activities, temporary road construction, road maintenance, invasive species control, and aquatic organism passage structure installation.

Table 2. Selected alternative summary of activities

Proposed trail construction	Miles
Nonmotorized trail	24.2
Motorized trail	0.4
Proposed road management	Miles
Temporary roads	6
NFS system road construction	0.9
NFS system road reroute	0.2
NFS system road aquatic organism passage structures	1
Proposed vegetation treatments	Acres
Commercial thin	1,886
Seed tree	458
Shelterwood	32
Clearcut	13
Overstory removal	46
<i>Total proposed commercial treatment</i>	2,435
<i>Estimated sawtimber volume</i>	18,811 CCF (9.4 MMBF)
	Acres
Sapling thin	558
Understory removal	292
Live birch cutting along open roads ^a	280
Prescribed burning (ecosystem burns)	157
<i>Total proposed noncommercial treatment</i>	1,287

a. Acres of live birch cutting along open roads overlap with acres of other types of vegetation treatment

Table 3. Proposed action trails

Trail number	Designed use and trail class	Managed use	Miles
6400B	ATV - 3	Pedestrians, bicycles, equestrian, ATV	0.2
6301B	ATV-3	Pedestrians, bicycles, equestrian, ATV	0.2
TR01	Bicycle - 3	Pedestrians, bicycles	3.0
TR01A	Bicycle - 3	Pedestrians, bicycles, equestrian	0.5
TR02	Bicycle - 3	Pedestrians, bicycles, equestrian	2.3
TR02A	Bicycle - 3	Pedestrians, bicycles, equestrian	0.1

Trail number	Designed use and trail class	Managed use	Miles
TR03	Bicycle- 4-5	Pedestrians, bicycles	1.5
TR03A	Bicycle - 3	Pedestrians, bicycles	0.5
TR04	Bicycle 3	Pedestrians, bicycles, equestrian	1.4
TR05	Pack and saddle - 3	Pedestrians, bicycles, equestrian	1.7
TR06	Pack and saddle - 3	Pedestrians, bicycles, equestrian	0.9
TR07	Pack and saddle - 2	Pedestrians, bicycles, equestrian	6.3
TR08	Bicycle - 3	Pedestrians, bicycles, equestrian	3.2
TR08A	Pack and saddle - 3	Pedestrians, bicycles, equestrian	0.5
TR10	Pack and saddle - 3	Pedestrians, bicycles, equestrian	1.4
TR11	Pack and saddle - 3	Pedestrians, bicycles, equestrian	0.9
Total miles			24.6

Vegetation treatment descriptions

In order to reduce tree densities and fuel loadings within the wildland-urban interface; improve the diversity and resilience of forest vegetation communities and associated wildlife habitat; and provide a mix of forest products to contribute to economic sustainability of local economies, several different silvicultural prescriptions are proposed:

Commercial thinning is an intermediate treatment that would retain the healthiest trees with large, well-formed crowns. The objective of this treatment is to improve forest growth and health. Leave tree selection would favor fire-tolerant species, including western larch, western white pine, and Douglas-fir. These trees would then have more growing space, light, nutrients, and water to allow them to develop into large trees more rapidly with improved insect, disease, and fire tolerance. Commercially thinned stands would not require reforestation. Three commercial thin units were identified as opportunities to promote aspen growth by removing encroaching conifers from healthy aspen clones. Commercial thinning would also achieve fuels reduction objectives by reducing tree densities and ladder fuels.

Shelterwood, seed tree, and clearcut are regeneration treatments that use timber harvesting to create a new forest stand of fire-tolerant tree species. These silvicultural methods would change the stands from large and medium tree structure classes to the seedling stage. The objective of these treatments is to reduce fuels and regenerate fire-tolerant species including western larch, western white pine, or ponderosa pine. These treatments would mimic a stand replacement fire where more than 75 percent of the overstory would be replaced reducing the potential for future crown fires. All regeneration harvests would have natural regeneration, or planting of desired species, or both.

Overstory removal is a treatment made in a stand with an older, upper canopy layer and a sapling stage understory. The removal of the upper canopy layer would be followed by a sapling thin to improve current and future stand health, growth, species composition, and tree sizes.

Sapling thin is similar to the commercial thin except it occurs in young stands less than 35 years old where trees are small. A portion of the existing trees are removed (trees at least 6 inches or smaller diameter at breast height), leaving a relatively well-stocked forested condition. The primary objective is to maintain or improve current and future stand health, growth, and species composition. Sapling thin would also achieve fuels reduction objectives.

Understory removal is similar to the commercial and sapling thin except the primary objective is fuels reduction. A portion of the existing trees are removed (trees at least 6 inches or smaller diameter at breast height), leaving a relatively well-stocked forested condition. Ladder fuels will be reduced and spacing between trees will be increased. Understory removal would also achieve increased forest growth objectives.

Live birch cutting is proposed along NFS Roads 1690, 10815, and 10816 in designated areas, up to 150 feet from the roadway, to provide opportunities for the public to harvest live birch for personal use with a permit.

Prescribed burning would return fire to the project area and reduce the risk and impacts of a relatively large stand replacement fire in the future. Prescribed burns would occur at low to moderate intensity burn severity conditions. Using prescribed fire combined with the other proposed treatments would reduce and break up the continuity of fuels across the project area. Another objective of burning is improving wildlife forage and winter range through stimulation of browse. Implementation of the prescribed burns could extend for several years into the future depending on the occurrences of desirable prescribed burning weather opportunities.

Post-harvest fuels and site preparation methods

Some proposed harvest units would have post-harvest treatments designed to reduce forest fuels that are generated either through harvest activity or is naturally occurring in high amounts. In the case of all regeneration harvest units (seed tree, shelterwood, and clearcut) these post-harvest activities would also prepare the site for reforestation by reducing competing vegetation and creating favorable seed bed conditions. Post-harvest fuels treatment includes excavator piling and broadcast burning, as identified by vegetation treatment unit in Table 4. Prior to broadcast burning, fireline would be constructed where needed.

Reforestation methods

Where regeneration harvest treatments are proposed (seed tree, shelterwood, and clearcut), a combination of natural and planting reforestation is planned. Planting would occur where insufficient natural regeneration of desired species is anticipated, due to lack of seed source or where restoring ponderosa pine or rust-resistant western white pine is an objective. Western white pine is an important, but declining species in this area and it would be planted where feasible. In addition to western white pine, other species that might be planted include western larch, Douglas-fir, and ponderosa pine.

Road management

To improve public safety and provide access for resource management and fire suppression activities, approximately 0.9 miles of system road are proposed for construction and 0.2 miles of National Forest System road (Road 10813) would be rerouted. Approximately 6 miles of temporary roads would be constructed to the minimum standards necessary for log hauling on NFS roads. Temporary roads would be rehabilitated following timber harvest activities and would cease to function as roads. Approximately 0.5 miles of temporary roads are proposed on existing motorized trails and will be managed again as trail following project activities.

NFS roads used as haul routes would receive road maintenance in accordance with best management practices (BMPs) prior to log hauling. The objectives of road maintenance would be to reduce the concentration of subsurface and surface water runoff, minimize road surface

erosion, filter ditch water before entering streams, and decrease the risk of culvert failures during peak runoff events. Maintenance work could include culvert installation, replacement of existing culverts with larger culverts, installation of drainage dips and surface water deflectors, placement of rip-rap to armor drainage structures, aggregate surface replacement, aggregate placement to reinforce wet surface areas, ditch construction and cleaning where needed, and surface blading to restore drainage efficiency of the road surface. These actions would bring the roads up to current BMP standards, better accommodate traffic, and reduce deferred maintenance.

A need for an aquatic organism passage structure has been identified on NFS Road 1690 for an unnamed fishbearing stream within the Spring Creek subwatershed. The existing undersized culverts will be replaced with a culvert or structure large enough to accommodate a 100-year flood and provide aquatic organism passage in the stream.

Table 4. Selected alternative vegetation treatments by unit

Unit	Acres	Prescription	Treatment method	Fuels treatment method	Management area
2	190	Commercial thin	Summer tractor	Excavator pile	7
3	12	Commercial thin	Tractor	Excavator pile	7
4	220	Commercial thin	Tractor	Excavator pile	7
04a	8	Commercial thin	Tractor	-	7
5	39	Commercial thin	Tractor	-	7
6	120	Commercial thin	Summer tractor	Excavator pile	7
7	166	Commercial thin	Tractor	Excavator pile	7
9	37	Seed tree	Tractor	Excavator pile	6b
10	16	Commercial thin	Log forwarder	Excavator pile	7
14	63	Commercial thin	Summer tractor	-	7
16	69	Commercial thin	Summer tractor	Excavator pile	7
17	86	Commercial thin	Summer skyline	Excavator pile	7
20	34	Seed tree	Tractor	Excavator pile	6b
23	4	Seed tree	Summer skyline	Excavator pile	7
25	17	Seed tree	Tractor	Excavator pile	7
25a	11	Seed tree	Tractor	Excavator pile	7
32	22	Seed tree	Tractor	Excavator pile	6b
33	20	Seed tree	Tractor	Excavator pile	7
35	5	Understory removal	Hand	-	7
36	23	Seed tree	Tractor	Excavator pile	7
40	40	Commercial thin for aspen release	Tractor	Excavator pile	6b
42	8	Understory removal	Hand	-	6b
43	39	Commercial thin	Tractor	-	7
44	16	Seed tree	Summer skyline	Broadcast burn	7
45	10	Seed tree	Tractor	Excavator pile	6b
46	133	Commercial thin	Summer tractor	-	7
47	22	Commercial thin	Tractor	Excavator pile	7

Unit	Acres	Prescription	Treatment method	Fuels treatment method	Management area
48	7	Seed tree	Tractor	Excavator pile	6b
49	23	Shelterwood	Tractor	Excavator pile	7
50	12	Commercial thin	Tractor	-	6b
51	86	Commercial thin	Tractor	-	7
53	10	Commercial thin	Tractor	-	6b
54	42	Commercial thin	Winter tractor	Excavator pile	7
54a	8	Commercial thin	Log forwarder or winter tractor	Excavator pile	7
55	16	Commercial thin	Summer skyline	-	7
64	32	Commercial thin	Log forwarder or winter tractor	-	6b
65	13	Seed tree	Tractor	Excavator pile	6b
66a	2	Understory removal	Hand	-	7
67	18	Commercial thin	Tractor	-	7
68	36	Commercial thin for aspen release	Tractor	Excavator pile	6a/7
70	31	Seed tree	Log forwarder or winter tractor	Excavator pile	7
70a	8	Seed tree	Log forwarder or winter tractor	Excavator pile	7
71	34	Commercial thin	Log forwarder	Excavator pile	7
72	5	Seed tree	Summer tractor	Excavator pile	7
73	27	Seed tree	Tractor	Excavator pile	7
74	3	Seed tree	Tractor	Excavator pile	6b
82	20	Commercial thin	Tractor	-	7
85	39	Commercial thin	Tractor	-	7
86	41	Seed tree	Tractor	-	7
88	11	Seed tree	Tractor	Excavator pile	6b
92	4	Seed tree	Tractor	-	6b
93	26	Seed tree	Skyline	Broadcast burn	7
96	12	Commercial thin	Summer tractor	Excavator pile	7
96a	2	Commercial thin	Tractor	Excavator pile	7
98	3	Seed tree	Tractor	Excavator pile	7
99	4	Seed tree	Tractor	Excavator pile	6b
101	9	Seed tree	Tractor	Excavator pile	7
102	7	Seed tree	Tractor	Excavator pile	6b
108	9	Shelterwood	Summer skyline	Broadcast burn	7
109	29	Commercial thin	Winter tractor	Excavator pile	7
112	14	Commercial thin for aspen release	Summer tractor	Excavator pile	7
113	20	Commercial thin	Summer skyline	-	7
114	9	Commercial thin	Summer skyline	-	7

Unit	Acres	Prescription	Treatment method	Fuels treatment method	Management area
119	19	Commercial thin	Log forwarder and winter tractor	Hand pile	7
119a	6	Commercial thin	Log forwarder and winter tractor	Hand pile	7
120	10	Seed tree	Log forwarder or winter tractor	Excavator pile	6b
121	13	Clearcut	Tractor	Excavator pile	2a
122	35	Commercial thin for aspen release	Tractor	-	6c
123	77	Commercial thin	Tractor	Excavator pile	2a
126	15	Commercial thin	Tractor	Excavator pile	6b
128	12	Commercial thin	Tractor	Excavator pile	7
129	54	Commercial thin	Tractor	Excavator pile	6b
130	6	Commercial thin	Log forwarder or winter tractor	Excavator pile	2a/6b
131	55	Seed tree	Tractor	Excavator pile	2a/6b
133	24	Understory removal	Hand	-	7
133a	3	Understory removal	Hand	-	7
134	30	Understory removal	Hand	-	7
135	46	Understory removal	Hand	-	7
136	26	Understory removal	Hand	-	7
137	42	Understory removal	Hand	-	7
140	5	Understory removal	Hand	-	6c
141	24	Understory removal	Hand	-	7
142	15	Understory removal	Hand	-	7
143	45	Understory removal	Hand	-	7
144	14	Understory removal	Hand	-	6c
145	5	Understory removal	Hand	-	6a
200	4	Sapling thin	Hand	-	6b/7
201	21	Sapling thin	Hand	-	6b
202	10	Sapling thin	Hand	-	6b
203	6	Sapling thin	Hand	-	6b
204	14	Sapling thin	Hand	-	7
205	24	Sapling thin	Hand	-	6b
206	16	Sapling thin	Hand	-	7
208	39	Sapling thin	Hand	-	7
209	2	Sapling thin	Hand	-	6b
210	8	Sapling thin	Hand	-	7
211	4	Sapling thin	Hand	-	7
212	13	Sapling thin	Hand	-	6b
213	27	Sapling thin	Hand	-	7

Unit	Acres	Prescription	Treatment method	Fuels treatment method	Management area
214	7	Sapling thin	Hand	-	7
215	2	Sapling thin	Hand	-	6a/7
217	9	Sapling thin	Hand	-	6b
220	10	Sapling thin	Hand	-	7
223	8	Sapling thin	Hand	-	7
224	13	Sapling thin	Hand	-	6b
226	3	Sapling thin	Hand	-	7
227	6	Sapling thin	Hand	-	6b
228	5	Sapling thin	Hand	-	7
229	6	Sapling thin	Hand	-	7
230	10	Sapling thin	Hand	-	6b
231	10	Sapling thin	Hand	-	7
232	19	Sapling thin	Hand	-	7
233	5	Sapling thin	Hand	-	7
234	5	Sapling thin	Hand	-	7
235	37	Sapling thin	Hand	-	6b
236	49	Sapling thin	Hand	-	6b
237	46	Overstory removal with sapling thin	Tractor	-	6c
238	23	Sapling thin	Hand	-	6c
239	20	Sapling thin	Hand	-	6c
240	22	Sapling thin	Hand	-	6c
241	17	Sapling thin	Hand	-	2a/6c
242	17	Sapling thin	Hand	-	6c
243	27	Sapling thin	Hand	-	7
244	3	Sapling thin	Hand	-	6b
245	2	Sapling thin	Hand	-	6b
246	3	Sapling thin	Hand	-	6b
247	3	Sapling thin	Hand	-	6b
248	3	Sapling thin	Hand	-	6b
249	4	Sapling thin	Hand	-	6b
250	2	Sapling thin	Hand	-	6b
251	2	Sapling thin	Hand	-	6b
252	4	Sapling thin	Hand	-	6b
253	4	Sapling thin	Hand	-	6b
254	4	Sapling thin	Hand	-	6b
255	3	Sapling thin	Hand	-	6b
256	2	Sapling thin	Hand	-	6b
300	48	Prescribed burn	Hand	-	7
300a	59	Prescribed burn	Hand	-	7

Unit	Acres	Prescription	Treatment method	Fuels treatment method	Management area
301	50	Prescribed burn	Hand	-	7
NFS Road 1690	140	Personal use live birch cutting	Hand	-	7
NFS Road 10815	105	Personal use live birch cutting	Hand	-	7
NFS Road 10816	35	Personal use live birch cutting	Hand	-	7

Design features

Introduction

These design features are an integral part of the selected alternative and are considered requirements. Many concerns expressed during the public involvement processes were addressed through development of design features to avoid or reduce potential environmental impacts.

Forest Service directives (manual and handbook), forest plan standards and guidelines, and all other laws, regulations, and policies that relate to managing National Forest System lands apply to the proposed activities and are repeated here only if clarification is required.

Aquatics

- 01** Other than trees that are determined to be a hazard at developed recreation sites and administrative sites, vegetation management (including ignition of prescribed fire) would not be permitted within inner RMZs. Exceptions also include prescribed fire which would be allowed to back through inner RMZs, pile burning consistent with accepted practices detailed in the Montana Guide to the Streamside Management Zone Law and Rules (MTDNRC 2006), and non-mechanical treatments such as sapling thinning and hand fuels reduction treatments, that do not impair the function or condition of aquatic and riparian resources. Broadcast burning would not occur within 50 ft of any waterbody. Unit layout would follow guidance detailed in FW-STD-RMZ-01.
- 02** At developed recreation sites, trees within the riparian management zone that are determined to be a hazard would be felled to provide for public safety, in consultation with a Forest aquatics specialist. Felled downed trees would be left on-site as needed to meet large wood desired conditions, where it is safe and practical to do so (FW-GDL-RMZ-07).
- 03** Application of site appropriate BMPs for water quality and forestry management would follow guidance detailed in volume 1 of the National Core BMP Technical Guide (USDA 2012) and associated Forest Service manual and handbook direction, Montana Guide to the Streamside Management Zone Law & Rules (MTDNRC 2006), and Montana Forestry BMPs (Ziesak et al. 2015) (FW-STD-RMZ-02).

- 04** No mechanical treatment would occur within 150 ft of Duck Lake or the unnamed perennial stream in proposed unit 119a. Mechanical treatment would be limited to the slope break, where appropriate, adjacent to Duck Lake or 150 ft in unit 119. Hand treatment would occur between 150 ft and 50 ft (above the existing road). The Forest hydrologist or aquatics specialist would be onsite to delineate appropriate RMZ for these two units prior to treatment.
- 05** In-stream activities (e.g. road or trail crossings) in the Crystal Creek drainage would be subject to timing limitations to protect westslope cutthroat trout (no activity May 1-July 15). To maintain free-flowing streams, new, replacement, and reconstructed stream crossing sites (culverts, bridges, and other stream crossings) would accommodate at least the 100-year flow, including associated bedload and debris.
- 06** Equipment storage, storage of fuels and toxicants, maintenance or refueling (other than for portable pumps associated with prescribed fire) would not be permitted within the RMZ.
- 07** Best management practices for protecting water resources from prescribed fire activities would follow guidance detailed in volume 1 of the National Core BMP Technical Guide (USDA 2012, 52-59). Ground disturbing fireline construction within RMZs should be avoided when practicable to do so. Any fireline constructed within RMZs would be fully rehabilitated (USDA 2012). All fireline constructed outside of RMZs would be stabilized with suitable water and erosion control measures. Water bar spacing for fireline stabilization would adhere to the following spacing guidelines:

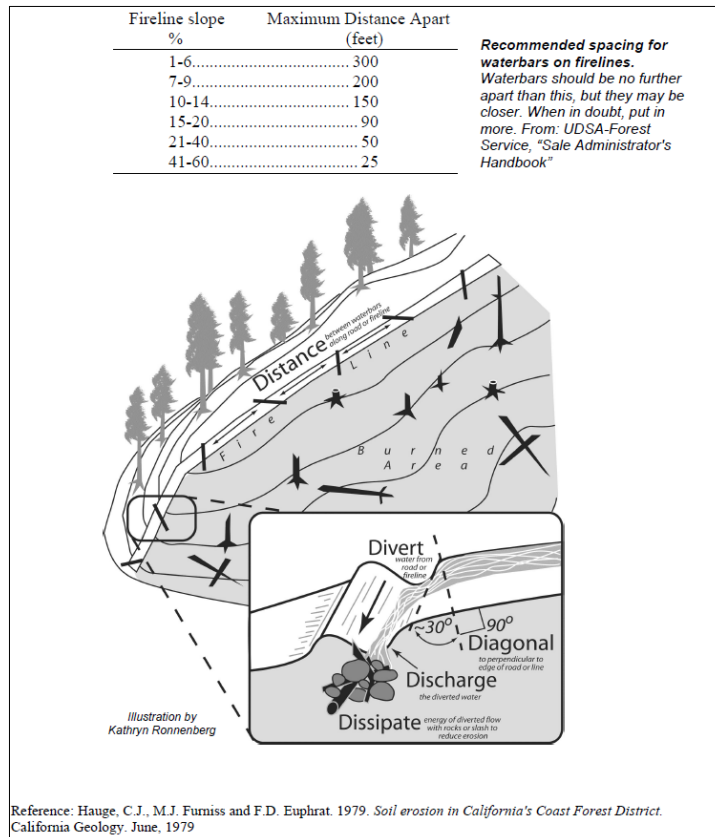


Figure 1. Water bar spacing for fireline stabilization

- 08 Portable pumps, and associated fuel, utilized for prescribed fire would be fitted with spill containment kits adequately sized and installed per manufacturer's recommendations.
- 09 All drafting hoses would be fitted with a minimum ¼-inch screen to prevent intake of fish and other aquatic species. No drafting will occur from ponds or fens.

Cultural resources

- 10 National Historic Preservation Act Section 106 reporting and consultation is required to be completed prior to any expenditure of federal funds to implement the selected alternative. Adherence to the regulations for implementing the National Historic Preservation Act insures that significant heritage resources are identified prior to project implementation.
- 11 To protect cultural resources, provisions shall be included in applicable contracts, agreements, and special-use permits for properties that are unevaluated, eligible for, or listed in the National Register of Historic Places (FW-STD-CR-01).
- 12 Identified cultural or archaeological sites will be flagged and avoided. Maps with site locations will be provided to the sale administrator and fuels specialist to ensure sites will be avoided.
- 13 Should cultural resources be identified during the course of project implementation, operations would cease and the heritage staff notified to complete resource documentation and evaluation of eligibility.
- 14 Trail locations will be surveyed for cultural resources prior to construction and relocated to avoid identified resources.

Non-native invasive plant species/noxious weeds

- 15 Off-road equipment would be power scrubbed or steam cleaned on the undercarriage and chassis before transport to the project area. Off-road equipment includes all logging and construction machinery for vegetation treatments and recreation development, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. All subsequent entries of equipment from outside the project area back to the project area shall be treated in the same manner as the initial entry.
- 16 Herbicides would be sprayed within the road prism along designated haul routes before log hauling begins and after all purchaser activities are completed. Treatments would only occur during the periods from June 1 to July 15 or September 1 to September 30. Treatment of invasive plants would be consistent with the strategy outlined in the Noxious and Invasive Weed Control Environmental Assessment and Finding of No Significant Impact (USDA 2001). Specific roads and mileage would be prepared in consultation with the Forest weeds coordinator.

- 17 To reduce the probability of establishment of new non-native invasive plant populations, areas where soils are disturbed by construction activities (e.g. road construction, landings, and skid trails) conducted or authorized by the U.S. Forest Service should be reseeded as soon as practical, during the appropriate time of year, using certified weed-free seed mixes (FW-GDL-NNIP-01).
- 18 Unit 133 would be hand treated and require additional equipment and gear cleaning when leaving the unit due to infestations of hoary alyssum and toadflax, and leafy spurge both in the unit and on the access road Parker Hill (NFS road 60111). All dirt and plant parts must be brushed off of gear and clothing prior to leaving the unit (and before entering vehicles) after operations. When approaching the unit, if using Parker Hill Road, all vehicles and gear must remain on the road when driving through the leafy spurge infestation, and not pull off to the side of the road until outside the infestation boundary. If there is to be burning, it shall only be in burn piles and not broadcast burning. All equipment and personnel shall avoid walking through the hoary alyssum infestation. No piles would be built in the hoary alyssum and toadflax infestations, nor would there be any trees or vegetation dragged through the infestations. The hoary alyssum and leafy spurge infestations would be monitored by the forest's weed or botany staff
- 19 Unit 10 and 71 would be specified for in-woods processing with log forwarder operation, operating on slash mat to minimize the spread of leafy spurge in the unit. Equipment would be washed before moving to other units in the project area to prevent the spread of leafy spurge.

Plant species of conservation concern

- 20 Trail TR11A will be designed to avoid a species of conservation concern (SCC) population of crested woodfern along the trail route as well to avoid a SCC population of cottongrass in the fen at the trail destination, as well as designed to not impact the fen or the state listed species of concern inhabiting the fen.
- 21 Units 43 and the birch cutting units along Road 1690 would be designed to avoid SCC populations that extend outside the RMZs (FW-GDL-PLANT DIV-02).
- 22 Trail locations will be surveyed for SCC plants prior to construction and relocated to avoid identified SCC plants.
- 23 If populations of any other SCC plants are found prior to or during implementation, they would be evaluated and protected as necessary to retain population viability.

Recreation

- 24 Overnight use would be prohibited by special order at the proposed trailheads on NFS Roads 316, 1690, and 10815.
- 25 Trail design and construction would follow Forest Service handbook direction for trails management (FSH 2309.18) according to the assigned designed use and adhere to applicable best management practices detailed in volume 1 of the National Core BMP Technical Guide (USDA 2012, 87-102).

- 26** Where appropriate, barriers would be constructed to restrict motorized use of nonmotorized trails, with an emphasis on places where motorized and nonmotorized trails intersect. Barrier types would be selected based on the managed uses of the intersecting trails. Barrier types may include, but are not limited to barrier rock placement, “V” gates, chicanes, and timber kissing gates (project file exhibit M-9).
- 27** To discourage trespassing on private land and provide high-quality trail experience, trail TR02 would be located out of sight of private property lines where feasible. Skid roads crossing trail TR02 will be rehabilitated for 150 ft on either side of the trail by any site-appropriate combination of the following:
- Scarifying with hand tools or excavator to a depth equal sufficient to ameliorate the presence of detrimental soil compaction (usually between 2 and 12 inches);
 - Seeding with the native plant mix as specified by the Forest botanist;
 - Placing woody material on the template;
 - Planting native shrubs or trees to augment natural vegetation; or
 - Placing barrier rock to discourage use.
- 28** The following trails would accommodate adaptive cycle technology such as handcycles: TR01, TR02, TR03, and TR04.
- 29** Any damage that occurs to National Forest System trails during logging or associated post-harvest fuels or site preparation will be repaired.
- 30** To protect the safety of the public using the area, contractors will be required to post signs warning the public of activities and traffic associated with the treatments.
- 31** If skid trails within thinning units do not currently fall on an existing off-road motorized trail, then these skid routes will be closed in a manner that does not encourage future off-road motorized use. Adequate signing and barriers will be a part of this effort.

Soils

- 32** Units 11, 54A, 64, 70, 70A, 120, and 130 would be summer logged with an in-woods processing, log forwarder system or winter logged with rubber tired skidders to minimize potential detrimental soil disturbance. These units will be monitored for soil disturbance. Other units may be selected at random for soil disturbance monitoring.
- 33** Units 42, 54, 81, and 109 would be winter logged with rubber tired skidders to minimize potential detrimental soil disturbance.
- 34** Ground cover and forest floor depth monitoring will occur in units 9, 25, 32, 36, 70, 72, 88, 98, 102, and 131 after all activities are complete.
- 35** All mechanized units that remove commercial products would be logged using designated skid trails. Equipment would occasionally leave the trails to access trees or accomplish other activities.
- 36** Skid trail spacing width must average at least 75 ft in all tractor harvest units. The goal is to occupy less than 15 percent of the treatment area including soil disturbance from skid

- trails, temporary roads, and landings associated with past and proposed activities (FW-STD-SOIL-01).
- 37** Implementation monitoring will occur on all temporary road segments after restoration activities are complete.
- 38** All existing roads and skid trails would be reused to the extent feasible unless doing so would adversely affect soil, water, or other resources. If roads or trails cannot be reused, their extent and location must be considered when laying out additional skid trails.
- 39** Logging would occur when soils are dry as determined by the hand feel method (project file exhibit K-18).
- 40** Sale administrators will monitor soil moisture conditions prior to allowing equipment to begin operations in summer. This monitoring must be documented in the Timber Sale Daily Report.
- 41** All temporary roads constructed for this project will be rehabilitated by any site-appropriate combination of the following (FW-STD-SOIL-03):
- Removing any installed culverts or temporary bridges;
 - Recontouring the entire template to natural ground contour (figure 2);
 - Where recontouring is unnecessary due to lack of slope, scarifying with excavator to a depth equal sufficient to ameliorate the presence of detrimental soil compaction (usually between 2 and 12 inches);
 - Seeding with the native plant mix as specified by the Forest botanist;
 - Placing woody material on the template; or
 - Planting native shrubs or trees to augment natural vegetation.
- 42** Winter logging will be restricted to frozen or snow cover conditions. Winter logging requires that there be enough snow to prevent muddy water from mixing into the snow where equipment operates. This will require about ten inches of snow. The depth of snow varies with the snow conditions. It takes more dry powder snow than wet dense snow to protect the soil surface. Soils must be frozen enough to prevent deformation of the soil surface where equipment operates.
- 43** All mechanical fuel reduction will be accomplished with excavators. Excavators will, to the extent feasible, remain on skid trails.

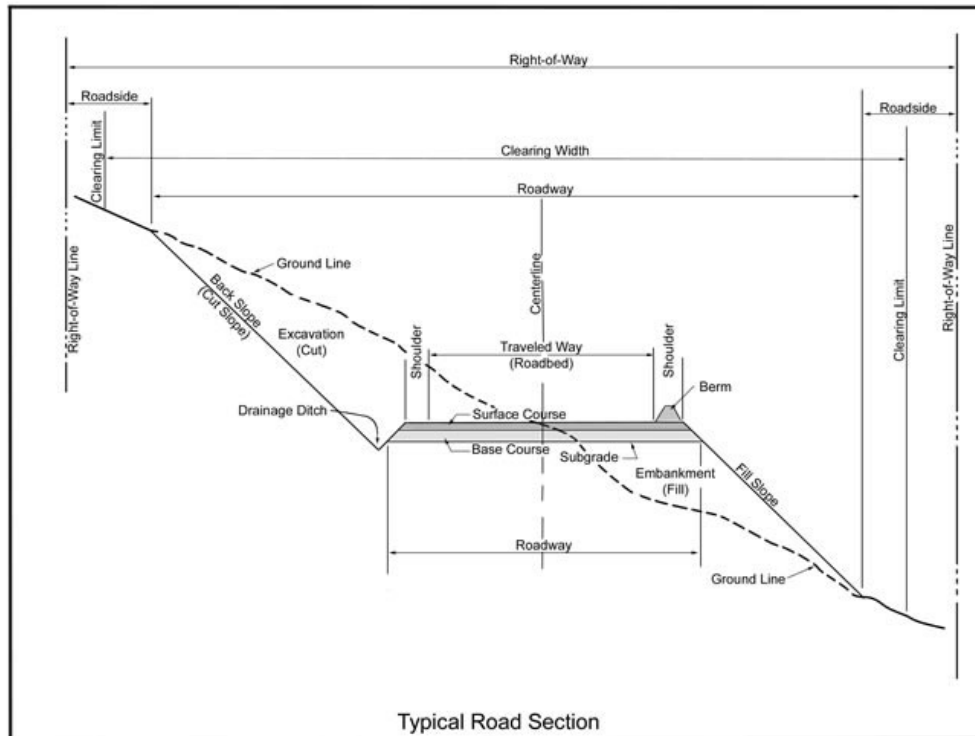


Figure 2. Road cross-section showing location of original ground line

Terrestrial ecosystems and vegetation

- 44 All snags of western larch, ponderosa pine, and black cottonwood trees greater than 20 inches d.b.h. shall be retained in vegetation treatment areas (FW-GDL-TE&V-06).
- 45 In units 36, 65, 70, 73 and 101 leave all live western larch, western white pine, and Douglas-fir trees greater than 17 inches d.b.h., large downed wood (greater than 9 inches diameter), and snags and decayed, decadent trees greater than 15 inches d.b.h (FW-GDL-TE&V-06).
- 46 Within timber harvest areas, snags, or live replacement trees shall be retained at or above the minimum levels displayed in table 5 (GA-NF-STD-01).

Table 5. Minimum average number of snags or live replacement trees per acre greater than 10 feet tall to retain within timber harvest areas

Forest dominance type	Potential vegetation type	Total minimum number of snags or live replacement trees per acres of the largest d.b.h. present (greater than 15" d.b.h.)	Minimum number of snags or live replacement trees per acre (greater than or equal to 20" d.b.h.)
All except lodgepole pine	Warm-moist	7	2
All except lodgepole pine	Cool-moist	5	2
Lodgepole pine	All	2	1

- 47 Regeneration harvest units should retain a minimum of three live reserve trees per acre of suitable western larch or ponderosa pine trees greater than 17 inches d.b.h., where present (FW-GDL-TE&V-09).
- 48 Downed woody debris of 12 tons per acre or less where it exists, is the desired amount of material to be retained in treatment units within the wildland-urban interface. A maximum of 15 tons per acre of downed woody material should be retained in treatment units within the wildland-urban interface.
- 49 Desired downed woody debris for RMZ vegetation treatment areas and units outside the wildland-urban interface is 22 tons per acre for warm-moist potential vegetation type (PVT) and 25 tons/acre for cool-moist PVT.
- 50 Retain (where it exists) downed woody debris which includes the longest material available (e.g., 16 feet long or longer) and the largest diameters available (e.g., greater than or equal to 15 inches d.b.h.), sufficient to achieve the tons per acre. (FW-GDL-TE&V-08)
- 51 Excluding live birch cutting units, hardwood trees would not be targeted for removal and would be left intact to the extent possible, considering operational feasibility.

Scenery

- 52 Shape individual units, to the extent feasible (economically and technically), to create a natural-appearing unit. Vegetation treatment units should avoid symmetrical shapes, straight lines and angles, disproportionate (to surrounding untreated units) opening and cluster sizes, and artificial lines and patterns. Additionally, treatments should follow natural topographic breaks and changes in vegetation, treat the entire landform and along roadways vary unit sizes, widths, shapes and distances from center lines as much as possible (FW-GDL-SCN-03).
- 53 In units bordering within the wild and scenic river corridor or North Fork Road, stumps should be cut to 8 inches or less in height. Slash, root wads, and other debris will be removed, buried, burned, chipped or lopped and scattered to a height no greater than two feet within 150 ft or until topography makes unit not visible (whichever is less distance) in these sensitive viewsheds (MA2-STD-02, FW-GDL-SCN-03).
- 54 Mask (black out) any painted boundary trees or leave tree marking that is clearly visible from the wild and scenic river or the North Fork Road. It is not necessary to extend this treatment further than 150 ft or until topography makes unit not visible (whichever is less distance) from the viewing locations. Other options to mitigate this visual impact include: use cut tree marking or using removable tags to designate leave or boundary trees (MA2-STD-02, FW-GDL-SCN-03).
- 55 In units along private land boundaries, use irregular clumping and blending of unit edges to avoid introducing dominating lines that could result from introducing unnatural appearing edges (FW-GDL-SCN-03).
- 56 When using cable logging systems, keep cable/skyline corridors as narrow as possible to reduce contrasting linear effects. Use irregular clumping to create mosaic landscape

- character on edges of corridors, use open areas adjacent to corridors. (FW-GDL-SCN-03).
- 57 In unit 121 retain Flathead river-side vegetative screening where it exists within 100 ft of the river edge. Saplings, brush and other vegetation within 100 ft of the river are often the most effective screening to soften visual impacts of harvest openings (MA2-STD-02).

Wildlife

Ungulate habitat

- 58 In vegetation treatment units within elk or mule deer winter range (units 2, 14, 16, 17, 23, 44, 72, 96, 108, 112, 113, and 114) and white-tailed deer winter range (units 6, 46, 55, and 109), maintain, where present, full-crowned trees (primarily Douglas-fir) in the overstory to provide snow intercept cover (FW-GDL-WL DIV-01). Douglas-fir should be favored over western larch in these units.
- 59 If funding is available, in regeneration units 9, 11, 23, 29, 31, 42, 48, 49, 70, 70a, 74, 81, 86, 92, 93, 99, and 101, decadent shrubs (primarily maple and willow) should be hand slashed throughout the units to improve forage conditions for forest ungulates.
- 60 If funding is available, in commercial thin units 2, 3, 4, 5, 6, 7, 10, 14, 16, 17, 27, 40, 46, 46a, 47, 50, 51, 53, 54, 54a, 55, 68, 71, 82, 85, 96, 109, 112, 114, 119, and 126, decadent shrubs (primarily maple and willow) should be hand slashed throughout the units to improve forage conditions for forest ungulates.

Riparian habitat

- 61 Where new openings would be created in riparian management zones through even-aged regeneration harvest (units 9, 20, 25, 25a, 29, 31, 32, 33, 42, 44, 65, 70, 70a, 73, 74, 86, 88, 101, 102, 108, 121, and 131), each created opening's distance to cover would not exceed 350 ft to provide wildlife habitat structural diversity, connectivity, and cover (FW-GDL-RMZ-09). Where the distance to cover would be greater than 350 ft, intermediate treatments would be used within the RMZ portion of the regeneration unit to maintain connectivity for wildlife (FW-GDL-RMZ-09).
- 62 Where vegetation treatment would occur within riparian management zones, all snags greater than or equal to 12 inches d.b.h. would be retained within the harvest area to contribute towards more diverse forest structure and desired habitat conditions by providing higher snag and downed wood densities (once the snags fall) as compared to areas outside riparian management zones (FW-GDL-RMZ-10).
- 63 In vegetation treatment units within one-half of a mile of Flathead River (121, 123, 130, and 131) and Spoon Lake (42, 48, 65, 74, 81, 99, 119, 119a, 141, 202, 205, 209, and 217), live ponderosa pine, western larch, or black cottonwood trees greater than or equal to 20 inches d.b.h should be retained where they exist to provide bald eagle nesting and roosting habitat (FW-GDL-TE&V-10).
- 64 In the birch firewood cutting area, some of the largest birch trees (approximately six trees per linear mile of road) will be marked for retention as wildlife trees to provide future snags for nesting and foraging (FW-DC-TE&V-09).

- 65 Birch cutting within the RMZ will only occur in designated areas approved by wildlife, botany, and aquatic specialists. Birch cutting will not occur within the inner RMZ (FW-STD-RMZ-06).

Timing restrictions

- 66 To reduce the risk of disturbance to the grizzly bear population, project activities would not occur in spring habitat during the spring time period (April 1 to June 30). For any excepted activities, the duration of the activity and use of restricted roads may be limited (FW-GDL-TE&V-01). Project activities occurring along open roads would not be subject to this timing restriction.
- 67 To reduce the risk of disturbance to nesting common loons on Spoon Lake and Cedar Creek Reservoir, vegetation treatments would not occur from April 1 to August 1 within 150 yards of active nesting and nursery sites. This restriction would apply to units 119, 119a, 82, and 82a (FW-GDL-WL DIV-05).
- 68 If it is determined that wolf denning is occurring in the project area, no vegetation activities would occur within 0.25 mile of active den or rendezvous sites from April 1 to July 1 (FW-GDL-WL DIV-05).
- 69 If an active northern goshawk nest is located in or adjacent to a vegetation treatment unit, project activities would not occur within 0.25 mile of the nest from March 1 to August 15 (FW-GDL-WL DIV-05).

Access management

- 70 Project would be designed so that on-the-ground implementation of project activities affecting access management conditions (e.g. activities requiring use of temporary or restricted roads) would not exceed 5 years to reduce the potential of grizzly bears being disturbed or displaced (FW-GDL-IFS-01). Exceptions may be made where necessary, however, if an extension is required, reasons would be documented in writing prior to authorization of the extension.
- 71 There would be no net decrease to the baseline for secure core and no net increase to the baseline open motorized route density or total motorized route density in the affected bear management subunit (FW-STD-IFS-02) and access management conditions should be restored to pre-project levels within one year after completion of the project in order to reduce the duration of grizzly bear displacement or disturbance due to project-related activities (FW-GDL-IFS-02). This includes rehabilitation of temporary roads, returning restricted roads used as haul routes to administrative access only (10810, 10810A, 10811, and 10813), and replacing the berm on 10877.
- 72 The 10-year running average for temporary changes to access management conditions in the affected bear management subunit would not exceed 5 percent increase in open motorized route density, 3 percent increase in total motorized route density in each subunit, and 2 percent decrease in secure core (FW-STD-IFS-03).
- 73 Newly constructed firelines should be located away from public access points to prevent their use as motorized travel routes (FW-GDL-FIRE-03). Where fireline must be constructed near public access points, fireline should be treated in a manner to make inaccessible to wheeled motorized vehicles during the non-denning season.

Grizzly bear-human conflict

- 74 Trails should be constructed to limit the risk of bear-human conflict by avoiding areas of dense vegetation, such as that found in riparian habitat, maintaining sight distances, and limiting speed of travel. In addition, information on how to avoid and respond to bear-human encounters should be posted at trailheads (FW-GDL-IFS-015).
- 75 Contractors, operators, and their employees should be informed of procedures for safely working and recreating in grizzly bear country and of food and wildlife attractant storage special order prior to beginning work and annually thereafter, in order to reduce the risk of grizzly bear-human conflicts (FW-GDL-WL-01).

Fire and fuels

- 76 Implementation of the prescribed burns may extend for several years into the future depending on desirable burning weather opportunities. Prescribed burns would be ignited using hand ignition and could occur in the spring (with coordination with wildlife biologist), summer, or fall when suitable burn and air quality conditions exist. Prior to broadcast burning, fireline would be constructed where needed.
- 77 Prescribed burning prescriptions would be prepared and implemented to not exceed moderate burn severity conditions and would target the treatment of the existing shrub/grass dominated openings. Prescribed burns should be implemented in a way to maintain, where present, patches of full-crowned trees (primarily Douglas-fir) in the overstory to provide snow intercept cover within the burn unit boundaries (FW-GDL-WL DIV-01).
- 78 Prior to implementing prescribed burns in units 300 and 300a, measures should be taken to prevent negative impacts to full-crowned trees (primarily Douglas-fir) retained in the overstory of regeneration units 44, 72, and 108 to provide snow intercept cover (FW-GDL-WL DIV-01).

Air quality

- 79 On the Flathead National Forest, prescribed burning is generally accomplished when dilution, dispersal, and mixing conditions are considered fair to excellent. Prescribed burning requires a permit from the Montana/Idaho Airshed Group and the burn must be implemented within the regulatory framework. This includes daily approval from the Flathead County Air Quality hotline and the Montana/Idaho Airshed Group

Duration and timing of activities

- 80 Unit 119A and 119 will require winter logging and in-woods processing to reduce ground disturbance, minimize weed spread, and avoid potential seasonal conflicts with local residents and visitors. Fuels piling and treatment could occur during non-winter season.

Appendix B. Response to Comments

A 30-day comment period for the Crystal Cedar Environmental Assessment began June 5, 2019.

The environmental assessment is subject to the Project-Level Predecisional Administrative Review Process (36 CFR 218).

To be eligible to submit an objection under the Project-Level Predecisional Administrative Review Process, individuals and entities must have provided specific written comments (36 CFR 218.25(3)) within the scope of the proposed action, have a direct relationship to the proposed action, and must include supporting reasons for the responsible official to consider (36 CFR 218.2).

The interdisciplinary team reviewed public comments and considered the substance of the concerns, evaluated whether they triggered a change in the environmental analysis, and wrote responses to specific written comments (36 CFR 218.2). In some cases, comments were similar enough that one response was prepared for multiple comments. Additional discussions or factual and clarifying information have been incorporated into the updated environmental assessment. Page numbers included in responses refer to the November 2019 updated environmental assessment.

The following is a list of individuals and organizations that submitted comments on the June 2019 environmental assessment.

Table 6. List of commenters on Crystal Cedar Environmental Assessment

Commenter	Project file exhibit				
Ann Brooks	F-13	Fred and Lynne Vanhorn	F-33	Michelle Stone	F-54
Cyril Burguiere	F-14	Scott Quinby	F-34	Kate Weatherwax	F-55
Sarah Dakin	F-15	Susan and Michael Sherman	F-35	Karl Sebbby	F-56
DREAM Adaptive Recreation	F-16	Amy Olson	F-36	Elyse Pare	F-57
Jane Eby	F-17	Bill Adams	F-37	Terrie Palmer	F-58
Alan Gregory	F-18	Susan Wagner	F-38	Greg Priest	F-59
Becky Lomax	F-19	Tara Trotter	F-39	Rich Penrod	F-60
Debbie Mallam	F-20	Pieter "Fred" de Lepper	F-40	Robert Dunn	F-61
Montana Fish, Wildlife, and Parks	F-21	Brian Peck	F-41	Ryan Brooks	F-62
Chris Nelson	F-22	Lisa Jones	F-42	Daniel Brown	F-63
David Nickelson	F-23	Craig Christophersen	F-43	Mary McCarthy	F-64
Billy Sandstrom	F-24	Molly Miller	F-44	Paul Tripp	F-65
Stacey Schnebel	F-25	Tim Marchant	F-45	David Marx	F-66
Michael Shepard	F-26	City of Columbia Falls	F-46	Tyler Tourville	F-67
Brenda Winkler	F-27	Laura Strong	F-47	Katherine Major	F-68
Denise Davies	F-28	Flathead Area Mountain Bikers	F-48	Marc Obrien	F-69
Jennifer Drew	F-29	Bonnie Streeter	F-49	Stephen Shea	F-70
Gary Saurey	F-30	Rebecca Briber	F-50	Tyler Hoppes	F-71
Lindsey Bengtson	F-31	Matt Kennedy	F-51	Rick Williams	F-72
Deb Kampsula	F-32	Kathleen Schlabach	F-52, F-53	Laura Raddatz	F-73
				Tanner Claridge	F-74
				Devin Popper	F-75
				Colin Baxter	F-76
				Matt Barnes	F-77

WildEarth Guardians	F-78
Kevin Kosnoff	F-79
Keith Lederman	F-80
Andy Burbine	F-81
Whitefish Legacy Partners	F-82
Bryan Tremayne	F-83
Andy Crites	F-84
Jake Cook	F-85
Miriam Lewis	F-86
Sam Kavanagh	F-87
Beth Thomas	F-88
Vonda Garcia	F-89
Arne Boveng	F-90
April Boveng	F-91
Austin Smith	F-92
Lisa McKeon	F-93
Dave Windauer	F-94
Chris Kratsch	F-95
Sarah Jones and Josh Gleason	F-96
Grady Bennett	F-97
Peg Havlovick	F-98
Alisia and Burt Jesmore	F-99
Martha Hunt	F-100
Scott Ogradnik	F-101
Louis Schmidt	F-102
Darin Fisher	F-103
Scott Thomas	F-104
Whitefish Bike Retreat	F-105
Charlotte Jansson	F-106
Michael Meador	F-107
Monica Preisendorf	F-108
Andy Zimmerman	F-109
Sara O'Brien	F-110
Jeffrey von Kiper	F-111
Daniel Savage	F-112
Miles Frank	F-113
Rebecca Baker	F-114
Julie Sebby	F-115
Jeff Windorski	F-116
Matt Winchel	F-117
Paul Alsippi	F-118

Theresa Vonada	F-119
Kristen Barbaree	F-120
Jardy Kyner	F-121
Tony Powell	F-122
Nathaniel Pulsifer	F-123
Dan Block	F-124
Dallas Davis-Timms	F-125
Swan View Coalition	F-126
Daniel Hansen	F-127
Jeremiah Martin	F-128
Flathead Land Trust	F-129
North Shore Nordic	F-130
Margosia Jadkowski	F-131
Genevieve Bennett	F-132
Charlie Hoving	F-133
Friends of the Wild Swan	F-134
Travis Feller	F-135
Jessica Bruinsma	F-136
Charles Overcast	F-137
Peter Steele	F-138
Dee Brown	F-139
Claude Boiteau	F-140
Gateway to Glacier	F-141
Lindsay Goudreau	F-142
Ken Carpenter	F-143
Thomas Danley	F-144
Ryan Sanford	F-145
Myrna Matulevich	F-146
Shawn Lezner	F-147
Pete Costain	F-148
Emily Sedgwick	F-149
Clayton Cardarelli	F-150
Greg Beardslee	F-151
John Gangemi	F-152
Montana Department of Natural Resources and Conservation	F-153

Cindy Weaver	F-154
Jon Elliott	F-155
Jon Medler	F-156
Larry Youman	F-160

Aquatics

Comment (F-41)

...in a 6/14/19 article by the Daily InterLake, area homeowners expressed concern that a Forest Service road crossing the headwaters of Garnier Creek would affect stream flows to their spring. They reported that agency personnel told them that since that road was used for logging 60 years prior, the soils were already compacted, and so effects shouldn't be "lasting" or "prolonged." This suggests that (a) The forest hydrologist isn't aware that compaction lessens over time (b) that no actual core samples have been collected along the road to provide data on compaction, and potential sedimentation; and (c) that the Forest Service is willing to put up with shorter-term damage to area streams regardless of homeowner concerns. Definitely not the required "hard look." called for under NEPA.

Response

The comment is in reference to proposed temporary road "E" as displayed in map 1 (vegetation management) of the EA. Temporary road "E" utilizes a historic road template to minimize displacement and compaction of soils that would otherwise be associated with new road construction. Soil survey data collected on site by the forest soil scientist is discussed in the Soils response to comment section below. The soils response to comment and figure 1 and 2 included in the soil response, portray the differences in soil productivity on the historic road template (from displacement and compaction) relative to adjacent undisturbed soils. Additionally, treatment methods for harvest in proposed units 54 and 109 would occur under winter conditions to further mitigate potential soil disturbance (table 6, pp. 15-19 of the updated EA). Further, forest plan standards for soils FW-STD-SOIL-03, as reflected in project design feature 41, directs that temporary roads would be rehabilitated following use which would begin the process of restoring soil productivity and improving soil hydrologic function. These methods are all best management practices for forestry in Montana that aim to minimize potential effects to soil and water resources (DNRC 2006). Field review of BMP application and effectiveness in Montana occurs bi-annually. Results from the most recent field review show that across all ownerships, BMPs were properly applied and were effective in protecting soil and water resources over 97 percent of the time (MDNRC 2018).

Proposed temporary road "E" has no stream crossings and based on Water Erosion Prediction Program (WEPP) modeling is not anticipated to deliver sediment to Garnier Creek (project file exhibits L-09 and L-14).

Comment (F-121, F-78)

The area of Crystal Creek, Cedar Flats, and Flathead Forest Service lands in the proposed Crystal/Cedar Flats project area has many streams, creeks, springs, ponds, and marshes. Many of the private land owners that border this area have water rights. Any disturbance caused by the proposed project would be a violation of The Clean Water Act. The many streams and wetlands contribute to large riparian areas that should not be disturbed.

The Forest Service should provide detailed, site-specific information regarding existing conditions. We are particularly concerned about the Forest Service's lack of knowledge regarding water sources, fens, wetlands, and drinking water sources. Without this site specific information,

the Forest Service is unable to take the required “hard look” at the impacts of its proposal and the public is unable to provide meaningful and informed public comment.

Response

Proposed activities would be consistent with the forest plan (project file exhibit L-17 and R-3) which includes desired conditions, standards and guidelines for protecting water quality and associated beneficial uses which are fundamental for compliance with the Clean Water Act. Forest plan standards for inner riparian management zones (RMZs) meet or exceed requirements set forth in the Streamside Management Zone law (77-5-301[1] MCA) which are proven effective at protecting soil and water resources over 97 percent of the time (MDNRC 2018). Work associated with stream crossings would be subject to all applicable regulatory requirements, and permits would be obtained through the State’s joint permitting process.

Table 5 on p. 15 of the updated EA displays total area and treatment type proposed within RMZs. Pages 76-78 and table 45 in the updated EA address potential effects to water quality and associated beneficial uses that could occur with implementation of the proposed action. Potential effects to water quality are primarily associated with upsizing “high risk” stream culverts on existing roads which may temporarily increase turbidity in surface waters below construction sites. Proposed work would reduce potential water quality and stream habitat effects that could occur if “high risk” culverts were to fail. Project file exhibit L-3 presents estimates of sediment volumes associated with culvert replacements relative to culvert failure scenarios on the Flathead National Forest.

As detailed on pp. 76-78 of the updated EA, downstream water quality effects are not anticipated to be measurable beyond the reach scale (~810 meters as presented in Foltz, Yanosek, and Brown 2008). Based on current Montana DNRC water rights query for the area (project file exhibit L-26) and field verification of surface water connectivity, surface diversions for private water rights do not exist within this affected downstream zone.

Comment (F-78)

In light of the impacts to riparian areas, the Forest Service should explain how the project will ensure bull trout critical habitat (Flathead River, designated for foraging, migratory, and over wintering habitats) is not harmed. Increases in sediment delivery (table 45) would potentially alter downstream channel habitat conditions by increasing percent pool tail fines, reducing median substrate particle size, and decreasing residual pool depths.

Response

Effects to aquatic species (including bull trout) are presented on page 79 of the EA. A “no effect” biological assessment was prepared. Bull trout do use the main river as a migratory corridor but do not use any streams for feeding or rearing within the project area.

As detailed on p. 79 of the updated EA, “water quality reductions or measurable increases in sediment delivery, and associated nutrients, would not reach the Flathead River system due to the spatial distribution of potential sediment sources, scale of predicted sediment delivery, and local hydro-geologic setting (e.g. hydrologic sinks, high permeability surface geology, discontinuous nature of surface water features).” Therefore, because measurable effects to water quality, aquatic habitat, and channel morphology are not anticipated in designated bull trout critical habitat in the Flathead River (project file exhibit L-14), and the species are not present in affected stream reaches, effects to the species or their habitat are not anticipated (project file exhibit L-15).

Comment (F-134)

Furthermore, it does not analyze or disclose how removing riparian vegetation will impact groundwater and stream upwelling. Or how riparian and upland logging will impact spring and stream flow water rights that adjacent landowners have.

How will riparian logging impact maintaining adequate down woody material for streams and fish habitat?

Response

As outlined in project file exhibit L-1, effects from proposed management actions on water yield were considered but not carried forward for analysis. This is because the record of evidence associated with past equivalent clearcut acres (ECA) analysis indicate the analysis is not necessary in all circumstances (project file exhibit L-22). And, the scale and intensity of proposed vegetation treatments do not warrant ECA evaluation (limited stand replacement harvest). Furthermore, soils and geology in the area have inherently high infiltration capacities (project file exhibit L-28).

Table 5 on p. 15 of the updated EA displays total area and treatment type proposed within RMZs, and regeneration harvest is not proposed within inner RMZs. Forest plan standards for inner riparian management zones (RMZs) meet or exceed requirements set forth in the Streamside Management Zone law (77-5-301[1] MCA) which are proven effective at protecting soil and water resources over 97 percent of the time (MDNRC 2018). The project design feature 49 identifies that within the RMZ the desired downed woody debris is 22 tons per acre in warm-moist PVT and 25 tons per acre in cool-moist PVT. Design feature 50 also identifies that large diameter material is most desirable for retention, where it exists. Design feature 62 requires that all snags greater than or equal to 12 inches d.b.h would be retained within the harvest area of a riparian management zone. The forest plan FEIS discusses the potential effects of vegetation management in riparian management zones on p.143-145 and concludes that the forest plan “includes direction that would result in the retention of forest conditions and cover that protect the functional attributes of riparian and aquatic resources when conducting vegetation treatments” (p.144).

Comment (F-96)

Moreover, where this existing single-track trail (proposed to be the temporary logging road through units 54 and 109) crosses through the riparian/ fen area which joins the two units together it reveals a level area that is no more than 10’ wide (even after the removal of vegetation) and makes a sharp “S” turn. This trail could in no way accommodate a logging truck or fit the definition of a temporary road as is. It would demand a much more invasive and disruptive temporary road to be constructed to meet the “average 22 feet” width as indicated in the EA. And when the proposed road is decommissioned, further disruption to the soil and subsoil layers will occur adding further destruction of the water source. This is clearly a bigger threat to our water source than the Forest would like to admit to the public. The activities presented in the EA will, de facto, create a much more destructive impact than what is concluded in the EA, affecting the riparian/ fen area(s), the underground water flows, and our source of clean water as well as our water rights. This is dangerous ground to tread.

Response

The comment is in reference to temporary road “E” which would utilize the existing historic road template to minimize displacement and compaction of soils that would otherwise be associated with new road construction. The exact point of reference in the comment was evaluated onsite by the forest hydrologist in 2018, and again in 2019 (with the commenters), does not directly cross a stream or wetland of any type and was identified as an ephemeral area because it lacked channel defining characteristics as detailed in the State SMZ law Rule: 1 (36.11.311 and 36.11.312) (also see project file exhibit L-5). This point is the junction of the historic road and user created trail leading to private property.

Soil survey data collected on site by the Forest soil scientist (project file exhibit K-3) portrays the differences in soil productivity on the historic road template (from displacement and compaction) relative to adjacent undisturbed soils. In response to the comments received from adjacent landowners, an additional site assessment was conducted (project file exhibit K-20) and is discussed below in the soils section. The difference is also visually apparent based on the type and vigor of vegetation on the road bed relative to adjacent undisturbed areas which was a topic of discussion on-site with the commenter on June 6, 2019. Additionally, treatment methods for harvest in proposed units 109 and 54 would occur under winter conditions to further mitigate potential soil displacement and compaction (table 6, pp. 15-19 of the updated EA) which would be the primary mechanisms for altering surface and groundwater hydrology. Furthermore, forest plan standards for soils FW-STD-SOIL-03, as reflected in project design feature 41, require temporary roads to be rehabilitated following use to begin restoring soil productivity and soil hydrology. These methods are all best management practices for forestry in Montana that are successful at minimizing potential effects to soil and water resources (MDNRC 2006, MDNRC 2018). Field review of BMP application and effectiveness in Montana occurs bi-annually. Results from the most recent field review show that across all ownerships, BMPs were properly applied and were effective in protecting soil and water resources over 97 percent of the time (MDNRC 2018). Furthermore, “road obliteration reduces the long-term risk of sediment delivery to streams from roads and roadside ditches through reducing culvert failures and landslides, eliminating vehicular traffic, improving infiltration of water into the ground through decompaction of road surfaces and reducing overland and ditch flow into streams” (FEIS p.116, 2018).

As detailed on p. 72 and table 40 of the updated EA, indicator measure #1 (miles of road/trail interaction with riparian areas and wetlands) was used to quantify possible effects on stream flow and recharge with the understanding that compacted surfaces can alter surface and groundwater recharge patterns and more disturbance has greater potential to affect these hydrologic processes. Kahklen and Moll (1999) found that the measurable effect of a road on groundwater could only be observed 5-10 meters below a road. Page 72 of the updated EA (measurement indicator 1) utilizes guidance from Kahklen and Moll (1999) to address road compaction effects to groundwater adjacent to lentic habitats, and the minimum State SMZ buffer for lotic habitats. Table 44 of the updated EA displays results of the analysis. Because the spatial distribution of indicator 1 is important (e.g. proximity to spring developments or private property), an additional map (project file exhibit L-27) was included as part of the project record to supplement spatial information presented in table 44.

Comment (F-96)

Additional Forest Service documents continue to reveal the imminent threat to our water and support our concerns, including:

“There is scant information on the effectiveness of BMPs applied during skid road use when the potential for water quality impact is high.” (REFERENCE A - Effectiveness of

Best Management Practices that Have Application to Forest Roads;
https://www.fs.fed.us/nrs/pubs/gtr/gtr_nrs163.pdf)2

“Ground-based harvest systems can cause the greatest area of detrimental compaction during forest management activities. After a ground-based harvest ends, skid trails and landings may be visible for years or decades. This effect is compounded in second entry harvest areas where dozer slash piling took place in the first entry.” (REFERENCE B – Technology and Development at the USDA Forest Service: Multipurpose Subsoiling Excavator Attachments; link https://www.fs.fed.us/t-d/programs/forest_mgmt/projects/subsoiling/)

This is, indeed, second entry in sections 54 and 109 and the compounded risk of damage to soils and water flows is totally unjustified.

...Do not build a temporary road connecting areas 54 & 109 eliminating the risk of destroying or otherwise negatively altering our water source and water rights.

...Do not log or manage vegetation in areas 54 & 109 with heavy machinery. Instead, consider, if absolutely necessary, hand managing these areas. Both water quantity and quality are at stake in these areas and hand managing would help reduce the water degradation issues at hand.

...Consider eliminating vegetation management in units adjacent to RMZs and areas of heavy wildlife use. Units 54 and 109 meet these criteria.

Response

As detailed on p. 5 of “reference A” cited in the comment above, “From the perspective of road BMPs and the Clean Water Act of 1972, high-risk areas are primarily three types of areas susceptible to mass failures (specific regions, specific geology or soil, steep terrain) and water bodies (predominantly streams).” Vegetation treatment in proposed units 54 and 109 and temporary road “E” do not overlap with areas prone to mass failure (project file exhibit K-03 and K-19), are designed to avoid riparian areas through application of forestwide standard FW-STD-RMZ-01 (project file exhibit R-03), and contains no stream crossings (project file exhibit L-5). Additionally, treatment methods for harvest in proposed units 109 and 54 would occur under winter conditions to further mitigate potential soil displacement and compaction (table 6, pp. 15-19 of the updated EA) which would be the primary mechanisms for altering surface and groundwater hydrology or creating detrimental soil conditions. Furthermore, forest plan standards and project design feature 41 for soils (project file exhibit R-03) require temporary roads to be rehabilitated following use to restore soil productivity and soil hydrology, to improve soil hydrologic function relative to the existing condition. These methods are all best management practices for forestry in Montana that are successful at minimizing potential effects to soil and water resources (MDNRC 2006, MDNRC 2018). Field review of BMP application and effectiveness in Montana occurs bi-annually. Results from the most recent field review show that across all ownerships, BMPs were properly applied and were effective in protecting soil and water resources over 97 percent of the time (MDNRC 2018).

The literature presented in the comment were reviewed but not included in the analysis for the following reasons:

- “Reference A” cited in the comment above is a synthesis of existing literature covering BMP application and effectiveness over multiple climatic, soil and geologic regions. Analysis in the updated EA utilizes more recent and locally relevant information regarding application and effectiveness of forestry BMPs in Montana presented in

MDNRC 2018 and project file exhibits K-5, 6, 7, 9, 10, 11, 12, 13, 14, and 17. Reference A was utilized in the preparation of the Flathead National Forest Plan FEIS, Volume 4.

- “Reference B” cited in the comment above highlights the fact that ground-based harvesting can cause the greatest area of detrimental compaction. The proposed action specifically identifies winter treatment methods in units 54 and 109 to minimize detrimental compaction and ensure compliance with forest plan standards (specifically project design feature 41, which implements FW-STD-SOIL-01 in project file exhibit R-3).

Comment (F-96)

Forest thinning, vegetation management, and prescribed burning in areas 51, 54, 109, 07, 300, 300A will negatively affect both water quantity and water quality. The proposed actions in these areas will increase run-off debris, sedimentation, and mineral loads in this watershed (see Hydrology Issues & Concerns section above). Water quantity will also be negatively altered by rising temperatures in thinned areas due to increased sun exposure and lack of canopy and shade. In addition, the prescribed burning of areas 300 and 300A will have a direct negative effect on the water quality and water quantity entering Garnier Creek as the snowmelt from at least three separate drainages directly feed the riparian zone/ fen that then feeds its groundwater springs to our only source of clean water. The EA does not provide any kind of estimate for the increase in water quantity that will occur from logging, thinning, road building, and burning. Water quantity, not just water quality, is of tantamount importance to our access to clean water.

This EA does not treat water quantity analysis and disclosure in a competent nor convincing manner. The EA provides only a sporadic paragraph (see EA pages 71 and 75, respectively) on “water quantity,” while going into greater detail on “water quality” and the contribution of sediment to streams from logging, burning, roadbuilding and trails. The EA, instead, focuses solely on the miles of roads and trails that are near bodies of water. This obviously does not account for the effects of logging and vegetation removal on this watershed.

Response

Water Yield:

As detailed in the proposed action, treatment types proposed for units 300 and 300A are prescribed fire while proposed treatment in units 07, 51, 54, and 109 are commercial thin. Likewise, temporary roads in these areas would utilize existing road templates rather than constructing new roads. As outlined in project file exhibit L-1, effects from proposed management actions on water yield were considered but not carried forward for analysis for the following reasons:

Prescribed fire- “literature suggests prescribed fire does not alter vegetation or soil properties enough to create measurable differences in water yield (Troendle and others 2009).”

Commercial thinning- “Record of evidence associated with past ECA analysis indicate the analysis is not necessary in all circumstances (Kendall 2015). Scale and intensity of proposed vegetation treatments do not warrant ECA evaluation (limited stand replacement harvest). Soils and geology in the area have inherently high infiltration capacities.”

Water quality/water temperature:

As detailed in project file exhibit L-1: “modeling for proposed units in the project area suggest harvest activities and prescribed fire with application of site appropriate RMZs and BMP application would not result in measurable sediment delivery to surface water streams. These data are available in the project file (project file exhibit L-16). This is consistent with analysis of past harvest on the Flathead and State BMP field review results. Road/stream interaction tends to be the primary source of sediment delivery from forest practices on the National Forest. Proposed work within inner RMZs is limited to fuels reduction by hand treatment and would consistent with the Forest Plan and State SMZ law). Effects to water quality from these types of treatment would not be measurable given effectiveness of BMPs (MDNRC 2018) (FEIS pp. 123-4, 2018).”

Project file exhibit L-16 presents WEPP modeling outputs and further summarizes potential risk explaining that all treated hillslopes show predicted sediment delivery values within the predicted range for undisturbed forests as outlined in Elliot (2013) which is 0 to 0.0293tons/acre (English units of measure). Yellow polygons represent the upper end of values from Elliot (2013) but site verification indicates these hillslopes are disconnected from surface water features and those that are not have been assigned greater RMZ buffers widths to negate potential delivery above what would naturally occur. Thus, sediment delivery rates from proposed vegetation treatments are not predicted to be measurably different from rates associated with undisturbed forests. Additionally, implementation/effectiveness of modern forestry BMPs are documented to be greater than 97 percent successful at preventing sediment delivery to streams (MDNRC 2018). For these reasons, sediment delivery from proposed vegetation treatments is not an issue relevant for further analysis in the Crystal Cedar updated EA and will not be included.

Comment (F-96)

There is a failure to use “equivalent clear-cut area” comparisons to estimate the increase in water yield as a result of logging and vegetation management. Increasing water quantity peak flows is regarded as highly detrimental causing increased stream flows and streambank erosion early, then later leaving streams with lower flows and much less available water.

Removal of tree cover increases the amount of snow and rain that reach the ground, decreases the amount of time it takes for the snow pack to melt due to increased sun exposure and higher temperatures, and together increases the peak flow and surge of water that ends up running off the land and into streams instead of slowly perking down to recharge groundwater. Increased runoff from logged areas will also run subsurface to reach streams without necessarily being intercepted by roads, ditches and trails that then direct that water to the streams (although these latter things indeed make the situation much worse). Why has the Forest abandoned this analysis method? Why does it not directly address these issues in the EA? Why is the Forest hiding science that clearly proves your actions are detrimental to our water source?

Response

As outlined in project file exhibit L-1, effects from proposed management actions on water yield were considered but not carried forward for analysis because prescribed fire does not alter vegetation or soil properties enough to create measurable differences in water yield (Troendle and others 2009).” And, the record of evidence associated with past ECA analysis indicate the analysis is not necessary in all circumstances (project file exhibit L-22). Scale and intensity of proposed vegetation treatments do not warrant ECA evaluation (limited stand replacement harvest). Soils and geology in the area have inherently high infiltration capacities” (also see project file exhibit L-28).

Comment (F-96)

Here the Forest admits that negative effects are likely to occur but then state it would be difficult to estimate. So instead of offering a scientific site analysis to gather real data ensuring the health of our water source, the Forest instead suggests moving forward regardless. Not even attempting to quantify the effects is not the answer here. Our water rights are in jeopardy and the Forest is turning a blind and arrogant eye to this threat. Then the Forest continues to admit that whatever damage might happen would be short-term:

Chapter 3 “Watersheds (water quality): Management activities identified under the proposed action would increase sediment delivery to area streams relative to current conditions (Table 45, EA page 76, Project File Exhibit L-14). The principal mechanism for sediment delivery is short term (less than 3 years).” (EA, pg. 76)

Short term degradation of our water source? Without site-specific science you’re simply guessing here. Even one single day without the quantity and quality of water we use today would be catastrophic to our way of life and threaten our legal access to clean water.

Response

Table 45 of the updated EA quantifies potential sediment delivery associated with the proposed action and does so both temporally and spatially by source. Project file exhibits L-9, L-14, and L-16 support data displayed in table 45. The subject water right referenced in the comment (76LJ 78552 00) is a groundwater certificate for a spring development adjacent to Garnier Creek on private land. Field data from public land above the source (project file exhibit L-5) document lack of surface water connectivity from potential sediment sources on public lands to private lands in this area (project file exhibit L-14). Because a surface water connection is not present, short term surface water quality effects detailed in the EA would not overlap spatially with the developed spring located below on private land. Furthermore, the analysis utilizes “short term” (less than 3 years) and “long term” (greater than 3 years) to provide temporal context to possible effects. While the analysis acknowledges potential for short-term effects to surface water quality, it also clearly articulates potential long-term benefits of such work on p. 79 of the updated EA.

Proposed activities would be consistent with the forest plan (project file exhibit L-17 and R-3) which includes standards and guidelines for protecting water quality and associated beneficial uses which are fundamental for compliance with the Clean Water Act. Forest plan standards for inner riparian management zones (RMZs) meet or exceed requirements set forth in the Streamside Management Zone law (77-5-301[1] MCA) which are proven effective at protecting soil and water resources over 97 percent of the time (MDNRC 2018). Work associated with stream crossings would be subject to all applicable regulatory requirements, and permits would be obtained through the State’s joint permitting process.

Soils**Comment (F-13)**

I am SO glad that 119 and 119a are being designated as a winter commercial logging project...I noticed on Table 56 that the percentage of soil affected detrimentally by the proposed action doubles in 119 and increases from 0 to 8% in 119a. With the temporary roads being put in on snow, they account for 0% of the increased soil damage (on Table 56), so Im thinking that all the soil damage from the proposed action will come from the “nonwinter months” of treatment? If

that is the case, please consider having all the mechanically piled fuels in piles completed in the winter, on snow.

Response

Thank you for your comment. The detrimental soil estimates have been corrected in the updated EA on p. 104 to reflect the required winter logging with a log forwarder. In response to your concern about mechanical fuels treatment occurring in units 119 and 119a in the non-winter months, the responsible official has decided that in the selected alternative included in this draft decision notice, if fuels piling is required in unit 119 or 119a, it would be done by hand.

Comment (F-13)

I noticed that “Units 42, 54, 81, and 109 would be winter logged with rubber tired skidders to minimize potential detrimental soil disturbance.” Is that something that would also apply to 119 and 119a?

Response

Yes, unit 119 and 119a were analyzed for winter logging with a log forward to address neighboring landowner concerns about weeds, landing piles, and harvest activities occurring in the summer. Following harvest, any fuels piling that is needed will occur by hand.

Comment (F-134)

What are the impacts and damage to soils from machine compaction and other activities? Six units (16, 49, 54A, 81, 93, and 122) will be near the threshold for detrimental soil damage at project completion. Yet the EA does not disclose if any of these are in riparian areas.

Response

Units 16, 49, 81, 93, and 122 are outside of mapped RMZs. Approximately four acres of unit 54A overlaps with mapped RMZs and some of the predicted soil disturbance will occur within those overlapping areas.

Comment (F-96)

Temporary road construction in this area connecting zones 54 to 109 could crush, disturb or otherwise divert the current underground flow of water and negatively affect our water source...

The compaction of the soil in these areas (which is believed to have taken place in the 1960s during the last known logging activities) is now very different than your current proposed use suggests, so stating that “it’s ok to rebuild the old road because it was already compacted” is conjecture and even contrary to what is stated in the EA. Under the current proposed action, the Forest justifies building the new temporary road here because the old road already functioned as a logging road and, therefore, has been previously compacted. But in the EA, it states that it takes between one and seventy years for old logging roads to rehabilitate and return to their natural state of porosity and hydrologic function (EA pg. 94). We can, therefore, conclude that this 50-60 year old temporary road bed has most likely completely rehabilitated to a natural and uncompacted state. So, rebuilding a road on top of an old existing road inside of this timeframe is effectively building a new road on already rehabilitated ground, correct? This old road, today, is now back to its natural state and, therefore, the presented logic is flawed, contradictory and the

Forest is shamefully hiding from the public the destructive nature of the presented new road-building effects in this area.

The EA does not address the details of the temporary roads as to size, material, type, etc. It also does not address the limits on axle loads, vehicle weights and tire pressures. Firstly, why have these details been omitted and secondly, HOW WILL THIS BE ENFORCED?

Response

The existing historic road template proposed for reconstruction to harvest units 54 and 109 is currently 100 percent detrimentally disturbed. While there are some small areas of soil compaction on the existing road prism, the main culprit for detrimental disturbance is soil displacement from original road construction which was found on the entire length proposed for use. All of the fertile topsoil has been sidecast downslope of the historic road template, leaving only infertile subsoil in place (Figures 1 and 2). Cut slopes along the road template are up to six feet high. Temporary road rehabilitation measures (project design feature 41) require recontouring side slopes to the original ground line. These measures will restore soil hydrology and accelerate soil productivity recovery after harvest activities have been completed. Without these harvest activities, the historic road prism will remain 100 percent detrimentally disturbed.

Figure 1. Intact soil profile in unit 54



Figure 2. Infertile subsoil material at surface of historic road template in units 54 and 109



Specific weight limits tied to harvest activity comply with state road limitations by contract. Temporary roads have 16 foot running surface and cut and fill widths vary depending on slope. Native materials will be used for all temporary road surface and existing templates will be used to the maximum extent possible. Forest Service personnel are assigned to oversee harvest activities to meet contract specifications.

Climate change

Comment (F-134)

The Flathead failed to analyze the impacts of climate change on forests, wildlife, fish and streams. The EA assumes that regeneration of cutting units will occur even though current science indicates that the future will not resemble the past. Nowhere in the EA is there an analysis of how regeneration failure will impact wildlife habitat, whether the tree species the Forest Service "desires" is even feasible to grow on these sites after logging, how aspect and elevation will impact tree growth if seedlings fry in the hot summer sun. Instead the Flathead is using a rear view mirror approach to forest management: this is the way we've always done it so this is how we will continue to do it. Climate change is real and things are not the same nor will they be in the future. The EA does not use the best available science related to climate change.

Response

A detailed analysis of carbon cycling, carbon emissions, and carbon storage was not included in the environmental assessment because the forest scale is the most appropriate scale for analyzing these effects. Therefore, the project tiers to the detailed analysis for climate change in the Forest Plan Final EIS, Alternative B Modified (USDA FS 2018a). For more information, please refer to the final EIS for the Forest Plan, including the climate change related response to comments (pp. B-127 through B-131).

In regards to regeneration success and desired species, the Forest Service is required by the National Forest Management Act to have even-aged regeneration harvests adequately restocked with appropriate forest cover within five years of final harvest. Project File Exhibit H-15 documents high success rates following regeneration harvest on the Forest. Page 25 and 30 of the updated EA identifies how the project will move the project area towards the desired species composition identified in the 2018 Forest Plan.

Also, in regards to best available scientific information, please refer to pages B-102 through B-115 of the Forest Plan FEIS response to comments. Additionally, page B-129 of the Forest Plan FEIS response to comments also addresses climate change and forest management. Here it mentions that the Forest Plan's desired conditions for vegetation composition, structure, and density, which we are addressing with this project, are built upon the concept of maintaining and improving the resilience and resistance of the Forest, in part to address climate change and improve forest adaptability.

Fire and fuels

Comment (F-30)

The trail system will result in more potential for fire starts and damage that will offset the positive effects of the other treatment actions in the area.

Response

Although increased human access to the forest can increase the potential for fire starts, trails and roads are also used by firefighters to access forest lands to initial attack wildfires when they start. Firefighters use trails and roads as fuel breaks where possible when fighting wildfires to prevent

fire spread. Vegetation treatment units break up the continuity of the vegetation, allowing firefighters to successfully suppress any potential fire starts near the trail system.

Comment (F-41, F-96)

The rapidly evolving fire science of the last 20 years has shown that, while fuels are important, the primary drivers of large, stand-replacing fires in the west are heat, drought, and especially wind... Time for a “hard look” at the role of regeneration harvest in increasing rather than decreasing fire danger, and in working contrary to the stated “need” for this project.

Response

The updated EA acknowledges on pp. 94-95, that “Although future fire intensity will be reduced in vegetation management units, rate of spread can increase in the post-treatment environment due to a reduction in shading from the sun and sheltering from the wind. Fast moving, lower intensity surface fires has more desirable fire effects than a slow moving intense fire due to the fact that fire adapted, resistant tree species are more likely to survive and create more resilient forest. Treatments would also reduce the risk and severity of a large scale stand-replacing fire by breaking up the continuity of heavy fuel across the landscape and prevent the spread of wildland fires to neighboring property (FW-DC-FIRE-05).”

The availability of fuel plays an important role in what type of fire environment exists. The updated EA explains on p. 95, that by treating forest stands “Fire type will be moved from crowning/conditional crowning to a surface fire in all treatment types except for sapling thinning where an initial torching type of fire occurs (project file exhibit J-9). This torching is not carried through the crowns of the stand.” Other studies have looked at whether fuel or fire weather are more important to fire severity and have come to different conclusions. Most recently, a Parks et al. 2018 study found that “fuel is on average the most influential factor driving high-severity fire in forests of the western US,” but that fire weather also has a substantial influence on fire severity. Given that fuel loads is the one of the factors that managers can influence on public lands within the wildland-urban interface, it is anticipated that the proposed treatments would modify fire behavior in the event of a wildfire.

Comment (F-160)

A good portion of the Cedar Flats area is already either thinned or clear-cut. Thinning the rest of the older growth will only spoil the beauty of what is going on there now. Cedar Flats is out of any natural forest fire corridor. The last fire that swept through “the Flats” was the nineteen twenty-nine fire that was man caused. Any fire start in this area will, because of the close proximity to Columbia Falls, be very quickly addressed by forest service personnel, thinned or not.

Response

The updated EA discusses the past management activities in the Crystal Cedar project area in the cumulative effects section for each resource and in appendix B. past, ongoing, and reasonably foreseeable actions. The Crystal Cedar project does not propose any activities within old growth forest, see pp. 36 of the updated EA for analysis of effects to old growth and very large live trees. The updated EA also discusses the Half Moon Fire of 1929 on p. 6 as an influential factor of the forest vegetation found in the project area today.

Any fire start in this area will, because of the close proximity to Columbia Falls, be very quickly addressed by forest service personnel, but the outcome is determined by fuel conditions and areas where fuels have been treated will provide the greatest chances of success in stopping a wildfire.

Fire and fuels–wildland-urban interface

Comment (F-41, F-96)

From the EA’s statement on “Public Involvement” on P: 7, it’s not clear that the Flathead itself believes in the 1.5 mile WUI buffer being used to create a “need” for fuel-reduction logging. EA P: 7 says, “On October 15, 2018, we sent letters announcing the release of the proposed action to approximately 270 individuals and landowners within one tenth of a mile of proposed management activities within the project area.” (emphasis added). If the Forest Service actually believes its own expansive WUI claims, why didn’t it notify everyone within that questionable 1.5-mile buffer rather than a more reasonable 528 feet? Answer - because a realistic WUI would not have justified the more expansive logging program (9mmbf) the Forest had already decided it wanted to conduct.

Response

The commenter is connecting the public involvement process conducted under NEPA with the wildland-urban interface boundary defined by the Flathead County community wildfire protection plan. As described on pp. 7-8 of the Crystal Cedar updated EA, the public involvement process began by sending letters to every mailing address within the project area and within one-quarter of a mile of the project area to provide notification of the planning process. This was complemented by Forest news releases and press coverage in local papers (project file folders C, D, E, and F). As people expressed interest in the project, they were included in email notifications or hardcopy mailings regarding project development. As we continued the NEPA process, we attempted to narrow down the list of landowners who would automatically receive hardcopy mailed letters. At the time of the proposed action, we sent out emails to individuals who expressed interest, letters to landowners living adjacent (within one-tenth of a mile of proposed management activities), and again received press coverage in local papers to notify landowners and interested parties of the planning process.

This public involvement process is separate from the Flathead County community wildfire protection planning process which identifies the wildland-urban interface for all of Flathead County (updated EA, p. 91 and project file exhibit J-1). The Crystal Cedar Project used the Flathead County wildland-urban interface, conversations with the county fire service area manager, and discussions with local fire departments to identify areas of concern with the project area to propose fuels reductions. The Crystal Cedar updated EA provides the analysis of effects to resources for these proposed activities on NFS lands.

Comment (F-78)

Under the second stated purpose, essentially, the Forest Service proposes to log the forest to “save” it from wildfire. We question the agency’s assumptions that reducing tree densities and fuel loadings will result in less intense fire behavior and facilitate safe wildland fire operations....

Existing science by the Forest Service’s own Rocky Mountain Research Station refutes the Forest Service’s assumptions that logging will result in less intense fire behavior. *See, e.g., Calkin, D.E., et al., How risk management can prevent future wildfire disasters in the wildland-urban interface,*

PNAS (2014), Vol. 111 No. 2:746-751 (Attachment C) (“Paradoxically, using wildfire suppression to eliminate large and damaging wildfires ensures the inevitable occurrence of these fires”).

Response

We reviewed the literature you provided and agree with the points the literature makes, including the perspective that wildfire suppression has led to a buildup of fuels that makes the occurrence of large wildfire inevitable and that “fuel treatments do not stop fires (just change behavior) and treatment alone without HIZ [home ignition zone] treatment means that inevitable wildfire exposure will result in structure loss.” Changing fire behavior adjacent to communities is a collaborative effort where the “...landscape condition cannot be ignored to realize fire-adapted communities because, by definition, WUI communities consist of more than homes.” The Flathead National Forest works closely with Flathead County, the Montana Department of Natural Resources, and FireSafe Flathead to discuss fire and fuels mitigation across landownerships. The Crystal Cedar project is part of this effort to reduce fuels on National Forest System lands adjacent to private property.

NEPA

Comments (F-78, F-96, F-134)

Prepare an Environmental Impact Statement (EIS) This project will: decrease public safety by negatively affecting a source of clean drinking water for public use (including water rights), have a significant impact on the affected region and interests of others (including hunters and shooters), will increase the risk of human-animal and human-human conflict, will significantly affect critical habitat for several endangered species and not comply with the ESA, will result in controversy regarding the impacts of mountain biking to the environment and wildlife security, and because this area involves a geography of many unique characteristics (which the Forest Service has failed to identify in their 22% survey), an EIS must be considered. In addition, there is an abundant amount of competing science (as noted in our previous comments) that speak to the fact that logging and vegetation management can worsen wildfires.

Response

This draft decision notice includes a finding of no significant impact which identifies the context and intensity factors that were considered for evaluating the significance of an action on a local, regional, and global scale. The specific concerns raised by the commenter are also addressed in the finding of no significant impact and provides rationale for why the project activities do not result in significant effects that would require the preparation of an environmental impact statement.

The commenter’s concerns about drinking water have been address above in the aquatics response to comments and in the updated EA. Responses to comments regarding the potential for human-animal conflict and the design features that will be implemented to minimize these encounters are discussed in both the wildlife and recreation section of response to comments. The affects to endangered species and critical habitat were considered in the updated environmental assessment on p. 39-59, a biological assessment has been submitted to the U.S. Fish and Wildlife Service (project file exhibit G-12), and a biological opinion was received from the U.S. Fish and Wildlife Service (project file exhibit G-13). These documents consider the effects of both the proposed vegetation management and recreational activities on wildlife species. The Forest

Service has proposed management activities on approximately 22 percent of national forest system lands in the project area, each treatment unit has been field reviewed by multiple specialists to gather information about potential effects to resources in the project area (project file exhibit G-2, H-8, K-3, and L-5). The environmental analysis considers effects that are both beneficial and adverse to resources and evaluates the significance of these effects in the finding of no significant impact that has been included with this draft decision notice.

Comment (F-96)

The EA states that consultation with the U.S. Fish and Wildlife Service for grizzly bear and lynx has not yet been completed (EA pg. 49). This required consultation (under the ESA) and its findings should have been completed prior to the release of the EA so that (1) the EA and its proposed actions could account for the recommendations and; (2) the public would have the chance to review and comment on its findings. Waiting to conduct said study until after publishing the EA is an omission of critical information to the public.

Response

A biological assessment has been prepared for the Crystal Cedar project (project file exhibit G-12) and a biological opinion has been received from the U.S. Fish and Wildlife Service (project file exhibit G-13). The analysis of effects to threatened and endangered species presented in the biological assessment is very similar to the analysis of effects presented in the environmental assessment that the public reviewed in June 2019.

Comment (F-96)

Hunters and shooters have not been considered nor represented in this project. Sending scoping comments only to landowners within ½ mile of the project boundary and sending the proposed action EA only to landowners within 1/10 of a mile, as well as marketing the project to local biking interest groups and city businesses means that the scoping document and EA have not reached a large majority of the local population. The only opinions are coming from landowners within 1/10 of mile of the project and outside interest groups that have thousands of Facebook followers in want of more recreation. Hunters and shooters comprise far larger numbers as evidenced by the state revenue generated annually from hunting and fishing licenses alone.

- The Forest is required to include in their public land development, plans for all populations of users. Why didn't they include hunters and shooters? Why did this new mixed-use area exclude the very people that use these lands today for hunting and shooting?

Response

As described on pp. 7-8 of the Crystal Cedar updated EA, the public involvement process began by sending letters to every mailing address within the project area and within one-quarter of a mile of the project area to provide notification of the planning process. This was complemented by Forest news releases and press coverage in local papers (project file folders C, D, E, and F). As people expressed interest in the project, they were included in email notifications or hardcopy mailings regarding project development. As we continued the NEPA process, we attempted to narrow down the list of landowners who would automatically receive hardcopy mailed letters. At the time of the proposed action, we sent out emails to individuals who expressed interest, letters to landowners living adjacent (within one-tenth of a mile of proposed management activities), and

again received press coverage in local papers to notify landowners and interested parties of the planning process.

We received comments from members of the North Valley Sportsman Association and have discussed their interest in the project area and any concerns that they might have with proposed activities (project file folder D). We have also discussed the project with hunters who have attended open houses and inquired about how the proposed activities might affect areas that they use for hunting and recreating. The updated environmental assessment acknowledges on p. 110 that there might be indirect effects to hunters through improved access on trails. The Crystal Cedar project does not change hunting and shooting regulations but as use patterns change in the project area over time this may result in indirect effects to hunters, berry pickers, and other project area users.

Comment (F-96)

We demand equal consideration when analyzing the arguments set forth by all sides. It certainly appears that the Forest quickly discounts counter comments and instead favors and promotes the wants of recreationalists whose only point is to support the construction of more trails no matter the consequences. Their main stated purpose in support of the trail system is to relieve pressure from other heavily used trails. There is no consideration for the impact on wildlife, natural resources, and the effects on watersheds and riparian areas. Those in support want more trails so they can recreate at their leisure. Again, Mountain biking is not a mandatory activity needed for human survival whereas habitat and water is mandatory for wildlife and human survival and therefore it should be considered top priority.

Response

The Crystal Cedar updated EA states that the purpose of trails system on p. 5 of the updated EA as being to “provide sustainable trail-based recreation opportunities close to local communities that are compatible with other resources.” This includes consideration of effects to wildlife, aquatic resources, soils resources, botanical resources, vegetation resources, and other forest users which has been presented in the updated EA. We have heard both support and concern for the trails proposed in the updated EA have made site specific adjustments to address public concerns and resource concerns, while still meeting the purpose of providing trails near local communities. The Crystal Cedar project is in compliance with the 2018 Forest Plan which identified portions of the project area as management area 7 for focused recreation. The forest planning process which took place from 2013 to 2018 included multiple public involvement opportunities which resulted in the management direction found in the 2018 Forest Plan.

Comment (F-96)

Consider alternatives that use the Forest’s current and new resources to better manage the existing network of roads and trails. Maintain and repair existing Kelly humps and culverts. Police the area for illegal trash dumping and other prevalent illegal activities (increased use will exacerbate as oppose to address this problem). Relying on the public to self-police is bogus, there is no science or proof in this assumption. Neither the public nor Cedar Flats working group has authority to actually police this area. Assuming and implying that people will “do the right thing” and will self-police is wishful thinking and puts people in harm’s way. It is not the job or responsibility of the public to do that, but rather the responsibility of the Forest who manages the area. There needs to be an alternative that is sustainable as far as policing and managing is concerned and reflects the realistic resources the Forest is able provide.

Response

Although the Forest Service will construct and maintain the trails through partnerships with community organizations, the Forest Service and local law enforcement agencies will maintain law enforcement authority in the project area.

Comment (F-96)

There has been no study of the cumulative effects of the many Forest Service projects underway in northwest Montana and how these actions in totality will affect the endangered species, their habitat, food sources, and travel corridors. Please provide this analysis.

Response

The Crystal Cedar updated EA identifies the boundaries of the cumulative effects analysis area for each resource. For threatened species such as the grizzly bear, this analysis area is the bear management subunit (pp. 51-52 of the updated EA) and for Canada lynx it is the lynx analysis unit (p. 40). These areas are large enough to include home ranges of female individuals and to represent the effects of the proposed activities. Broadening this analysis area to northwest Montana would dilute these effects and make it difficult to measure the effects to the resources within the project area. The biological assessment prepared for consultation with the U.S. Fish and Wildlife Service (project file exhibit G-12) analyzes the effects of the proposed activities to individuals of the threatened species and the effects to their habitat in accordance with the Endangered Species Act.

NEPA—alternatives**Comment (F-30, F-41, F-78)**

1. Proper analysis of activities on this project area would require at least one other alternative, such as completing the treatment activities without the trail expansion, and perhaps trail expansion without the treatment activities. Or, preferably, separating the trails project so that the analysis would stand on its own.
2. Although the National Environmental Policy Act (NEPA 1970) requires The Flathead Forest to examine a “reasonable range of alternatives”, the EA only analyzes a No Action Alternative and a Proposed Alternative – essentially a “take it or leave it” presentation that suggests the Flathead already, and impermissibly, has its mind made up...Clearly, the Flathead National Forest, despite nearly 50 years of experience, still doesn’t take the “reasonable range of alternatives” mandate of NEPA seriously...An EA that presents just one action alternative has not taken a “hard look.”
3. The Forest Service should consider a reasonable range of alternatives, including (1) an alternative that considers decommissioning system roads to maintain and improve terrestrial wildlife species habitat and security; (2) an alternative that does not rely on previously stored roads for creation of new bike trails; (3) an alternative that removes unlawful motorized uses that the Forest Service acknowledges exist in the project area; (4) an alternative that actually increases wildlife security by removing existing human uses on old road templates and other locations it was not planned for; (5) an alternative that uses hand harvest in areas that are ecologically important to wildlife or important to human health (i.e., units near or adjacent to sources of drinking water for the neighboring

local communities); and (6) an alternative that requires no new roads (temporary or system).

Response

1. The commenter suggests that there should be an alternative that separate the trails from vegetation management. The analysis identifies the effects to different resources anticipated from each type of activity, such as vegetation management, temporary road construction, trail construction, etc. As a result, the responsible official has the opportunity to choose which activities to implement or not implement independent of each other.
2. The updated EA identifies on pp. 8-9 the changes that were made to the proposed action in response to public comment received. On pp. 9-10 of the updated EA we identified the alternatives that were considered by the Forest Service but ultimately were not analyzed in detail because they were determined to be outside the scope of the project. No unresolved conflicts concerning the use of available resources to meet the purpose and need were identified that could not be resolved by choosing portions of the no-action alternative or the proposed actions (36 CFR 220.7(b)(2)(i)). Therefore the responsible official determined that it was not necessary to fully analyze additional action alternatives to determine potential effects to resources.
3. The commenter identifies several potential alternatives that they believe should have been considered. The Forest Service chose not to develop these as alternatives for the following reasons:
 - (1) The travel analysis conducted for the project area did not identify opportunities for road decommissioning that were not high priority for fire managers, recreation, or timber management (project file exhibit P-3). The wildlife analysis considered the effects of road on wildlife habitat and security and determined that although there would be short-term displacement during project activities, habitat security areas would be maintained over the long term.
 - (2) The proposed action has identified areas where there is potential colocation for temporary roads and trails, none of these temporary roads were previously stored NFS road.
 - (3) Forest Service law enforcement continues to address illegal activities in the project area and across the Flathead National Forest and does not require NEPA to perform these duties.
 - (4) Dispersed non-motorized recreation on NFS lands is a legal activity in the project area. The proximity of the project area to the community of Columbia Falls is one of the reasons that it was identified in the 2018 Forest Plan as a focused recreation area (MA 7) where users could expect a higher concentration of use (updated EA, p. 111).
 - (5) The proposed action includes hand removal of fuels on 286 acres. Hand removal is proposed in areas where it was deemed necessary due to feasibility or potential effects to resources.
 - (6) An alternative requiring no new roads would not allow the project to meet the purpose and need of reducing tree densities and fuel loadings within the wildland-urban interface

to result in less intense fire behavior near communities and facilitate safe wildland fire operations. The analysis of effects to resources determined that the proposed activities, including the use of temporary roads and the construction of system road, was in compliance with the 2018 Forest Plan and the standards put forth to maintain and improve ecosystem function.

NEPA–project support

Comment (F-15, F-16, F-23, F-24, F-25, F-26, F-46, F-50, F-51, F-52, F-54, F-55, F-56, F-57, F-58, F-59, F-60, F-61, F-62, F-63, F-64, F-65, F-67, F-68, F-69, F-70, F-71, F-72, F-73, F-74, F-75, F-76, F-77, F-80, F-81, F-82, F-83, F-84, F-85, F-86, F-87, F-88, F-94, F-95, F-97, F-99, F-100, F-101, F-102, F-104, F-105, F-107, F-108, F-109, F-110, F-111, F-113, F-114, F-116, F-117, F-118, F-120, F-122, F-123, F-125, F-127, F-128, F-131, F-132, F-133, F-135, F-136, F-140, F-141, F-144, F-145, F-146, F-147, F-148, F-149, F-150, F-151, F-153, F-156)

Note: we received many comments of support for the Crystal Cedar Project, and commenters cited a range of reasons for support. Those comment numbers are included here, but the specific comment may not be captured below. We attempted to include representative comments of the spectrum of reasons for support here.

I would like to comment on the proposed Crystal Cedar Project and say that I am 100% in support of all aspects of it, especially the development of the trail system for adaptive mountain bikes.

Accessibility to trails close to town will be an incredible amenity for this family that hikes, bikes and skis. We see incredible value to having easily accessible trails within close proximity to town.

Please be advised that I am in TOTAL agreement of expanding my use, as a public taxpayer, on the lands due north of Columbia Falls for multi-use, including the bicycling community.

The caveat of the Crystal Cedar proposal is the addition of trail opportunities near Columbia Falls. While many residents already use the road network in the area for recreation, a defined trail system will minimize social trail networks and provide a safer experience for users.

We fully support that Trails TR01, TR01A, TR02, TR02A, TR03, and TR04 are designed as accessible to handcycles/adaptive mountain bikes. We further request that the additional multi-use trails take into consideration that there are no "choke points". These are natural features that occur so close together that a handcycle could not fit through them (example: Two trees, one on either side of trail, that do not have at least 36" between them.) This would allow adaptive riders to potentially branch out and use additional mountain bike trails within this system.

As an equestrian, I appreciate the Forest Services efforts to provide safe opportunity for public equestrian activities. Safe opportunity not only includes the trails, but includes access to the trails. Please insure that all trail heads accommodating horseback riding activities includes adequate trailer parking with large turnaround areas that require minimal backing.

The City Council of the City of Columbia Falls continues to support the efforts of the Forest Service to enhance the multi-user trail network surrounding Columbia Falls. The proposal to improve the network of trails will provide much-needed recreational opportunities for citizens and visitors.

As an outdoor enthusiast, hiker, biker, and supporter of local logging operations, I think this project will provide a tremendous opportunity for growth and rejuvenation of the Columbia Falls community.

I fully support the proposed action outlined in the plan. I've seen first hand how trails can benefit a community and the current lack of trails/trailheads near Columbia Falls is really low...I think that adding multi use trails for biking and hiking will help bring people into town and help the economy.

On behalf of Whitefish Legacy Partners (WLP), I am writing to express my organization's support for the Crystal Cedar Project. We are encouraged by the Forest Service's pursuit of the project and appreciate that you have planned a project that will address multiple and compatible resource objectives. Whitefish Legacy Partners strongly believes that the development and management of recreation opportunities on public lands that link to local communities contributes to economic sustainability and generates economic vitality while also enhancing diversity and resilience, wildlife habitat protection, and wildland-urban interface fire protection.

Thank you for developing a project that incorporates community involvement and engagement and supports and encourages local community partnerships to construct and maintain trail networks on public land.

As a mountain biker, I write to support the proposed action for the Crystal Cedar Project. Mountain bike (and multi-user) trails adjacent to Columbia Falls will be an incredible asset to the community.

Response

Thank you for your support of the Crystal Cedar project.

Non-native invasive plants/noxious weeds

Comment (F-134)

What plan does the Flathead have for weeds in the project area? Washing equipment does not work, please do not attempt to dupe the public into believing that the same past failed mitigation measures to control weeds will somehow miraculously work in this project. Instead of addressing the problem the Flathead just resigns itself to the fact that there will be an invasive species problem in the project area indefinitely. This is not adequate.

Response

Design features in the updated EA require that equipment will be washed prior to transport to the project area, haul routes will be treated for weeds pre- and post-implementation, and areas of disturbance related to timber sale activities will be revegetated with grass seed. Infestations documented prior to this project and occurring as a result of this project will be incorporated into the forest's weed program prioritization strategy after the project is completed.

Comment (F-96)

Weed mitigation in this area after the proposed road is decommissioned will add dangerous chemicals and herbicides to the soils that will leach into our water supply.

Response

The forest's weed program follows all federal and state laws and regulations, as well as label directions, to avoid environmental damage to soil and water. The project does not proposed any road decommissioning, but will rehabilitate temporary roads following project use and seed with native plant mix as specified by the forest botanist (project design feature 41).

Over-the-Snow Use

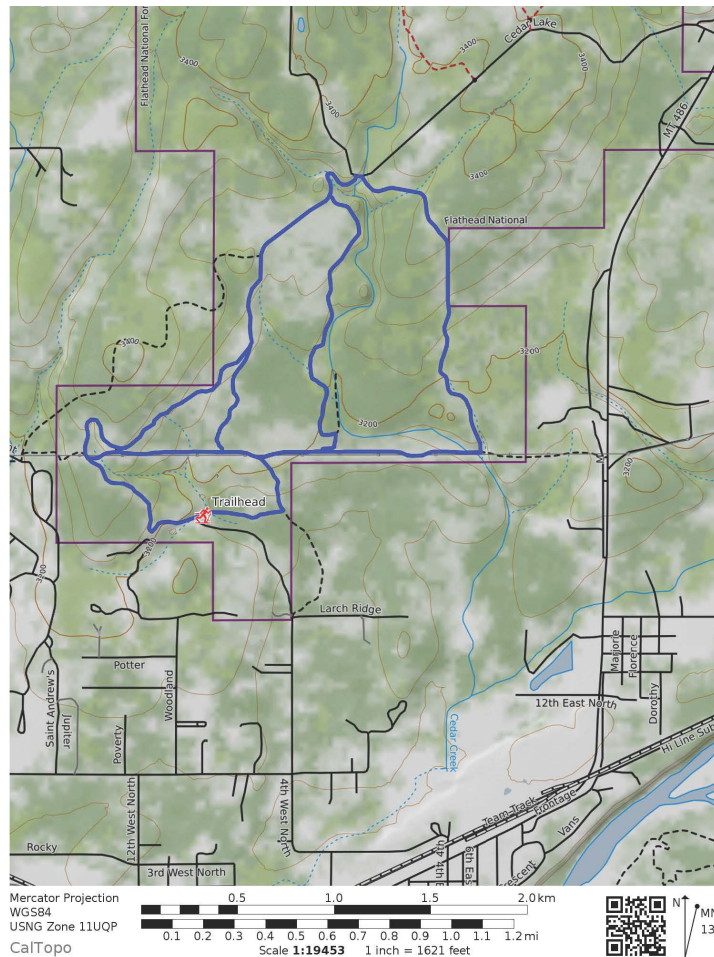
Comment (F-14, F-18, F-19, F-20, F-22, F-27, F-28, F-29, F-31, F-32, F-33, F-35, F-90, F-91, F-98, F-106, F-130, F-152, F-154)

...I do NOT support the current version of the Crystal Cedar EA because it neglects to include Nordic skiing trails in the analysis. Representatives of the Nordic community filed comments in a timely fashion notifying the Hungry Horse Ranger District that Nordic ski trails should be considered in the planning area. Numerous other individuals and groups also put the HHRD on notice that Nordic ski trails should be included in the analysis. In fact, a survey conducted by the Cedar Flats Trail Group identified Nordic ski trails as the number one activity of interest among its constituents. Forest staff were aware of these survey results in the early planning stages of the Crystal Cedar Project in their meetings with the Cedar Flats Trail Group yet elected to exclude winter recreation from their analysis. The current Crystal Cedar EA is deficient due to lack of full analysis of Nordic ski trails. The EA needs to be revised to include defensible analysis of Nordic ski trails.

Under the National Environmental Policy Act (NEPA) the HHRD is required to analyze issues identified by the public in Scoping. Forest Service staff's attempt to classify Nordic trails as "over-the-snow" use to avoid the analysis required under NEPA is disingenuous and fundamentally flawed. Labeling Nordic ski trails as "over-the-snow" use does not waive the requirement to perform analysis under NEPA. NEPA analysis requires Forest staff to base decisions on factual information. Assumptions or pre-conceived opinions are not facts. The Crystal Cedar EA as currently written in violation of NEPA for failure to analyze issues raised in Scoping by numerous members of the public. The Crystal Cedar EA must be revised incorporating analysis of Nordic ski trails raised by members of the public in the Scoping phase.

Having led the development of the Bigfork Community Nordic Ski Trail (with MT DNRC) and the Blacktail Nordic Ski Trails (with the Swan Lake RD) we understand that the analysis of Nordic ski trails is not that difficult, and certainly would not jeopardize approval of the Crystal-Cedar project. In fact, the public would enthusiastically support its inclusion.

The Final EA and decision notice needs to include the proposed Nordic ski trail system or a clear and legal explanation for the reason Nordic skiing was excluded from specific analysis, and how consideration of this legitimate forest use will be considered as an outcome of this assessment process.



Response:

During the pre-scoping request for information, we received feedback from forest users that they used the Cedar Flats area for winter activities, including cross-country skiing, and that they would like to see improved parking opportunities for winter use of the area (project file folder D).

In small group discussions with Nordic skiers in February 2019 (project file exhibits E-171 and E-172), they identified the southwest section of the project area for a potential groomed Nordic trail network. A similar potential groomed Nordic trail network was identified in comments on the environmental assessment (the map shown above was submitted by commenters). This proposed network overlaps an area where over-the-snow vehicle use is allowed (project file exhibit M-1). Establishing groomed Nordic trails here would necessitate closing the area to snowmobiles. In addition to groomed Nordic trail proposals, we heard from individuals wanting new designated snowmobile routes, groomed fat bike trails in this area, as well as Nordic skiers who wished to see these roads and trails remain ungroomed in the winter. The responsible official considered the existing decision in place for this landscape (open to winter motorized over-snow vehicles as published in the Flathead National Forest Over Snow Vehicle Use Map under 36 CFR § 212 subpart C), and decided that changes to over-the-snow management were outside the scope of the

Crystal Cedar Project. As such, an over-the-snow management change alternative was not analyzed in detail (see discussion on pp. 9-10 of the updated environmental assessment).

Given that individuals and organizations have recently expressed interest in developing additional groomed Nordic skiing in other places on the forest besides the Crystal Cedar planning area, the forest welcomes a larger discussion about changes to over-the-snow use and looks forward to working with the Nordic ski community and other interested parties as part of this discussion.

36 CFR 220.4(c) requires that “for each Forest Service proposal, the responsible official shall coordinate and integrate NEPA review and relevant environmental documents with agency decision making by: (2) considering environmental documents, public and agency comments (if any) on those documents, and agency responses to comments.”

Public comments received during pre-scoping (November 2017), proposed action scoping (October 2018), and environmental assessment scoping (June 2019) were considered (project file exhibits D-92 and E-168 and this appendix of the draft decision notice) in the development of the project and the analysis of proposed activities. Some comments were addressed by developing design features (appendix A of the environmental assessment); some were addressed by modifying the proposed action (pp. 8-9 of the environmental assessment); and some comments are already addressed by public law, policy, or regulation.

Comment (F-37, F-36, F-38, F-39, F-30, F-42, F-43, F-44, F-45, F-46, F-47, F, 49, F-66, F-79, F-89, F-92, F-93, F-100, F-112, F-124, F-129, F-138)

Groomed Nordic trails in the Crystal Cedar planning area would be an asset to Columbia Falls and adjacent communities. These communities are growing and there is increased demand for outdoor recreation opportunities in close proximity to where people live.

The Nordic community has a track record of partnering on National Forest Lands. Local examples included Blacktail Nordic area in partnership with Flathead Forest, Seeley Nordic Center and Pattee Canyon on the Lolo National Forest. A similar partnership could exist at Crystal Cedar.

The Nordic community could help share in the development and maintenance costs of trailhead facilities with the biking/hiking community similar to Glacier Nordic’s partnership at the Big Mountain Trailhead.

Nordic trails would add value to the Cedar Creek Planning Area by adding a 4th recreation season thus creating year-round recreation opportunities adjacent to Columbia Falls. The Nordic trails will encourage winter recreators in the community who, in turn, will frequent retail businesses traveling to and from the trail network thus benefiting the economy of Columbia Falls during the normally quiet winter period.

Nordic trails can be easily incorporated into the Crystal Cedar Planning Area. The Nordic trail network can be located on existing roads in the southwest portion of the Crystal Cedar Planning Area maintained from Dec 01 to March 30 annually.

Incorporating Nordic trails will require very little effort by the Flathead National Forest once implemented.

I am writing...to express my desire that Nordic skiing be included in the Crystal Cedar EA. My family’s access to the trails to ski has been an essential ritual to our family life. I believe that it is essential that our youth have access to the outdoors in the winter. I believe that Nordic skiing

offers lower income youth the opportunity to ski, develop lasting friendships, be stewards of the environment and engage in healthy leisure pursuits.

Recognizing the need for year-round recreational opportunities, the City Council supports the request from Nordic skiing enthusiasts to include an analysis of Nordic trails in the Crystal Cedar Planning area. The City's River's Edge Park provides limited Nordic skiing in the winter. Additional opportunities close to the city would be very beneficial to our citizens as well as visitors to the area.

Response

As was stated in the previous response to comment, the Forest Service considered the comments received from the public requesting groomed Nordic skiing, as well as the comments received from individuals who do not want to see groomed Nordic trails in the Cedar Flats area. The Forest Service determined that changes to over-the-snow use should be part of a larger discussion that includes other groups with interest in winter use and that this discussion was outside the scope of the Crystal Cedar project.

Comment (F-87, F-119, F-128, F-141, F-142, F-143)

Regarding the future of Nordic grooming/trails I support future dialogue and planning centered on such matters. However, I am of the opinion no viable and reasoned proposal exists to date nor has the Nordic community demonstrated a collaborative plan that attempts to balance existing winter uses in the area including snowmobiling, fat biking, snowshoeing etc. I would be very disappointed to have the trail construction postponed for the sake of a yet to be developed winter proposal. I believe it best to extend an opportunity to explore winter use at a later time.

Regarding expanded groomed nordic trails issue, I do not support postponing or delaying the project to account for inclusion of groomed nordic use. Before that is considered I think a plan is needed to account for the existing mix of winter users.

The concerns I have and what I do not see in the form letter from Glacier Nordic is:

- a. What grooming will be done? Skate track? traditional track only? Snowshoe lane?
- b. Will dogs be allowed?
- c. How will they manage the snowmobilers and 4-up wheelers who are currently going in there and destroying the tracks?
- d. What about Fat biking?
- e. How will the Nordic Club inform everyone of trail use rules and how will they enforce it? I can tell you that Glacier Nordic came into Meadow Lake and groomed this past winter without any heads up from Meadow Lake resort or the Nordic club. So what happened was the trail was groomed and all the residents and guests, who have had a free-for-all on the golf course once golf season is over, began walking, dog walking and snowshoeing on the groomed trail. It did improve with some explanation from myself to neighbors and posts on the Nextdoor app but we still have many folks who choose not to follow posted rules in this community. This Meadow Lake groomed trail is open for public use. Glacier Nordic members do not have to pay a fee to use this groomed trail.
- f. Additionally, this road is closed in the winter to allow the animals that frequent the area to get a bit of a reprieve. I did not see anything in the letter about that.

- g. What is the grooming schedule? and how do they propose to fund the equipment and manpower to do the actual grooming?

As a nordic skier I think we have plenty of opportunities to ski groomed trails with or without dogs. There are groomed trails at Meadow Lake Resort, Whitefish golf course, Big Mountain, Haskill Basin, Dog Creek Lodge, Bigfork, Blacktail mountain, Round Meadows, Issac Walton Inn, Glacier National Park. I prefer not to ski on trails with dogs so I am sure there are many more I am unaware of. I personally know the Glacier Nordic club has a difficult time managing dogs on the Big Mountain trails because I have encountered dogs on sections of those trails that are suppose to be closed to dogs and most people do not follow the rule of leashing dogs from the parking lot to the dog friendly trails. I think the Nordic club will have to have a better plan for dogs and Cedar Flats, in my humble opinion.

I would suggest moving forward with the current project as proposed and recommend keeping open the opportunity for nordic grooming in the future. Certainly nordic skiers will continue to be able to use the proposed multi-use trails without grooming.

I am opposed to any grooming of XC ski trails in the Cedar Flats area during winter. This would be very limiting to anyone other than XC skiers. Too many of us locals use the area for hiking and snowshoeing. Please do not allow groomed trails that limit usage to only xc skiing. That would be horrible. I buy a Nordic pass through Glacier Nordic and use the trails in whitefish and meadow lake. I am not in favor of limiting Cedar Flats to only xc skiing in winter. Many people I know use it for many winter activities, please do not limit it to strictly groomed trails.

I have been informed that Glacier Nordic actually has no proposal for the project. I believe that to have serious consideration the organization needs to have a specific proposal and not just be a place holder and “figure it out later”. I use the Crystal Cedar area for hiking, biking, skiing and snowshoeing. There are many people in the area that walk (some with dogs), ski, snowshoe and occasionally snowmobile there in the winter. Groomed Nordic trails would eliminate all but skiing and significantly limit the number of people that could use the area in winter. My observations are that many local people use the area in the winter and a large percentage would not be able to participate as they have in the past.

I believe Glacier Nordic should provide an actual proposal if they want to be considered. If they do so, those who use the area now need to be taken into consideration as Nordic skiing isn't their primary use pattern. And those of us who do Nordic ski, can use the trails at Meadow Lake Golf Course.

Gateway to Glacier Trail supports future discussions regarding improved winter recreation (groomed nordic) in the Crystal/Cedar area -- however we believe that it is important that any formal nordic plan take into consideration the broad user groups currently using the existing system during the winter including fat bikers, recreational touring skiers, walkers, snowshoers, and snowmobiles. We do not support postponing the existing fuels reduction plan and trail project in order to pursue winter recreation inclusion at this time.

Response

Thank you for your support of the proposed action. As was stated in the response to comments above, the Forest Service determined that changes to over-the-snow use should be part of a larger discussion that includes other groups with interest in winter use and that this discussion was outside the scope of the Crystal Cedar project.

Recreation

Comment (F-48, F-87)

...on page 103, we feel that the EA overstates the current state of frontcountry summer recreation.

There is virtually no frontcountry recreation on the National Forest in the Columbia Falls area. The only trailhead in the immediate vicinity is the Columbia Mountain Trail, which is a singular trail that offers limited opportunities. The next closest trails would be those on Whitefish Mountain Resort, which are not actually all that close to Columbia Falls, and many of which require paying for a lift pass. Outside of the Columbia Mountain trail and the WMR trails, there are few, if any trails or trailheads on Forest Service land that could be categorized as "frontcountry" within a 45 minute drive of the project area.

Response

The updated environmental assessment recognizes recreation opportunities in the project area are largely dispersed in nature and do not meet the desired conditions outlined in the forest plan (updated EA, pp. 105-113). While there is currently a variety of dispersed recreation opportunities as well as a small motorized trail system, the selected alternative would move the area closer to desired conditions by developing additional recreation opportunities close to Columbia Falls.

Comment (F-121)

Due to the fact that Ranger Rob Davies has stated to me, "we have no more resources or manpower to regulate this area", any increased usage would lead to more litter and trespassing on private lands. The Hungry Horse Ranger station has been trying to regulate motorized vehicles in this area for years, how would more trails stop increased motorized use when the USFS has more area to regulate but no resources or manpower?

Response

The proposed nonmotorized trails are not intended to stop increased motorized use. The updated EA identifies on p. 109, that "Development of formal trailheads and trail systems will likely reduce undesirable and illegal activities in the project area, as has been observed at other developed trailheads. Partnerships with local community groups may result in increased resources for education, clean up, and enforcement." Project design feature 26 (appendix A of the updated EA and this draft decision notice) includes the construction of barriers to restrict motorized use of nonmotorized trails.

Comment (F-121)

As the area in question is public land I would like to see the trails and roads that exist to remain at their current status. No new trails should be constructed. Perhaps shooting benches with brass catchers would help clean up the Shale Pit, which should remain open to local shooters. The kelly hump from the Cedar Flats trails to the FS road 1690 should be removed to allow motorized and horse access. No preference to mountain biking should exist over other current activities in this area.

Response

We acknowledge the commenter's preference for many aspects of the no-action alternative. The selected alternative includes a connector trail (6400B) from the existing motorized trail to National Forest System road 1690, which will allow motorized and horse access. We have asked for public comment three times during project development and analysis and have heard from a variety of users (including equestrians, hikers, and cyclists) that they are interested in the development of a multi-use trail system in the project area. The Forest Service is not proposing to develop a shooting facility as part of this project because it does not meet the purpose and need for the project.

Comment (F-126)

The EA fails to adequately discuss what types of SUPs have been issued in the area in the past and what types of SUPs are reasonably foreseeable. Page 107 states "There have been multi-sport recreational events permitted in the project area," but then fails to describe what those events were and whether they are likely to be repeated.

Response

A multi-sport recreation event was issued permits in 2017 and 2018 to bicycle on NFS road 316. This information has been added to appendix B of the updated environmental assessment. Under both the no-action and proposed action, special use permits will continue to be evaluated on a case-by-case basis consistent with law, regulation, and policy.

Comment (F-126)

On page 108-109, the EA notes "Strong partnerships with local community organizations will be key to ensuring that the proposed trail system is socially and financially sustainable . . . Under the proposed action, partner groups will be responsible for raising funds and building community support . . . for the construction, operation, and maintenance of the proposed trail system." Nowhere does the EA discuss whether these partner groups will be rewarded with SUPs for ultra-marathons, mountain bike races, or similar events aimed at raising funds for the partner groups.

Response

Special use permits will continue to be evaluated on a case-by-case basis consistent with law, regulation, and policy under both the no-action and the proposed action. To date, the Forest Service has not received any inquiries from partner groups regarding recreation events in the project area.

Recreation—trails**Comment (F-21)**

We recommend mountain bike-specific signs be placed at trailheads in grizzly habitat where mountain biking is permitted. These signs should carry the specific messages below aimed directly at mountain bikers. We also recommend the development of brochures and posters with these same messages about mountain biking in grizzly habitat. These brochures and posters should be distributed to all bike sale and rental shops and should be used in outreach presentations to recreational groups and clubs.

Response

Project design feature 74 requires that trails be constructed to avoid areas of dense vegetation, maintain sight distances, and limit speed of travel. It also requires that information about avoiding and responding bear encounters be posted at trailheads (see appendix A of the updated environmental assessment). The Forest Service is open to working with partners to reach out to local communities and present bear awareness and safety messages to wider audiences.

Comment (F-41)

Does [Crystal Cedar purpose and need regarding sustainable trail-based recreation]...refer to ecologically sustainable, or sustainable from a maintenance standpoint, because from all of the information above, there is nothing ecologically sustainable about the proposed trail system. Rapidly injecting high levels of foot, horse, bike, and motorized user recreation into a linkage zone “pinch point” between the North Fork and Hungry Horse Geographic Areas is not compatible with the habitat security and connectivity needs of grizzlies, lynx, elk, or wolverine.

Response

Forest Service trail design parameters and construction standards provide guidance for building sustainable trails, which includes ensuring that trails “have minimal negative effects on adjacent resources” (FSH 2309.18, 20.2, project file exhibit M-2). Pages 109-110 in the updated environmental assessment provide a discussion of the use of the term “sustainable” in the context of the proposed trails. The wildlife response to comments below addresses public comments related to wildlife connectivity in the project area.

Comment (F-21, F-96)

We recommend avoiding trail development in wet riparian zones, where grizzly bears tend to congregate. Specifically, Trail #10 is problematically located within a wet riparian zone that is frequently used by grizzly bears. We recommend moving this trail to a more upland location to avoid negative bear encounters.

Response

Portions of trail TR10 would run parallel and above riparian areas and be located on an existing road template with long sight distances both down the proposed trail and into adjacent areas. Alternatives to this location were considered; however, the longer sight distances achieved by using the existing template serve to provide greater margin of safety in this particular area.

Comment (F-87, F-155)

1. As to the additional trail I proposed along the west boundary of the 160 acre cedar lake private land (TR02B); IT IS a big deal and should be put into the trails as PRIORITY #1!

The Easterly half of your TR 10 is very difficult to construct, very expensive and not suitable for intermediate level bikers.

2. I would like to see a trail running along the western property line of the Cedar Lake Private connecting TR02 and TR10. The reason being that TR10 upon walking the proposed alignment, I believe will be very costly and difficult to build where it parallels the Shale pit road and private property up to TR04 with out compromising the user

experience. With a trail connecting TR02 and the TR10 it would be possible to use the FS road as an west east connector to TR04 and in doing so create an additional looped network. I have walked this proposed alignment and believe building a sustainable trail is very possible with little to no impacts to surrounding neighbors or environmental sensitivities. In fact much of the alignment could utilize existing corridors from previous forest management.

Response

Trail TR10 and the suggested alternate route (hereafter “alternate route”) were both part of Gateway to Glacier Trail organization’s initial proposal and served to connect the northern and southern parts of the proposed system. The Forest Service recognized early in the Crystal Cedar Project planning process that achieving this connection would be difficult because topography creates a pinch point between private land and steep exposed hillsides north of National Forest System road 1690. The Forest Service determined that the two trails served redundant objectives and looked to eliminate one for the proposed action. Trail TR10 was selected to be brought forward for the following reasons:

- TR10 parallels less private land than the alternate route while still achieving trailed access to the northern half of the proposed system from both the 4th avenue and 1690 trailheads.
- TR10 stays in close proximity to an open road, reducing the effect of trail density to grizzly bears as described on p. 57 of the updated EA.

Construction and maintenance costs for trail TR10 as proposed and the alternative route suggested by the commenter would be similar. Both trails would use existing road templates for portions of the trail. While trail TR10 does have steeper sidehills in places requiring greater amounts of excavation, the alternative route would be longer. In addition, trails constructed in moist areas in flat terrain (such as the terrain found in the location of the alternative route) pose ongoing drainage issues due to the difficulty of shedding water from trail tread that is level with the surrounding landscape. Such trails require frequent use of trail structures such as turnpikes and extensive ditches.

Comment (F-87)

I have couple of specific trail suggestions to be considered.

1. I feel that it would be beneficial to all users to increase the trail density south for FS 10815 by adding at a minimum a 2nd trail paralleling the road and north of the TR01 and thus creating a longer beginner/intermediate singletrack loop. This helps provide a concentration of trail near into the city and the trailhead allowing less experienced users a longer trail experience with out the worry of being more remote. This area is also lower in elevation and thus provides additional mileage for shoulder season use.
2. As proposed TR01a is horse friendly however TR01 is not, this seems counter point to provided access from the trail head and then force horses on to the motorized paths. I would suggest either leaving all trails south of 10815 as no horses or providing a horse friendly route that is not motorized to the northern portion of the trail system.

Response

1. The Gateway to Glacier Trail organization's initial proposal included a greater trail density throughout the project area. The responsible official brought forward into the proposed action the minimum trails required to achieve the purpose and need. Since all trail users (except for full size off-highway vehicles) are permitted to use the existing motorized trails, the responsible official sought to minimize trails that simply paralleled these existing trails. Page 10 of the updated environmental assessment further discusses the responsible official's rationale for not adding more trails to the proposed action.
2. Trail TR01a is proposed as managed for stock use in response to comments from stock users who currently use this area wish to continue to do so. Trails TR02 and TR04 are managed for stock and provide a connection to the northern trails while traveling on existing motorized trails for less than one mile.

Comment (F-48, F-87)

1. ...we feel that the EA should be more explicit in stating that the map of the trails is intended to show the general layout of the network, and the final location of the trails may be different. Final trail layout would be dictated by terrain, trail class, designed use, and a wide variety of other on-the-ground factors, and thus the layout may change significantly from the precise locations shown on Map 2.
2. On page 12 of the EA, Table 3, we would like to see the trail class designations of trails TR05, TR06, TR08, and TR10, be changed to class 2/3 (i.e. leaving the option open to make those trails fit either class 2 or class 3). This allows greater flexibility in the final design and construction of the trails...
3. ...the southern portions of TR07 should be built so that bicycle traffic on it is primarily in the uphill direction, with descending bike traffic routed to TR08 or the northern extent of TR07.
4. Similarly, a more natural, rougher trail will effectively slow mountain bikes down. While there are quite a few methods for reducing bike / wildlife conflicts, this is one method that is effective and can create more interesting, enjoyable trails for the riders. Additionally, short, steep pitches can actually have the effect of slowing riders down - riders perceive the change in pitch as an obstacle and approach it more hesitantly.

Response

The specific trail design suggestions submitted by the commenter(s) are not precluded by this draft decision notice or Forest Service policy. Trail design parameters provide for some flexibility in each trail's implementation. Specifically, "local deviations from any Design Parameter may be established based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class" (FSH 2309.18, 20.2, project file exhibit M-2).

Comment (F-48, F-87)

...we feel the proposed action is missing an opportunity to address current and future use issues by declining to incorporate mountain bike specific trails.

1. Multi use trails aren't bike trails, and ultimately, multi use trails are perfect for no one. While we understand the efficiency of building one trail for all user groups, given that mountain bikers have put a tremendous amount of work into this project, it seems clear that the interest exists to support the construction trails that are specifically designed with bikes in mind.
2. ...there is plenty of evidence on trail networks elsewhere in the valley as to the user conflicts that will exist if all users are directed onto non-directional, non user specific trails near trailheads. The trails within a mile of a trailhead will see considerably more use than the rest of the network, and as stated in our prior comments, we feel that additional trails that separate user groups in the area of the 4th Ave Trailhead are worthwhile. As the network is currently envisioned in that area, frequent user conflicts are likely.

Response

1. On page 10 of the updated environmental assessment, there is a discussion of the responsible official's decision that the proposed trails system should be accessible to a wide variety of users. We have received comments in support of trails that allow a variety of users.
2. The proposed trail system is designed to provide multiple trail opportunities that disperse users soon after leaving a trailhead. This is particularly true of the 4th avenue and FSR 1690 trailheads where users will have a choice of up to 8 junctions within one trail mile. This draft decision notice does not preclude management actions such as directional trails in response to future user conflicts.

Comment (F-48)

...the EA emphasizes clearing vegetation to increase sight distances in order to reduce wildlife conflicts. And while clearing vegetation and increasing sight distances is certainly useful in reducing wildlife conflicts, long sight distances also often allow bikers to achieve higher rates of speed, which may not be desirable due to wildlife and user conflict concerns. Building an arbitrarily tight, turny trail can reduce that issue, but it comes at the cost of making the trail significantly less enjoyable to ride.

Response

Project design feature 74 requires that trails be constructed to both maintain sight distances and limit speed to reduce potential for conflicts with wildlife. The specifics of trail design that can accomplish these goals will be identified during implementation in compliance with agency trail standards FSH 2309.18 (project file exhibit M-2) and review by the wildlife biologist prior to construction.

Comment (F-30, F-112)

1. Developing trail infrastructure that will be used by tourists, urbanites and pet owners in areas frequented by hunters, trappers and outdoorsmen and women that will result in conflicts detrimental to us traditional users.

The trail system will become a dog toilet, as has happened at the Whitefish Trails and many areas frequented by people and their dogs...

The trail system will be smack dab in the middle of some of my favorite huckleberry patches, which happen to be areas frequented by bears. I currently use old logging roads and game trails to get to the good picking. I don't expect the bears will fare any better than I will by these places being overrun by trail users and dogs!

2. the second largest group of new users and their impacts has not been evaluated or even acknowledged-dogs...dogs out of control at trailheads and on trails needs to be addressed proactively. With increased human and dog use it is a certainty there will be increased potential for human/dog conflicts moving forward.

Response

1. The effects of the no action and preferred alternatives to dispersed recreation is discussed on pp. 105-113 of the updated EA. The effects to these uses will be mixed under the preferred alternative. Most use will be focused on system trails, discouraging travel on social trails by trail users and making it easier for hunters, trappers and berry pickers to access different places within the project area. The result of increased access will likely be higher concentrations of use and increased social interactions, which are consistent with desired conditions for the area. As these use patterns change, some forest users will have to adjust to remain in compliance with shooting regulations.
2. As discussed on pages 107 and 108 of the updated EA, dog walking is an existing use in the project area that, along with other recreation activities is expected to increase under both the no action and the preferred alternatives. However, this use is anticipated to increase more along proposed trails under the proposed action. Higher concentrations of use and increased social interactions are consistent with desired conditions for the area.

Comment (F-121)

The construction of the proposed trail system would be in conflict with current public use. Motorized trails would be reduced. Horseback trails would be reduced. The current hunting land in the area would be greatly impeded by the construction of the proposed trail system. This means the proposed Crystal/Cedar trail project would not be "compatible with other resources" as stated in the Forest Service Plan (FW-DC-IFS-08).

Response

The proposed action does not reduce the existing motorized trail system and adds two new motorized connector trails (updated EA, p.12). Approximately 18 miles of trails open to stock use would be authorized under the proposed action. The project area would remain open for motorized use on legal trails, horseback use, and hunting. Use patterns may change as additional infrastructure is added (in the form of trails and trailheads) and forest users will have to adjust accordingly to remain in compliance with motorized use and shooting regulations.

Comment (F-139)

Opening some trail systems to motorized use will allow all of us to enjoy our national forests. Please don't close off more or make a trail system for a select group of outdoor users.

Response

The proposed action does not reduce the existing motorized trail system and adds two new motorized connector trails to improve loop opportunities (updated EA, p.12).

Comment (F-96)

The Forest claims to not have the resources to sustain the proposed trails themselves. The Forest states this relationship with “local community organizations will be key to ensuring that the proposed trail system is socially and financially sustainable (FSM 2353.03) in addition to operational and environmental sustainability (EA pg. 108).” The Forest continues to say the Forest “does not anticipate an increase in resources for education, law enforcement, and clean-up” (EA. Pg. 105). This is preposterous. An increase in new trails and trail users will require this! How can you proceed with the current proposed action knowing these resources won’t be available?

Response

As discussed on p. 109 of the updated EA, “development of formal trailheads and trail systems [under the preferred alternative] will likely reduce undesirable and illegal activities in the project area, as has been observed at other developed trailheads. Partnerships with local community groups may result [in] increased resources for education, clean up, and enforcement.”

Recreation–trailheads**Comment (F-49)**

I believe we need to address parking lots. I have noticed more and more vehicles at trail heads and I think it is wise for the parking lots to provide ample parking for all types of users. At the Whitefish Trails near Beaver Lake- parking can often be a problem for horse trailers. Folks wanting to keep their vehicles cool often leave an open parking area near the trail head to park across the road-the only practical place for horse trailers to park. Signs would be nice to indicate a horse parking area. Most people don’t think of a trailer needing a spot and many have no idea the space required. I also can’t stand for anyone to leave garbage and waste. Plastic bags of dog poop are disgusting and so are piles of fresh horse poop. Education can teach people to keep the parking lots clean and appealing for the next visitors.

Response

Trailhead development under the preferred alternative is discussed on p. 12 and p. 111 of the updated EA. Generally, trailheads will be constructed to accommodate anticipated use. During the initial stages of trail development, trailheads will not be constructed to their full capacity but could be expanded later to accommodate greater visitor needs. Site developments such as visitor kiosks will help educate visitors of the proper use of trailheads.

Transportation**Comment (F-30)**

The Forest could provide increased recreation opportunities and access to an existing trail system of old logging roads by protecting access over existing roads such as Road 10880 off Blankenship

Road. There is no mention in your project narrative or analysis of this situation, which I have pointed out to your staff in the past and commented on in my letter of October 27, 2018. The current Glacier View travel map shows that it is open year round to highway vehicles and dispersed camping is allowed along it. This road has existed for years, and provides access to large blocks of forest service land. The forest service should have a prescriptive easement which it should be defending vigorously and the public should continue to have access to these lands by the existing road.

Response

The Forest Service is aware of the concern raised by the commenter and continues to work with private landowners to provide public and administrative access to NFS lands.

Comment (F-30)

Consider the Flathead's travel analysis report, identify the minimum road system, and identify unneeded roads in the project area to prioritize for decommissioning or other uses.

The Flathead National Forest faces many challenges with its oversized, under-maintained, and unaffordable road system. See Final Travel Analysis Report for Flathead National Forest (Dec. 30, 2014) (Attachment F) (noting "The Flathead NF currently receives approximately 42 percent of the funds needed to maintain the road system to standard."). Only 27 percent of the system roads are managed for passenger vehicles, providing forest access to the public. Id. Subpart A of the Forest Service's own rules require it to address its unsustainable and deteriorating road system. 66 Fed. Reg. 3206 (Jan. 12, 2001); 36 C.F.R. part 212, subpart A. Subpart A is meant to close the gap between the agency's limited resources and maintenance required to keep up its oversized and deteriorating road system by (1) identifying the minimum road system (based on the Travel Analysis Report assessment of likely needed and unneeded roads), and (2) prioritize unneeded roads for decommissioning. 36 C.F.R. § 212.5(b). We urge the Forest Service to carefully evaluate the proposed Crystal Cedar project and each of the alternatives through this lens.

Response

The Forest Service conducted a travel analysis to inform the transportation management proposed in the Crystal Cedar project (project file P-03). Two road segments that were identified as unneeded in the forest wide travel analysis (project file exhibit R-10) were discussed by the team but were not proposed for decommissioning in the Crystal Cedar project, because of the district's interest in retaining them for fire management, recreational purposes, or future timber management needs.

Comment (F-78)

Address motorized travel management within the project area.

The Forest Service must demonstrate in the record how it located any new motorized trail designations with the objective of minimizing impacts and conflicts, pursuant to the minimization criteria as set forth under the Travel Management Rule and Executive Orders 11644 and 11989.

Response

The Crystal Cedar project proposes two segments of motorized trail (6400B and 6301B) totaling 0.4 miles to connect exiting motorized trails to exiting roadways 6400B or to each other 6301B.

The routes were identified in consideration of the minimization criteria identifies in Executive Order 11644 as follows:

- (1) *Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands.*

Trail 6400B was proposed to direct motorized use outside of an area receiving illegal motorized use onto more suitable terrain while providing a trail connection between a motorized trail and an open road to improve the recreation experience. The trail segment has been reviewed by resource specialists and designed to minimize effects to resources and in this can will be beneficial for soil and water resources in the project area. Trail 6301B has been review by resource specialists and designed to minimize effects to resources.

- (2) *Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats.*

The wildlife analysis considers the effects of all activities, including the two new motorized trail segments. Because they are located within an existing motorized network, the proposed trails will not increase disturbance to wildlife or habitat above the effects of the existing road and motorized trail system. The entire trail system was designed through an interdisciplinary approach to minimize the effects to resources.

- (3) *Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.*

The proposed trail system has been developed in collaboration with a local partner group. This partner group will construct and maintain the nonmotorized trails that are proposed, but have requested that existing use, such as motorized trails and existing roads, continue to be managed for motorized use. Other comments received on the project requested that motorized use be maintained where it is currently authorized. Project design feature 26 identifies the barriers that will be constructed to restrict motorized use on nonmotorized trails.

- (4) *Areas and trails shall not be located in officially designated Wilderness Areas or Primitive Areas. Areas and trails shall be located in areas of the National Park system, Natural Areas, or National Wildlife Refuges and Game Ranges only if the respective agency head determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, or scenic values.*

The project area is not located in or adjacent to wilderness areas, primitive areas, National Park lands, research natural areas, recommended wilderness or other areas with designated status to protect natural aesthetic or scenic values (forest plan figure B-21). No new trails or roads are proposed within the wild and scenic river corridor.

Vegetation management

Comment (F-41)

EA P: 21 the Forest Service reports that their actual field surveys, or “common stand exam”, covered just 22 percent of the project area – leaving 78 percent unsurveyed. Clearly, such a “Drive By” field survey is barely a look at all – let alone a “hard look.”

Response

The summary of exams described on p. 21 of the updated EA was summarized by the project area. Project file exhibit H-8 displays units (stands) that have had past common stand exams. Approximately 70 percent of proposed units have had at least one stand exam in them. In addition to formal exams, all units have been field visited by a certified silviculturist within the last two years, as described on p. 21 of the updated EA.

Comment (F-121)

The USFSs outdated logging policies are based on marketable timber and the continued growth of marketable species. Logging in the proposed area would only reduce the humidity and increase the airflow through this area. I believe logging in this area would greatly increase the amount of blow down trees, just like the FS area that was logged around Cedar Flats 12 years ago that has lost many trees due to increased wind affect after being thinned out. The increased wind flow, decreased humidity, and ladder fuels created by new blow down timber would make this area more susceptible to wildfire than it is currently. I am opposed to the current FS plan for logging and burning in the proposed area.

Response

Wind is a natural disturbance agent that we cannot control, however we can mitigate its effects. Blowdown hazard in general can be based on two things; density of the stand and species composition. Denser stands will have a higher likelihood of individuals blowing over after harvest due to the abrupt change in stand density. Species composition is the most important indicator of windthrow hazard as some species are high hazard, while others are low. The high hazard species in the Crystal Cedar project area are Engelmann spruce and lodgepole pine. Windthrow hazard in general can be mitigated through the type of treatment prescribed and the size, species, and quality of trees left. Most stands dominated by high wind throw hazard species such as lodgepole pine are prescribed for regeneration harvest. This allows for most of the trees to be removed so they do not fall down following harvest. Species such as western white pine, western larch, and Douglas-fir, all of which have a lower potential for windthrow following harvest, are preferred for leave. Where wind resistant trees are not available lodgepole pine is left in clumps which gives it a higher chance of being wind firm. In every unit the largest and highest quality trees are the selected leave trees.

Should a wind event occur that causes blow down, this would result in an increase in downed wood not ladder fuels. The project area has low to moderate downed wood densities currently (pp. 28-29 of the updated EA). As such, some additional downed wood could be added without substantially increasing fire hazard. Downed wood could be salvaged by firewood cutters or left in place for other resource benefit (i.e. wildlife).

Responses to comments in the fire and fuels section of this appendix address the concern about increased wind flow and the effects on wildfire.

Comment (F-115)

I am in favor of the proposed trail system and of the proposed logging to reduce forest fuels. I am not at all in favor of the proposed commercial logging component of this project. It seems that loggers have figured out that the way to get their enormous logging projects passed is to simply build a few trails along the way. Anyone who has flowed out of Glacier airport recently can clearly see the impact of logging on our local forests. We need less logging, not more of it. I would rather see trails not built than more commercial logging.

Response

Thank you for being in support of fuels reduction. The commercial harvest portion of this project was designed to accomplish fuels reduction and forest resilience objectives. In order to achieve the desired fuels reduction results and improve tree growth the removal of larger trees is required. Selling this material and providing a commercial product is desired to offset the costs of fuels reduction activities and provide jobs to the local economy.

Comment (F-134)

The EA is confusing because it states on page 26 that there are only 387 acres with very large trees (the size class that would correlate most closely to old growth). Yet on page 27 it states that there are 1,593 acres of old growth. As we said above old growth is more than just large trees but how can you reconcile that you only have 387 acres with very large trees (an old growth attribute) but have 1,593 acres of old growth. Please explain.

Response

The 2018 Forest Plan defines old-growth forest using the criteria defined by Green et al, which includes 10 trees per acre greater than 21 inches diameter at breast height. There are approximately 1,593 acres of forest in the project area that meet this definition of old-growth forest. Forest size class for this analysis was classified using a basal area weighted average, as defined on p.183 of the 2018 Forest Plan and displayed in project file exhibit H-11. In the very large size class of forest, it is likely that there are a lot more than 10 trees per acre over 20 inches, and the analysis showed that there were only 387 acres that met the definition of very large size class. There are more acres that meet the criteria for old-growth forest than those that meet the classification of very large trees. There are no activities proposed in forest stands that currently meet the criteria for old-growth forest or very large trees.

Comment (F-134)

There are no maps to show where the old growth is, how big the old growth patch sizes are, whether and how they are connected to other old growth stands. It is disclosed that patch size range between 9 and 361 acres but apparently the Flathead is not going to allow the inadequate patches to expand into adequate habitat for wildlife and birds.

Response

Maps of existing old growth are displayed in project file exhibit H-2, maps 8 and 9. Old growth patch size is discussed in the updated EA p. 29 See also updated EA p. 36 and project file exhibit H-4 for an analysis of the project's effects on old growth within the project area.

Comment (F-134)

Flathead considers old growth habitat to be undesirable, however the EA in the lynx section states that the temporal scale of the effects analysis is 100 years which is enough time for forest conditions and mature multistory stands to develop and for some trees to die and fall to create denning habitat. Mature multistory habitat is exactly the habitat that the Flathead considers undesirable in the project area so which is it -- are you going to allow it to develop into good lynx habitat (and old growth) or not?

Response

Forest vegetation management objectives are different within the wildland-urban interface versus outside the wildland-urban interface. As displayed on page 35 of the updated EA, it is not desirable to encourage abundant ladder fuels within the wildland-urban interface. The wildlife statement referenced in the comment was in regards to time scale, which is estimated to be 100 years to develop multi-story lynx habitat.

Vegetation treatment--riparian management zone**Comment (F-41)**

1. As the Forest Service is aware, riparian zones are some of the most productive habitats on the Flathead due to higher water tables, better soils, and dense hiding/feeding cover. They also provide key linkage zones for wildlife generally, and species like grizzlies and lynx specifically. In addition, due to the presence of water, deciduous trees, and higher humidity, RMZ's are more resistant to burning.
2. ...from the Kalispell Daily InterLake article of 6/14/19, and the EA itself, it's clear that the Flathead Forest has failed to conduct field surveys on 78% of the project area, and has little idea of how many acres of RMZ habitat actually occur in the project area, or where they're located. Second, the habitat conditions described above as the goal of project "vegetative treatments" are the same ones that existed before the Forest Service rode to the forest's rescue in 1906, and the same ones that already exist on much of the area today. Finally, the Flathead presents no compelling, science-based, ecologically sound reason to be "treating" this key habitat type, and until it provides that reasoning, it must stay out.

Response

In addition to the formal exams that have been completed in 70 percent of treatment units, all units have been field visited by a certified silviculturist within the last two years, as described on p. 21 of the updated EA.

The updated EA describes on pp. 14-15 the types of treatments that could occur within RMZs. Project file exhibit H-2, map 2 shows the location of mapped RMZ's, but may not reflect the

riparian areas identified during implementation, and project file exhibit H-9 shows the acreage of potential mapped RMZ treatment by unit. Page 31 and 32 of the updated EA includes a discussion of objectives and effects of management in the RMZ to terrestrial ecosystems and vegetation. Management in the RMZ is allowed and desired as outlined in the forest plan FEIS Vol.1 pages 143-144.

The forest plan includes direction that would result in the retention of forest conditions and cover that protect the functional attributes of riparian and aquatic resources when conducting vegetation treatments. This includes retention of live reserve trees when harvesting (FW-GDL-RMZ-08), retention of forest cover to provide for wildlife habitat connectivity (FW-GDL-RMZ-09), and retention of snags when harvesting to provide higher snag and down wood densities in riparian areas (FW-GDL-RMZ-10). All Forest Plan guidelines for RMZs will be met through project design features.

Comment (F-134)

The EA discloses that there will be regeneration logging (i.e., clearcuts) in riparian areas to alter species composition because they are undesirable. Then desirable seral trees will be planted. The EA does not disclose where the riparian logging will be, whether it will cause soils to dry out, if the riparian areas are adjacent to streams, wetlands or fens, and how this will impact wildlife that use riparian areas.

Response

The updated EA describes on pp. 14-15 the types of treatments that could occur within RMZs. Project file exhibit H-2, map 2 shows the location of mapped RMZ's, but may not reflect the riparian areas identified during implementation, and project file exhibit H-9 shows the acreage of potential mapped RMZ treatment by unit. Page 32 and 33 of the updated EA includes a discussion of objectives and effects of management in the RMZ to terrestrial ecosystems and vegetation. The wildlife section of the updated EA addresses the effects of riparian management on different wildlife species. Page 78 of the aquatics section of the updated EA discusses sediment delivery and pp. 83-84 discusses the potential effects to plant species of conservation concern within the wetland/riparian habitat group.

Wildlife

Comment (F-78, F-121)

This area is a major wildlife corridor that should not be tampered with. When I met with rangers at The Hungry Horse Ranger station, and expressed my concern of the wildlife, I was told that the hope was for the animals to move to another location. This kind of plan would go against the protected species of Grizzly bear and Lynx that have a large population in the proposed project area. There are other prevalent species that inhabit this area as well. Moose, elk, deer, black bear, wolves, mountain lion, bobcat, pine martin, fisher, grouse, and many others would be disrupted by logging and any additional trails. Due to the projects infringement on protected species habitat a full EIS should be done.

(F-96)

Consider alternatives that reduce or eliminate more harmful “loop trails” and reduce total new trail miles in general to protect wildlife habitat and security.

Response

Maintenance of connectivity for wildlife species was a major consideration throughout the Crystal Cedar project planning process and the updated EA displays effects of proposed project activities to habitat connectivity in the species-specific sections and associated project file exhibits. The updated EA also considers potential disturbance and displacement effects of project activities to wildlife species in the species-specific sections.

Comment (F-134)

The Flathead must prepare a Biological Assessment for wolverines for this project. It cannot rely on programmatic Regional guidance.

Response

In 2014, USFS Region 1 prepared a programmatic Biological Assessment for wolverine for a variety of projects routinely conducted on NFS lands (project file exhibit G-14) such as timber harvest, mechanical equipment use, roads and road maintenance, silvicultural activities, recreation management, forest products, prescribed fire, weed control, and administrative uses proposed in the Crystal Cedar project. The U.S. Fish and Wildlife Service concurred with this finding and in 2016 determined that this concurrence was still valid (project file exhibit G-14). In 2017, the U.S. Fish and Wildlife Service also concurred with the conclusion of no-jeopardy for the Flathead National Forest’s Forest Plan due to plan components that maintain, improve, and restore ecological conditions within the plan area to contribute to conservation of the wolverine by reducing the risk of future threats, including consideration of potential future changes in climate. See the FEIS for the 2018 Forest Plan (Volume 2 pp. 250-262), its Biological Assessment (project file exhibit R-6), the concurrence with “no jeopardy” in its Biological Opinion (project file exhibit R-7), and the ROD for the Forest Plan (USDA Forest Service 2018a, pp. 41 and 54). The Crystal Cedar project would not jeopardize the wolverine (project file exhibits G-9, G-10, and G-31). See the response to objections on the Forest Plan (USDA Forest Service 2018c) for information about how the Forest Plan provides for the ecological conditions necessary for wolverine conservation and addresses relevant threats. The updated EA includes an analysis of effects to wolverines on p.58-61 and concludes that although cover would be removed on 33 acres of modeled primary wolverine habitat, connectivity of forest cover would not be severed.

Comment (F-134)

The NFMA requires that viable populations of species be maintained. The agency provides no assurance that there are viable populations of wildlife in the project area before the project is implemented, or how viable populations will be maintained after project completion. Or into the future as wildlife is perpetually displaced by permanent mountain biking trails. The agency failed to maintain and improve habitat, and fails to maintain viable -populations for old growth species. NFMA § 6(g)(3)(F)(v), 36 CFR 219.19(a) and 36 CFR 219.27(a)(6).

Response

The updated EA (pp. 3 and 38) describes the coarse-filter/species-specific approach applied by the Forest Plan (USDA Forest Service 2018b), as guided by the 2012 planning rule. The Forest Plan FEIS, in sections 3.7.1 through 3.7.3, discusses the use of models and assumptions and the key ecosystems and their characteristics for wildlife and FEIS Appendix 6 provides the bridge between coarse-filter plan components and key ecosystem characteristics associated with the species that use the Flathead National Forest. The Forest Plan Record of Decision identifies species specific plan components where needed to maintain viable populations within the plan area on pp. 16-18 (project file exhibit R-4). Consistency with Forest Plan direction relevant to wildlife is documented in the EA (pp. 39-70), and in project file exhibit R-1. Project design features, listed in appendix A of the updated EA and in this draft decision notice, ensure this consistency. The long-term or permanent nature of effects of use of the proposed trails was recognized throughout the project effects analysis for wildlife.

Comment (F-134, F-96)

Moose are totally ignored in the EA, except for a general statement in the Big Game discussion. Moose are old growth associated species, and really don't fit neatly under the big-game umbrella concept imagined by the Flathead National Forest. No analysis of moose, moose habitat, or old growth habitat relating to moose appears in the EA.

Response

The updated EA considers affects to moose primarily in the forest ungulate section (pp. 67-68). There is also a discussion of forest ungulates (including moose) as prey species in the gray wolf section (pp. 68-69). Forest plan FEIS sections 3.7.1 through 3.7.3 discuss the use of models and assumptions and the key ecosystems and their characteristics for wildlife and FEIS Appendix 6 provides the bridge between coarse-filter plan components and key ecosystem characteristics associated with the species that use the Flathead National Forest. The FIES lists moose as a key species for consideration of wildlife diversity in coniferous forests and presents an analysis of effects on moose of management under the 2018 Forest Plan (USDA Forest Service 2018a Volume 3 pp. 85-91). Project design features, listed in appendix A of the updated EA and of this draft decision notice, ensure consistency with the forest plan.

Comment (F-96)

Garnier Creek provides food for blue heron, bald eagles, red-tail hawks, and northern goshawks, as well as many other bird species. We frequently have up to three blue heron fish-feeding on our property at any given time. Bald eagles and goshawks are especially common. The projects direct threats to our water source (see Hydrology Issues & Concerns section above) will not only endanger our legal water rights but will also endanger these species' food source. If our water source ceases to exist, this feeding ground will be destroyed in kind.

Response

The updated EA considers effects to the blue heron (p. 69), bald eagle (pp. 63-64), and northern goshawk (pp. 69-70). Forest plan FEIS sections 3.7.1 through 3.7.3 discuss the use of models and assumptions and the key ecosystems and their characteristics for wildlife and FEIS Appendix 6 provides the bridge between coarse-filter plan components and key ecosystem characteristics associated with the species that use the Flathead National Forest. The FIES lists bald eagle as a key species for consideration of wildlife diversity in aquatic, wetland, and riparian habitats,

northern goshawk for consideration of wildlife diversity in coniferous forest habitats, and great blue heron for consideration of wildlife diversity in hardwood tree habitats. The FEIS presents an analysis of effects on these species of management under the 2018 Forest Plan (USDA Forest Service 2018a Volume 3 pp. 41-43, 43-47, and 94-97). Project design features, listed in appendix A of the updated EA and this draft decision notice, ensure consistency with the forest plan.

Please see the aquatics response to comment regarding the concerns about water resources.

Comment (F-96)

Logging efforts will destroy critical cover habitat, browse, and migration routes for our deer, elk and moose populations. The logging roads, motorized, and non-motorized trails will push our game out of these areas and provide us with fewer take opportunities.

Response

The updated EA considers effects to forest ungulates (pp. 67-68), which include deer, elk, and moose. The analysis of effects shows that removal of vegetation will reduce hiding cover it will also enhance forage opportunities. The analysis considers the effect of both motorized and nonmotorized access to forest ungulates.

Forest plan FEIS sections 3.7.1 through 3.7.3 discuss the use of models and assumptions and the key ecosystems and their characteristics for wildlife and FEIS Appendix 6 provides the bridge between coarse-filter plan components and key ecosystem characteristics associated with the species that use the Flathead National Forest. The FIES lists white-tailed deer, mule deer, elk, and moose as key species for consideration of wildlife diversity in coniferous forest habitats. The FEIS presents an analysis of effects on these species of management under the 2018 Forest Plan (USDA Forest Service 2018a Volume 3 pp. 82-91). Project design features, listed in appendix A of the updated EA and this draft decision notice, ensure consistency with the forest plan.

Wildlife – old growth

Comment (F-134)

The EA really doesn't analyze impacts of displacing old growth wildlife - for how long, how does this affect breeding, feeding, nesting, rearing young, viability, diversity?

Response

The Crystal Cedar project does not propose vegetation treatment in old growth or late successional forest, therefore there is no analysis of effects specific to old growth associated species, however, displacement effects to wildlife species due to project activities are disclosed in each species-specific section of the updated EA. See the site-specific analysis for old growth and very large live trees in the updated EA (pp. 31 and 36) and project file exhibit H-2, maps 8 and 9 for a location and patch size of old growth in the project area.

Comment (F-134)

The key to diversity is retention of old growth. Logging could only improve diversity if there were a surplus of old growth and a scarcity of young, regenerating stands. The purpose of a full and fair (NEPA) analysis of the no-action alternative is to gain a clear understanding of the tradeoffs associated with various, proposed action alternatives. Moreover, the casual reference to

the environmental consequences of past logging and road-building activity, supposedly “considered in the habitat baseline...,” cites no evidence, no specific monitoring data and no cumulative effects analysis in the EA to support this claim.

Response

The Crystal Cedar project does not propose vegetation treatment in old growth or late successional forest. The updated EA includes a site-specific analysis for old growth and very large live trees in the updated EA (pp. 31 and 36) and project file exhibit H-2, maps 8 and 9 for a location and patch size of old growth in the project area.

Comment (F-134)

The EA fails to disclose how elevation often determines the quality of old growth. Old-growth habitat effectiveness declines as elevation increases. Elevational distribution of old growth wasn’t even addressed. The EA fails to analyze how the loss of low elevation old growth may affect moose, pine marten, northern goshawk, pileated woodpecker, brown creeper and flammulated owl. Liquidation of low elevation old growth threatens the viability of these species.

Response

Elevation and other kinds of site conditions do have effects on the development and retention of old growth habitats, as detailed by Green et al (2011), however, the Crystal Cedar project does not propose vegetation treatment in old growth or late successional forest.

Comment (F-134)

The agency’s weak commitment to old growth in this project area will needlessly destroy important habitat for goshawk, northern flying squirrel, flammulated owl, migratory songbirds, pileated woodpecker, and lynx. Old growth associated species such as the pine marten need old growth in stand sizes of 250 to 500 acres to be effective. Pileated woodpeckers, another old growth associated species, require 100-250 acre stands. Goshawks, another old growth associated species, require an average nesting stand size of 40 acres in west-central Montana, plus additional acres for post-fledgling habitat. Where is the site-specific analysis? It isn’t in the EA. The EA doesn’t even disclose how large each of the old growth patches are in the analysis area.

Response

The Crystal Cedar project does not propose vegetation treatment in old growth or late successional forest. The updated EA includes a site-specific analysis for old growth and very large live trees in the updated EA (pp. 31 and 36) and project file exhibit H-2, maps 8 and 9 for a location and patch size of old growth in the project area.

Wildlife—Canada lynx**Comment (F-134)**

Nor does the EA identify the distribution of lynx habitat in the project area, i.e., where are the stand initiation, mature multi-story, multi-story habitat, winter foraging etc. How is it connected before and after the project is implemented? How will the habitat be fragmented and lynx displaced by continual use of trails?

Response

See project file exhibit G-3 for the existing condition of Canada lynx habitat and Canada lynx critical habitat by structural stage in the affected LAU and project file exhibit G-4 for the effects of proposed project activities to Canada lynx habitat and Canada lynx critical habitat by structural stage, including maps displaying distribution and connectivity of Canada lynx habitat and Canada lynx critical habitat by structural stage before and after proposed project activities. The updated EA considers the effects of trail construction and use on Canada lynx and Canada lynx critical habitat (pp. 43 and 49).

Comment (F-41)

EA P: 48, Table 31 shows that trails would pass through 11.19 miles of critical habitat, and given these trails proximity to Columbia Falls, there's little doubt that they would quickly become high-use, high-intensity trails – as noted on EA P: 56. According to research by Kasworm and Manley (1991), those trails would displace grizzlies for 122m on each side, for a total of 1085 acres. What would they do to lynx? And for motorized trails, grizzlies would be displaced from 500 meters each side, or 398 acres per mile. What would that do to lynx Critical Habitat?

Response

A response to the grizzly bear science cited above (Kasworm and Manley 1991) is addressed below in the grizzly bear response to comments section of this appendix. Research conducted on grizzly bear cannot be translated to the effects and behavior of Canada lynx because of the different needs of the species. The 2018 Final Environmental Impact Statement for the Land Management Plan, Volume 2, states the following in relation to Canada lynx and recreation on p.213:

Some kinds of recreational activities cause loss of habitat, behavioral responses to human disturbance, or snow compaction (ILBT, 2013)...Some anecdotal information suggests that lynx are quite tolerant of humans, although this has not been well studied. A variety of behavioral responses may be expected from individual lynx and in different contexts (ILBT, 2013).

The updated EA discusses that Canada lynx could be disturbed or displaced by trail construction activities, but would not change the overall function of the habitat patch (updated EA, p.44 and 50). The Forest Service consulted with U.S. Fish and Wildlife Service on the effects of project activities on Canada lynx and critical habitat and they determined that effects would be insignificant or discountable (project file exhibit G-13)

Comment (F-41)

1. EA P: 43-44 tells us that, “Timber harvest, pre-commercial thinning, and fuel reduction across National Forest System lands has removed or altered lynx habitat, typically leaving few smaller trees, low limbs, or large downed wood...Such areas can still function as lynx habitat but at reduced quality for a period of time...Past timber harvest occurred on approximately 6,719 acres of National Forest System land in the project area from the 1940's through the 2000's...”

Yet with lynx now a Threatened species – in part due to these activities – the Flathead forest would have us believe that these same activities are now a project “Need.” Statements of this type simply don't pass the “Straight Face Test.”

2. ... the Forest would have us believe that the same firewood cutting that caused the above problem is now a “Need” in the form of live birch cutting along a 400 foot wide swath adjacent to some project roads. Clearly the only “need” here is for the Forest Service to buy off the public with the promise of free firewood – at the expense of wildlife habitat integrity.

Response

The updated EA considers the effects of proposed vegetation management on Canada lynx (pp. 42-43) and Canada lynx critical habitat (pp. 48-49). The live birch firewood cutting proposed in the Crystal Cedar project would occur outside both mapped Canada lynx habitat and designated Canada lynx critical habitat.

Wildlife–grizzly bears

Comment (F-41)

1. When we compare the Habitat requirements of A19 (USDA 1995) to the current access conditions in Crystal Cedar, it’s clear that the Forest needs to be closing roads and motorized trails – not opening more.

Yet, despite these dramatic shortcomings in providing habitat security, this project would Increase OMRD by 9% and increase TMRD by 2%, and this further elevated risk to grizzlies would remain for the 5 years of the project, plus a year of restoration (EA P: 49-50).

Response

The Forest used Montana Fish, Wildlife and Park’s preliminary report and other unpublished data to develop management direction in Amendment 19. The “19-19-68” objectives were based on analysis of eight adult female grizzly bears, which was the best available information in 1995. We now have a much more extensive knowledge about grizzly bear populations and habitat use in the NCDE. Notably, the population has been increasing, with full occupancy of the recovery zone starting in 2009 and continuing through 2014, even though not every subunit in the primary conservation area met the Amendment 19 objectives for open motorized access density, total motorized access density, and security core. In addition, Amendment 19 recognized that it was infeasible to meet these on every subunit due to landownership patterns, such as the Cedar Teakettle bear management subunit which only has 59 percent national forest system lands (updated EA p. 49).

The proposed temporary changes to access conditions in the affected bear management subunit are in compliance with 2018 Forest Plan direction related to grizzly bears which is consistent with the Grizzly Bear Conservation Strategy (IGBC 2019). Project consistency with Forest Plan direction for the grizzly bear is provided in project file exhibit R-1. See project file exhibits R-6 and R-7 for consultation on the 2018 Forest Plan. For more information about how management under the Forest Plan contributes to grizzly bear recovery and applies the best available scientific information, see the response to objections on the Forest Plan (USDA Forest Service 2018c).

Comment (F-41)

1. And when we add the displacement from roads and trails, the true scale of displacement becomes even clearer. The 7.4 miles of roads, buffered by 500m on either side, disrupt 2942 acres of habitat (USDA 1995; Mace and Waller 1997), while the 24.7 miles of trails buffered by 122m per side (Kasworm & Manley 1991), displace grizzlies from another 2396 acres. And when – not if – these trails become high-intensity, non-motorized trails because of their proximity to Columbia Falls, they must be buffered by 500 meters, leading to 9823 acres of displacement. USFWS, in the NCDE Conservation Strategy (USFWS 2018), is trying to claim that it doesn't have to count these high-intensity trails against Core, but that claim is as devoid of science as its claim that NCDE grizzlies are "recovered."
2. First, a check of Project Map 1 & 2 suggests that most trail construction does not appear to be within the 500-meter buffer along open roads as claimed in Table 37, requiring a fact-check by the Forest Service. However, if it is correct, the solution is comparatively simple – close many of the miles of non-primary roads in the project area, simultaneously lessening displacement of grizzlies and moving the area closer to the known grizzly security level requirements of A19 and Mace and Waller (1997). Simply leaving all of these "other roads" in place while creating an additional 24.7-mile network of "high-use, high-intensity trails" is not acceptable, because the overlapping 500-meter buffers for each of these will create a "grizzly exclusion zone" throughout the western-south western portion of the project area.

Response

In 1994 and 1998, the Interagency Grizzly Bear Committee task force charged with creating standard definitions and procedures for managing motorized access in grizzly bear recovery zones recommended that the impacts of "high intensity use" nonmotorized trails be considered in calculations of core habitat (IGBC, 1998, p. 4). As stated in the draft Grizzly Bear Conservation Strategy (USFWS, 2013, p. 21):

The original recommendation to exclude areas within 500 m. of high use nonmotorized trails from core area calculations was based on several untested assumptions regarding the potential impacts of such trails on grizzly bears. The approach is not clearly supported by the existing scientific literature. Multiple studies document displacement of individual grizzly bears from nonmotorized trails to varying degrees (Schallenberger and Jonkel 1980; Jope 1985; McLellan and Shackleton 1989; Kasworm and Manley 1990; Mace and Waller 1996; White et al. 1999). However, none of these studies documented increased mortality risk from foot or horse trails or population level impacts to grizzly bears from displacement. For example, while Mace and Waller (1996) found that grizzly bears were further than expected (i.e., displaced) from high-use trails (90 visitors/day) in the Swan Mountains, they reported there were no historic or recent records of grizzly bear/human conflict in their study area. Similarly, while grizzlies in Glacier National Park are displaced to some degree by nonmotorized trails (Jope 1985; White et al. 1999), conflicts and grizzly bear mortalities there are extremely low and related almost exclusively to campgrounds and other human-use areas. Furthermore, the recommendation that core blocks be a minimum of 2,500 acres in size was based on research regarding road density . . . and did not address high intensity use nonmotorized trails in the analyses. While we

recognize that displacement merits concern because it can affect individual grizzlies through habitat loss and disrupted foraging or social behaviors, there are no data demonstrating that these impacts translate into detectable impacts to population-level variables such as grizzly bear survival or reproduction. Until such effects are documented, our primary concern with high-use trails is whether or not they are strongly associated with grizzly bear mortality, as motorized routes are. At this point, there are no data or research indicating nonmotorized trail use results in disproportionate grizzly bear mortality or population declines.

The Forest Service has conducted additional review and has added new discussion, literature citations, and analysis of the impacts of nonmotorized recreation on grizzly bears to section 3.7.5 and 6.5.5 of the final EIS and in the biological assessments (Kuennen, Van Eimeren, & Trechsel, 2017; Warren et al., 2017). Under the action alternatives, high-intensity-use nonmotorized trails would not be considered in the identification of secure core. In order to compare the alternatives, the Forest Service calculated the existing percentage of secure core both with and without nonmotorized, high-intensity-use trails for the action alternatives. Removal of high-intensity-use nonmotorized trails does not mean that the effects of nonmotorized trails would be ignored; the baseline is set depending on the definition used. As stated in the NCDE Grizzly Bear Conservation Strategy (USFWS, 2013), grizzly bear-human conflicts and mortalities will be monitored and reported annually. Forest plans are to be adaptive; they can be changed in the future if needed. The discussion of effects in the final EIS is based upon the best available scientific information.

Further, no activities proposed in Crystal Cedar project would occur in or within 500 meters of existing secure core for grizzly bears (updated EA p. 58). See project file exhibit G-6 for the existing condition of grizzly bear habitat in the affected bear management subunit and project file exhibit G-7 for the effects of proposed project activities to grizzly bear habitat, including maps displaying locations of proposed roads and trails relative to grizzly bear habitat. The updated EA considers the effects of road and trail construction and use on grizzly bears (pp. 57-58). Also see project file exhibit G-8 for details of temporary changes to access conditions during proposed project activities.

Comment (F-126)

The EA in numerous places notes that “Open and closed roads, along with both motorized and non-motorized trails, facilitate human access, contributing to the risk of mortality or displacement of grizzly bears” (see EA at 57). Nowhere, however, does the EA or the revised Forest Plan account in a substantive fashion for the displacement of bears by non-motorized recreation and measure it against mandatory limits/standards.

Instead, the EA states that non-motorized trails are not included in calculations of TMRD (see EA at 55) that could then be measured against TMRD Forest Plan standards. The EA and revised Forest Plan made no effort to measure the density and impact of non-motorized roads and trails and they include no mandatory limits/standards on those densities and impacts. Instead, the revised Forest Plan denies there are significant impacts from non-motorized trails, changes definitions to allow high-use nonmotorized trails in Grizzly Bear Security Core, and allows closed roads to not be included in calculations of TMRD.

Response

In 1994 and 1998, the Interagency Grizzly Bear Committee task force charged with creating standard definitions and procedures for managing motorized access in grizzly bear recovery zones recommended that the impacts of “high intensity use” nonmotorized trails be considered in calculations of core habitat (IGBC, 1998, p. 4). As stated in the draft Grizzly Bear Conservation Strategy (USFWS, 2013, p. 21):

The original recommendation to exclude areas within 500 m. of high use nonmotorized trails from core area calculations was based on several untested assumptions regarding the potential impacts of such trails on grizzly bears. The approach is not clearly supported by the existing scientific literature. Multiple studies document displacement of individual grizzly bears from nonmotorized trails to varying degrees (Schallenberger and Jonkel 1980; Jope 1985; McLellan and Shackleton 1989; Kasworm and Manley 1990; Mace and Waller 1996; White et al. 1999). However, none of these studies documented increased mortality risk from foot or horse trails or population level impacts to grizzly bears from displacement. For example, while Mace and Waller (1996) found that grizzly bears were further than expected (i.e., displaced) from high-use trails (90 visitors/day) in the Swan Mountains, they reported there were no historic or recent records of grizzly bear/human conflict in their study area. Similarly, while grizzlies in Glacier National Park are displaced to some degree by nonmotorized trails (Jope 1985; White et al. 1999), conflicts and grizzly bear mortalities there are extremely low and related almost exclusively to campgrounds and other human-use areas. Furthermore, the recommendation that core blocks be a minimum of 2,500 acres in size was based on research regarding road density . . . and did not address high intensity use nonmotorized trails in the analyses. While we recognize that displacement merits concern because it can affect individual grizzlies through habitat loss and disrupted foraging or social behaviors, there are no data demonstrating that these impacts translate into detectable impacts to population-level variables such as grizzly bear survival or reproduction. Until such effects are documented, our primary concern with high-use trails is whether or not they are strongly associated with grizzly bear mortality, as motorized routes are. At this point, there are no data or research indicating nonmotorized trail use results in disproportionate grizzly bear mortality or population declines.

The Forest Service has conducted additional review and has added new discussion, literature citations, and analysis of the impacts of nonmotorized recreation on grizzly bears to section 3.7.5 and 6.5.5 of the final EIS and in the biological assessments (Kuennen, Van Eimeren, & Trechsel, 2017; Warren et al., 2017). Under the action alternatives, high-intensity-use nonmotorized trails would not be considered in the identification of secure core. In order to compare the alternatives, the Forest Service calculated the existing percentage of secure core both with and without nonmotorized, high-intensity-use trails for the action alternatives. Removal of high-intensity-use nonmotorized trails does not mean that the effects of nonmotorized trails would be ignored; the baseline is set depending on the definition used. As stated in the NCDE Grizzly Bear Conservation Strategy (USFWS, 2013), grizzly bear-human conflicts and mortalities will be monitored and reported annually. Forest plans are to be adaptive; they can be changed in the future if needed. The discussion of effects in the final EIS is based upon the best available scientific information.

Further, no activities proposed in Crystal Cedar project would occur in or within 500 meters of existing secure core for grizzly bears (updated EA p. 58). See project file exhibit G-6 for the existing condition of grizzly bear habitat in the affected bear management subunit and project file exhibit G-7 for the effects of proposed project activities to grizzly bear habitat, including maps displaying locations of proposed roads and trails relative to grizzly bear habitat. The updated EA considers the effects of road and trail construction and use on grizzly bears (pp. 57-58).

Comment (F-96)

The EA also states that “proposed activities would not occur in spring habitat for grizzly bears. (EA, Pg. 30).” We have abundant evidence of grizzly bears both on our property (which is bordered by areas 54 and 109 in the project area) and inside the project areas in the summer and fall as well. Efforts to reduce the impact to grizzly bears by avoiding implementation during just one season of the year does not address the fact that these animals live in this area year-round. This is NOT A SEASONAL USE AREA; it is year-round so the likelihood of a human-bear conflict will be even greater than “Moderate” as the EA states (EA, Pg.50).

Response

The updated EA explains the reasoning for spring timing restrictions for grizzly bears on page 52 and acknowledges spring, summer, and fall use of the project area by this species. “Grizzly bears use a mosaic of habitats that vary throughout the year. The affected subunit provides potential foraging habitat for grizzly bears throughout the spring, summer, and fall. The spring period (see den emergence time period in forest plan glossary) is a key time for grizzly bears because they are coming out of their winter dens, possibly with young cubs or yearlings, and it is the breeding season. Grizzly bear use of habitat is restricted by snow in the early spring so many grizzly bears move to lower elevations. In summer and fall, abundant habitat is available for grizzly bears.”

The proposed project activities in the affected bear management subunit are in compliance with Forest Plan direction related to grizzly bears which is consistent with the Grizzly Bear Conservation Strategy (IGBC 2019). Project consistency with Forest Plan direction for the grizzly bear is provided in project file exhibit R-1. See project file exhibits R-6 and R-7 for consultation on the 2018 Forest Plan. For more information about how management under the Forest Plan contributes to grizzly bear recovery and applies the best available scientific information, see the response to objections on the Forest Plan (USDA Forest Service 2018c).

Comment (F-96)

The EA also states that the proposed actions “could negatively affect grizzly bears by causing disturbance or displacement from preferred habitats. Grizzly bears are highly dependent upon learned habitat; disturbance or displacement into unknown territory may lead to sub-marginal nutrition, reduced reproduction, or greater exposure to adult predatory bears or human food sources, which can lead to human-caused mortality....Human and mechanical activity would displace bears from the areas in/near proposed vegetation treatment units, road and trail construction, haul routes, aquatic improvements, and other project activities. (EA, Pg. 55).”

The EA mentions that the “No Action Alternative” would “maintain habitat components that contribute to the sustaining the recovery of the grizzly bear population in the NCDE, a mosaic of successional stages to provide for grizzly bear habitat needs over the long term, and habitat connectivity with neighboring grizzly bear recovery zones” (EA pg. 53). Here, you explicitly imply your proposed actions presented will NOT meet the above ESA standards and requirements.

Response

The updated EA has been clarified on p. 58 to show that the proposed action would also meet the Forest Plan desired conditions referred to above. The proposed project activities in the affected bear management subunit are in compliance with Forest Plan direction related to grizzly bears which is consistent with the Grizzly Bear Conservation Strategy (IGBC 2019). Project consistency with Forest Plan direction for the grizzly bear is provided in project file exhibit R-1. See project file exhibits R-6 and R-7 for consultation on the 2018 Forest Plan. For more information about how management under the Forest Plan contributes to grizzly bear recovery and applies the best available scientific information, see the response to objections on the Forest Plan (USDA Forest Service 2018c).

Wildlife–human–bear conflict

Comment (F-21, F-30, F-34, F-41, F-96, 137)

1. Addressing the first concern, research and experience suggest that very narrow trails in a forest setting typically have little, if any, measurable effect on wildlife through modification of habitat, attractants, or toxic substances. However, depending on the number of people using the trails and, to some extent, on the type of activity, even narrow trails can be problematic if they are in critical habitat areas. Some bears, particularly adults or females with cubs, are more likely to avoid areas with a lot of human activity, and others will continue to use the area but alter their behavior patterns (Coltrane and Sinnott 2015). Loose dogs can intensify impacts on wildlife and promote negative encounters as well. We encourage the Flathead National Forest to consider leash restrictions in this area to reduce potential impacts, as well as conflicts. We also recommend providing signage at the trailheads to educate trail users on the effects of their dogs on wildlife.
2. I enjoy mtn biking, but it seems inappropriate to put them in the middle of bear territory. Setting people up for failure in a bear-biker encounter seems silly. Please consider other routes.
3. ...the risk of conflict is particularly serious because many of the proposed trails pass through areas of high quality habitat, including huckleberries – something the Forest Service should know better than to even propose. This becomes especially serious in August – October when berries ripen, bears are in “hyperphagia” in preparation for denning, and NCDE mortalities historically spike. Given last year’s record NCDE grizzly mortalities, and the fact that 16 grizzlies are already dead in 2019 (Kalispell Daily InterLake, 6/19/19, A3) the Flathead Forest has no justification for knowingly increasing conflicts in the name of recreation.
4. The problem is that in forested habitat, there’s virtually no way to provide for the kind of sight lines needed to compensate for elevated numbers of mountain bike riders traveling at high speed, making little noise, and often not carrying bear spray – all problems identified by the Board of Review in the Brad Treat fatality. Tim Manley, Grizzly Bear Conflict Resolution Specialist for Montana FWP, correctly notes in an 11/7/18 letter to the Flathead Forest (See Attachment), that bikers traveling at high speed on rough trails have little time to be scanning the landscape for bears, making better sight distances of little benefit. In addition, as discussed at a number of Interagency Grizzly Bear

Committee (IGBC) meetings in recent years, users seldom read educational information provided at trailheads, and often ignore it if they do. The one foolproof solution is to restrict bike usage to Primary Access Roads only.

Response

The updated EA considers the effects of trail construction and use on grizzly bears (pp. 57-58). Project design features 74 and 75 related to trail construction, listed in appendix A of the updated EA and this draft decision notice, would reduce the risk of bear-human conflict along proposed trails by avoiding areas of dense vegetation, such as that found in riparian habitat, maintaining sight distances, and limiting speed of travel. In addition, information on how to avoid and respond to bear-human encounters would be posted at trailheads.