Region 2
3201 Spurgin Road
Missoula, MT 59804

November 6, 2020

Dear Interested Citizen:

Thank you for your thoughtful reviews, comments, and suggestions on a proposal by Montana Fish, Wildlife & Parks (FWP) to conduct the North Fork Blackfoot River Westslope Cutthroat Trout (WCT) Conservation Project. As detailed in the draft Environmental Assessment (EA), the objective of this project is to establish a secure population of nonhybridized to slightly hybridized (< 10% hybridization) WCT in the North Fork Blackfoot River upstream of the North Fork Falls. Secondarily, the project would eliminate a source of nonnative genes that threaten native WCT in the North Fork Blackfoot River watershed downstream of the barrier falls.

Both goals would bring considerable conservation benefit to native trout. Native fish restoration in the project area would require removing the existing fishery (comprised of hybrids of rainbow trout, Yellowstone cutthroat trout, and WCT) using CFT Legumine™ or Prenfish™, two commonly used formulations of liquid rotenone (a naturally-derived piscicide substance used to kill fish), used in stream reclamations in Montana. This would be followed by stocking of genetically pure WCT in the project area.

Enclosed is a decision document in which I explain my rationale for approving the proposed action (Alternative 1) to proceed with the westslope cutthroat trout conservation project. Upon completion of the public involvement process and by inclusion of information in this decision notice, FWP accepts the draft EA as final. The decision document also includes public comment, along with FWP's responses, which further explain and clarify the actions proposed for this project.

Please feel free to contact me at 406-542-5500 with any questions. Thank you for your interest and participation.

Sincerely,

Randy Arnold

RA/sr

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DECISION NOTICE for the DRAFT ENVIRONEMNTAL ASSESSMENT:

North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project

November 2020

Region 2 of Montana Fish, Wildlife & Parks
3201 Spurgin Rd, Missoula, MT 59804

Proposal

This environmental assessment (EA) evaluates a proposed project with the primary purpose of establishing a population of westslope cutthroat trout in the North Fork Blackfoot River watershed upstream of a barrier waterfall in the Scapegoat Wilderness. Secondarily, the project would eliminate a source of nonnative genes that threaten native westslope cutthroat trout in the North Fork Blackfoot River watershed downstream of the barrier falls. Both goals would bring considerable conservation benefit to native trout. The project area (Figure 1) harbors a heavily hybridized population of rainbow trout × Yellowstone cutthroat trout × westslope cutthroat trout, with rainbow trout genes being the dominant proportion of genes in the project area. Genetic contribution of westslope cutthroat trout ranges from 0% to 17% throughout the project area. Hybridization with nonnative rainbow trout and Yellowstone cutthroat trout is among the most common causes of decline of westslope cutthroat trout, and the hybrids in the project area are a threat to a core population of westslope cutthroat trout in the watershed downstream. Native fish restoration in the project area would require removing the existing fishery using CFT Legumine™ or Prenfish™, two commonly used formulations of liquid rotenone (a naturally-derived piscicide substance used to kill fish), used in stream reclamations in Montana. This would be followed by stocking of genetically pure westslope cutthroat trout in the project area. Stocking would occur for a minimum of three years within a 5-year span and include multiple age classes to establish a recreational fishery and expedite the spawning activity of nonhybridized fish in the project area. This proposed project follows FWP's previous **Pilot-Level Bioassays and Fish Distribution Testing Project** EA process for the NFBR in 2019.

Alternative 1 (proposed action)--Establish a secure conservation population of nonhybridized to slightly hybridized (<10 % hybridization) westslope cutthroat trout in the North Fork Blackfoot River upstream of the barrier falls. The existing fishery of hybrids would be removed from streams and lakes using a formulation of rotenone. Nonhybridized westslope cutthroat trout would be stocked in the watershed at levels that would reduce the proportion of remaining nonnative genes in the population.

The proposed action would establish a secure conservation population of westslope cutthroat trout in the North Fork Blackfoot River. Application of liquid rotenone would remove or greatly suppress the existing fishery, which includes hybrids of rainbow trout, Yellowstone cutthroat trout, and westslope cutthroat trout.

Liquid rotenone would be applied to fish-bearing waters in the watershed. Initial estimates of 45 miles of occupied habitat have been adjusted to 67 miles of occupied habitat, as additional sampling, including the use of eDNA, has expanded the known distribution of fish in the watershed. About 18 miles of headwater stream do not support fish and would not be treated

with rotenone. The primary means of dispensing liquid rotenone to streams would be from drip stations or IV bags in accordance with all established label requirements. Drip stations are 5-gallon containers filled with the appropriate quantity of liquid rotenone diluted with stream water and 5-liter IV bags are loaded with concentrated liquid rotenone that is dripped into the stream at the appropriate rate.

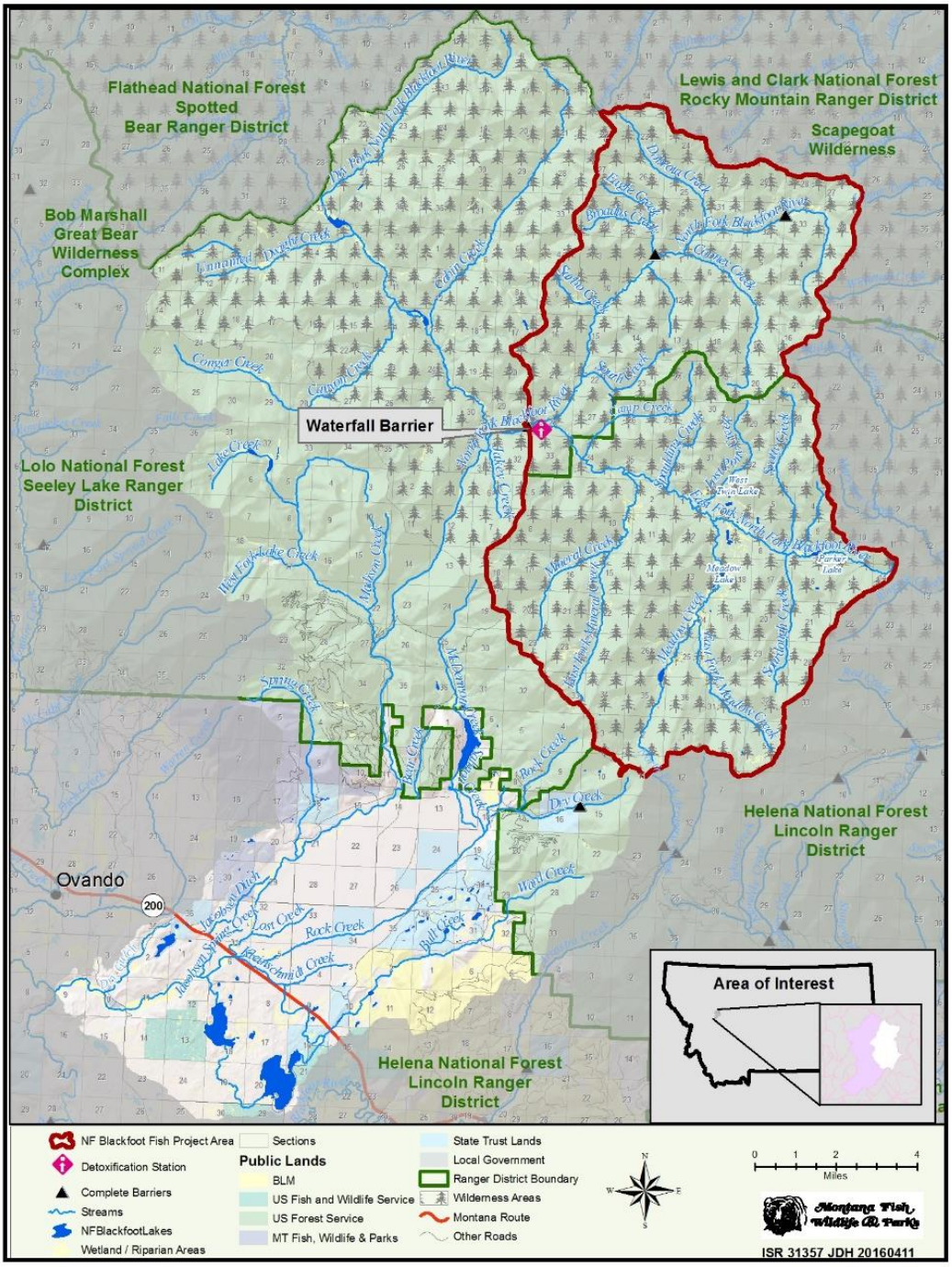

Figure 1. The North Fork Blackfoot River watershed and proposed project area.

Rotenone would be deactivated just downstream of the confluence of the North Fork Blackfoot River and East Fork North Fork Blackfoot River using potassium permanganate, a strong oxidizer, which can neutralize rotenone within ½ hour of contact time within the stream. The procedure for deactivation on this project will be dictated by label requirements and more stringent FWP protocols. It will likely require multiple days of application—a minimum of 2 and possibly 4 or more days. Deactivation must begin when rotenone is applied to the water at travel times less than 8 hours upstream of the deactivation station, and then must continue after the rotenone treatment ceases until a time that sentinel fish at the deactivation station can survive four hours without stress.

Three connected lakes would also be treated with rotenone. Rotenone would be applied in lakes from a small inflatable raft. Parker Lake is largest of the lakes proposed for treatment and would require two inflatable rafts powered by small gas-powered outboard motors to ensure that rotenone application is completed in one day. A single oar-powered raft would be used to treat Meadow and West Twin lakes. A small battery powered pump on each raft would be used to disperse piscicide from the pesticide tank into the lake. Rotenone in lakes would break down naturally through photolysis, by binding with organic matter, or by dilution with inflows of surface and groundwater. Toxic concentrations of rotenone could persist for days to weeks.

Following piscicide treatment, nonhybridized westslope cutthroat trout would be stocked in the North Fork Blackfoot River watershed. FWP's westslope cutthroat trout brood stock has proven successful at populating watersheds and has outperformed westslope cutthroat trout from wild stock likely due to its greater genetic diversity than most remaining wild stocks. Periodic infusion of wild genes promotes genetic diversity and swamps out genes selected for in the hatchery environment that would be maladaptive in the wild. Natural selection further works to eliminate genes favored in the hatchery environment.

Within fish-bearing streams, stocking would commence at the furthest upstream location of suitable fish habitat. Sections of streams above known passage barriers would not be stocked to preserve their fishless condition. Lakes and the main stems of the East Fork North Fork Blackfoot River and North Fork Blackfoot River, and larger tributary sections would be stocked by aircraft during the first stocking event. Where canopy cover limits the ability to stock from a helicopter, fish would be distributed on foot or by pack stock. Ideally, the first stocking event would occur in autumn after treatment has been completed. Stocking would occur for a minimum of three years within a 5-year span and include multiple age classes to establish a recreational fishery and expedite the spawning activity of nonhybridized fish in the project area. Aerial stocking will be reduced in the outyear stocking events and rely primarily on horse or mule assisted stocking. A maximum of 7 flights in each of the two outyears is required to accommodate stocking fish of the larger size class.

Alternative 2--No action

Under the no action alternative, agencies would not remove the existing fishery and replace it with native westslope cutthroat trout. This alternative would not yield conservation benefits for native species, reduce the threats of hybridization posed by rainbow trout hybrids spilling over the falls, or contribute towards the goals and objectives for restoration, protection, or conservation of westslope cutthroat trout.

Public Review Process

A draft EA[1] for the proposed project was available for public review and comment for a 37-day period from July 9 through August 14, 2020. The original comment period was scheduled to close on August 7 but was extended through August 14 to accommodate the public hearing postponement.

Legal notices were published once each in the *Blackfoot Dispatch* (Lincoln, July 8), *Independent Record* (Helena, July 8), *Missoulian* (July 7), and *Seeley Swan Pathfinder* (July 9) newspapers. FWP distributed 64 copies of the EA and 85 email-notifications of the EA's availability to nearby landowners and interested individuals, groups and agencies. (FWP also mailed and emailed notifications to these same parties concerning the changed public hearing date.) The EA was available for public review on FWP's website (http://fwp.mt.gov), under "Recent Public Notices" beginning July 9 (through August 14), and comments could be made directly on the EA's webpage or submitted to Region 2 FWP in Missoula. A statewide news release was distributed on July 14.

Public Comment Overview

Public Comment

FWP received input from 39 commenters: 34 were individuals and 5 were nongovernmental organizations (NGOs). Thirty-seven commenters submitted email comments (3 of which also provided comment during the public meeting), and 2 commenters telephoned their comments (see public comments in Appendix A). Eighteen commenters were in full support of the proposal, 3 commenters supported the project with contingencies,14 commenters were in opposition, and 4 commenters did not specify support or opposition to the project.

Four of the 5 NGOs--the Big Blackfoot Chapter of Trout Unlimited, Big Blackfoot Riverkeeper, Montana Trout Unlimited, and Montana Wildlife Federation--were in support of the project. The 5th NGO, Wilderness Watch, opposed the action.

Wilderness Watch also generated a form-letter type of comment in opposition of the project, which was received by FWP approximately 6,078 times (see Commenter #34 in Appendix A for the text of this form-letter comment). Per state IT personnel, a third-party software system was apparently responsible for delivering individual submissions of the Wilderness Watch form letter to the designated FWP email address for this public comment process, rather than individuals submitting comments themselves. After 94 submissions received by the designated email address, the State of Montana email firewall system started flagging the sender as spam after receiving numerous emails from the same source and with the same subject title. Of the approximately 5,984 emails that were quarantined, approximately 519 were manually (one at a time) released from quarantine, recorded, and reviewed along with the initial 94 submissions. Few of these emails contained additional comments beyond the form-letter comments (Commenter #34, Appendix A). Twenty-one (3.4%) of these 613 were duplicate emails and 24 (3.9%) included some variations or additional comments beyond the form-letter text, but similar to comments submitted by others. Therefore, we believe it is unlikely that unread emails would contain comments significantly different from those already received, recorded, and reviewed. Furthermore, the additional comments attached to the form letter were consistent with the

[1] Draft EA is available (accessed 27 October 2020) on FWP's website at: http://fwp.mt.gov/news/publicNotices/environmentalAssessments/restorationAndRehab/pn_0182.html

themes of other comments received. Failure to manually remove every email from quarantine before the State of Montana quarantine system deleted them (after 30 days), prevented us from recording all potentially unique comments and text, but our responses cover the spectrum of concerns, viewpoints, and questions presented by the diversity of stakeholders that submitted comments.

Public Hearing

FWP scheduled a virtual public meeting on Wednesday, July 22, 2020 at 6:30 p.m. The live-stream function did not work properly on that date, so FWP rescheduled the meeting for the following week. FWP held a virtual public meeting on Wednesday, July 29 at 6:30 p.m. (FWP mailed and emailed notification concerning the changed public hearing date to all on our original distribution list, as well as those who had contacted us since the public comment period had opened.) A livestream of the public meeting is currently available on FWP's website, http://fwp.mt.gov, on the webpage[2] where the North Fork DEA was posted.

Three individuals called in with questions and comments. Two individuals, one each representing Montana Trout Unlimited and the Montana Wildlife Federation, expressed their support for the project and indicated that their organizations would also submit formal comment letters following the meeting. The third caller was a private citizen with multiple questions and comments regarding the proposal but did not explicitly express support or opposition to the project.

FWP also participated in a virtual meeting on Thursday, July 23, 2020 at 2:00 p.m. The meeting was organized by the U.S. Forest Service to discuss the project proposal and EA with wilderness stakeholders.

Summary of Public Comment Received

- Of the 39 public comments received, 21 commenters supported FWP's proposed action (including 3 contingents), 14 commenters were in opposition, and 4 commenters did not specify support or opposition.

- Of the commenters who identified their location, 11 were from Missoula; 2 each were from Darby, Hamilton, and Helena; and 1 each was from Greenough, Ovando, Potomac, Seeley Lake, Florence, Lolo, Billings, Clancy, Kalispell, Livingston, Noxon, and Trout Creek. Four commenters were from out of state, and 6 commenters were from unknown locations.

Comments supporting the proposal included overall support for the project and specific support for native fish conservation. Several supporting comments also highlighted the improved angling opportunity and recreational value associated with the project. A few comments specifically mentioned support for a future phase of the project to establish a population of bull trout above North Fork Falls.

Opposition included: objections to the use of rotenone, preference for using an alternative technique to accomplish objectives, criticism of FWP's fisheries management in other drainages, perception that the project is a waste of money, use of piscicide in wilderness,

[2] http://fwp.mt.gov/news/publicNotices/environmentalAssessments/restorationAndRehab/pn_0182.html, accessed 27 October 2020.

operating mechanized equipment in wilderness, stocking fishless waters in wilderness, and impacts to non-target aquatic organisms in the project area and downstream of North Fork Falls.

Response to Public Comment

The following comments and FWP responses encompass specific questions, suggestions or comments received during the public comment period. (Comments are lettered to make later reference easier.) All comments are available in Appendix A.

Comment A: *I want to comment on the poisoning of the fish in the North Fork of the Blackfoot River.*
I see from the Seeley Swan Pathfinder the FWP wants to put pure WCT above the falls.
I have no problem with that, but then they want to poison the fish below the falls. That is a bad idea, with as many small streams that flow into that stretch of river they will never get all the hybrids.
Plus, what about any Bull Trout that might be in the river at the time of poisoning.
I may have misunderstood some of the program. A friend that is in the know says the only poisoning will be above the falls. Unless their detox station does no work very well.

> **FWP Response:** We are only proposing to apply rotenone above the falls. In fact, the detox station will be situated a minimum of 30-minutes travel time above the falls, so that full deactivation of the rotenone-affected water will occur before it flows over the falls. Bull trout will be present in the North Fork below the falls at the time of project application. While some could be in the pool directly below the falls, bull trout densities are generally low in the section below the falls and start to increase near the North Fork cabin and Dry Fork confluence.

Comment B: *My primary concern is the potential for an overdose of rotenone making it over the falls and impacting that lower stretch of the North Fork. This has happened in other rotenone uses and it could happen here. What plans do you have to neutralize a spill like this once it gets below the falls? This has to be part of your contingency plans.*

> **FWP Response:** Rotenone will be transported to the North Fork in sealed drums via helicopter and stored in dry areas away from open water, hence minimizing the potential for spills. During daily use, distributing only the amount of formulation for the day's treatment to applicators will prevent spills of uncontrollable amounts of rotenone. As part of the calculation of the amount to be applied to the water, the concentration and spacing of application stations along the stream will be tightly regulated so that it will not be possible for a large "slug" of rotenone to overwhelm the deactivation station above the falls and impact the lower North Fork. The deactivation station is designed for redundancy, meaning that there will be a primary and a backup station for deactivation where potassium permanganate is applied to deactivate the rotenone. The backup station is designed to function immediately in the event the primary system malfunctions or has operational problems. The backup station consists of an extra application device, at least one extra generator, and double the amount of potassium permanganate being on hand than what is theoretically needed. In the event both the primary and backup systems fail (which has never occurred before in Montana), rotenone applications will cease immediately, limiting impacts downstream. Furthermore, the deactivation station will be situated a minimum of 30 minutes travel time above the falls to ensure full deactivation of water before it flows over he falls.

Comment C: *The commenter stated that she was very impressed with the science, numbers, and all the work so far. She has known about the project since early in the conceptual phase. She said the EA did not address worst case scenario. She also stated that there will not be 100% kill, so there will still be hybrids in the system. She is interested to learn more about the source of fish because she said she did not know anything about the M012 strain. She asked a lot of questions about the strain and made comments suggesting they are not technically native. She wanted to know what would happen to the "natural" stuff downstream. She also stated that there are too many bull trout eating all the cutthroat trout in the North Fork.*

FWP Response: Please see response to Comment B. Section 2.2.11 of the EA describes the rationale for selecting the M012 strain as the stocking source and its proven success in establishing an adapted native fishery. Bull trout are opportunistic piscivores and prey on all fish species present in the North Fork, including other bull trout. Bull trout are less abundant than cutthroat trout in the North Fork and no data exists to suggest that bull trout are affecting or limiting the cutthroat trout population. These species coevolved and are adapted to their predator/prey dynamic. The proposed action will greatly benefit cutthroat trout in the North Fork Blackfoot River.

Comment D: *The commenter stated that she gets a little tired of collaring everything, banding everything, and trying to redo what God has done. She stated that she has spent a lot of time and effort protecting the stretch of river along her property including protecting from cattle, putting in fish screens, and other actions. Not overfishing, which she says is currently happening. She said she is just trying to protect the fish, and if they're funky fish, that's fine. Not sure we need to over manage everything. What are the ramifications of not killing everything – will you go back and do it all again?*

FWP Response: The extensive baseline data collection in the North Fork has enabled a thoughtfully designed project that will ensure a high chance of success and enable a robust before-after comparison to evaluate project effectiveness. The proposal is consistent with FWP's statutory mandate to conserve native species per Montana Code Annotated (§ 87-1-702, MCA; § 87-1-201[9][a], MCA). Monitoring results will inform the success of the project and if project objectives are not achieved, a future environmental analysis would be developed for any desired future actions.

Comment E: *The commenter asked how far rotenone would travel over the falls and if it would kill fish below.*

FWP Response: Please see response to Comment B.

Comment F: *Hello my name is [name] and I've fished many of Montana's rivers including the Blackfoot river. I fully support this project and I was interested if there was any sort of volunteer work for this project and if so I wouldn't mind helping out.*

FWP Response: Thank you for your interest in this project. Currently, we do not have any specific plans for recruiting volunteers. As project implementation planning progresses, we will have a better idea of staffing levels and the potential need for volunteers. Please contact the Blackfoot Area Fisheries Biologist, Patrick Uthe (phone 406-542-5532, patrick.uthe@mt.gov), with further inquiries about volunteer opportunities.

Comment G: *While MTU strongly supports the overall project, we do have one specific concern and strong recommendation. It is unclear that there will be sufficient post-treatment*

monitoring and evaluation. MTU would very much like to see a definitive commitment to do some post-treatment evaluation for effectiveness of the rotenone. MTU strongly supports extensive use of sentinel fish at the lower ends of each treatment zone to make sure rotenone is effective. The short Effectiveness Monitoring section of the draft EA states: "Following completion of piscicide treatment, project partners may [emphasis added] evaluate the effectiveness of the removal effort through electrofishing and collection of water samples to test for eDNA. Gillnets may be deployed in lakes. Furthermore, genetic analyses will assess changes in non-native trout admixture throughout the project area. These efforts may result in subsequent changes to the level and frequency of stocking in waterbodies not meeting conservation objectives."

FWP Response: FWP is committed to long-term, post implementation monitoring. On Page 11 of the EA, the monitoring is mentioned in more detail and states that the monitoring will likely occur for ten years and include multiple sampling techniques. We appreciate the commenter's observation and acknowledge that the Implementation Plan in Appendix A was vague and created ambiguity about specific monitoring activities.

Comment H: *We strongly urge the project partners to absolutely evaluate effectiveness of the removal effort through electrofishing, especially in stream sections where the highest density or population of hybrid trout reside based on prior pre-treatment surveys. Electroshocking equipment and personnel will already be present for use in capturing sentinel fish. Given the complexity and difficulty of getting equipment and people into this project area, both the equipment and people should be put to maximum beneficial use while there, even if that means extending the project time to gather sufficient evidence that removal efforts were effective. It's especially worth considering investing more time in electroshocking to determine effectiveness than collecting post-treatment eDNA samples. Literature shows that eDNA is not as effective at showing population. Rather it is used for presence-absence determinations. If the assumption is that rotenone treatment will not likely eradicate fish completely than a simple presence-absence evaluation by eDNA is not particularly informative. Plus, the literature on eDNA shows that DNA matter can linger in streams and lakes long after fish are gone. That would seem to be the case when the treatment is slated to leave dead fish to sink and decay. Collecting eDNA after such treatment might be no different than collecting it in the same stretch of water before treatment. The fish and their DNA will still be present. In short, we urge you to replace "may" with "shall" or "will" in regard to post-treatment evaluation of rotenone effectiveness.*

FWP Response: On Page 11 of the EA, we discuss the variety of sampling methods that will be employed to monitor project effectiveness. Electrofishing will occur at established pre-treatment baseline survey sites to allow robust before-after comparisons of fish density and genetic status. We will use eDNA in upstream survey sections where presence/absence data will be sufficient to providing evaluation of WCT expansion compared to pre-treatment hybrid distribution.

Comment I: *I would leave this area alone, there isn't a way to stop the poison from going over the falls into a super bull trout fishery a lot of us have known for years. I doubt there are enough fish/rainbow or hybrid to risk killing some of the biggest bull trout we have left in any part of the Blackfoot which once had them all the way down to the Bonner Mill, I know, caught several in both places, had a hard time catching something else just below the fall in the Scapegoat when I camped there in July*

FWP Response: A deactivation station will be positioned a minimum of 30 minutes flow time above the falls. Please see the above response to Comment B regarding the potential for rotenone flowing over the falls.

Comment J: *You people make this way too hard! Encourage anglers to keep all non-native fish in the watershed; rainbows, brown and brook trout. Either keep these species for the frying pan, or toss them over your shoulder (that's good luck at the Trevi Fountain in Rome!) and feed the wildlife. If need be, pay a bounty for these fish. Call Trout Unlimited and ask for volunteers. You'll get more than you think.*
3. Buy a few dozen Whitlock-Vibert boxes (https://flyfishersinternational.org/Conservation/Projects-Programs/Whitlock-Vibert-Box) and once a year in spring, in conjunction with MFW&P, get those boxes into the streams. Go back weeks later and confirm the hatch and presence of fry. Continue with the above for five years. Done.

FWP Response: Brown trout and brook trout are not present in the project area. We discuss multiple alternatives in Section 2.2 of the EA. Specifically, we discuss angling in Section 2.2.5 and describe why this alternative is ineffective for fish eradication and unable to achieve project objectives. The egg boxes referenced by the commenter are similar to remote site incubators (RSIs), which have been used on a variety of similar westslope cutthroat trout conservation projects. They were considered for this project (see Pierce et al. 2018) but deemed unrealistic given the multiple weeks of maintenance required after installation to ensure effective results. Therefore, stocking of live fish was chosen as a more feasible option to ensure a high chance achieving project objectives given the broad geographic scope of habitat that needs to be seeded.

Comment K: *How are the fish hybridized now and what will prevent the future hybridization, especially below the falls?*

FWP Response: The fish in the project area are hybrids of rainbow trout, Yellowstone cutthroat trout, and westslope cutthroat trout. Except for Parker Lake, which harbors fish with majority Yellowstone cutthroat trout genetic contribution, all other waters have majority rainbow trout contribution. The contribution of westslope cutthroat trout ranges from 0 to 17%. See Pierce et al. (2018) for a full synthesis of fish population and genetic results in the project area. Hybridization below the falls is present, although not as significant as in the project area. The fishery below the falls is a mixture of genetically unaltered westslope cutthroat trout, rainbow trout, and hybrids of rainbow and westslope cutthroat trout. Rainbow trout are relatively abundant in the lower North Fork near the confluence with the Blackfoot River. Even with the reduction or elimination of the hybrid population above the falls, nothing will prevent further expansion of rainbow trout and hybridization from expanding up to the falls from the downstream reaches of the river.

Comment L: *I fully support this Environmental Assessment, provided the agency include long-term monitoring after the project is completed.*

FWP Response: We would like to reiterate FWP's commitment to long-term post project monitoring. We have invested over a decade of sampling effort towards baseline data collection, which will provide a robust evaluation of project success. Long-term monitoring will also include assessment of macroinvertebrates and amphibians. Please refer to Page 11 of the EA where we discuss the variety of sampling methods that will be employed to monitor project effectiveness.

Comment M: *I generally support this effort to restore native westslope cutthroat trout to the North Fork of the Blackfoot River. However as with the use of any biocide, and with a project having such a major impact on the existing aquatic ecosystem it is important to have a well-planned ongoing monitoring program to monitor the impact of the piscicide as well as the success and impact of the reintroduction of the native cutthroat on the ongoing health of the stream.*

FWP Response: As per the FWP's piscicide policy (FWP 2017), we collected pre-treatment information on benthic macroinvertebrates and will conduct post-treatment monitoring as well. Please see Section 3.4 of the EA for a discussion of non-target organisms present in the project area. The pre-treatment sampling framework and survey results are described in detail in Appendix D of Pierce et al. (2018).

Comment N: *Reject proposal to poison the North Fork Blackfoot and its tributaries. Please stop stocking fish in naturally fishless waters in the Scapegoat Wilderness*

FWP Response: Although there is no unequivocal evidence regarding historical fish presence in the project area, these waters were stocked before wilderness designation, and therefore, trout are considered indigenous to the project area per the *Cooperative Agreement for Fish, Wildlife and Habitat Management On National Forest Wilderness Lands In Montana* (FWP 2008). Under this agreement, FWP retains the authority to change the species stocked in favor of a native species. This also contributes to the conservation strategy outlined in the *Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout and Yellowstone Cutthroat Trout in Montana* (MCTSC 2007), as well as FWP's statutory mandate to conserve native species under state law (§ 87-1-702, MCA; § 87-1-201[9][a], MCA). A thorough analysis of the proposed stocking effects on wilderness character is found in the Forest Service's MRDG (Minimum Requirements Decision Guide) in Appendix B.

Comment O: *A project like this should not occur within any designated Wilderness, let alone the iconic Bob Marshall Wilderness Complex / Scapegoat Wilderness, the first citizen-proposed Wilderness to be designated. Wilderness areas should be protected as Congress intended under the 1964 Wilderness Act, not poisoned and manipulated.*

FWP Response: Native fish conservation projects that incorporate rotenone use have been deemed consistent with maintaining or improving wilderness character. Specifically, the decade-long South Fork Flathead Westslope Cutthroat Trout conservation project was successfully implemented in the Bob Marshall Wilderness. Recent projects completed in the Lee Metcalf Wilderness include the Cherry Creek and North Fork Spanish Creek Westslope Cutthroat Trout conservation projects. The Forest Service analyzed the proposed action and its associated effects on wilderness character in the MRDG document in Appendix B.

Comment P: *The poison rotenone should never be used in Wilderness. Rotenone kills many species beyond the "undesirable" fish that Montana Fish, Wildlife & Parks (FWP) wants to kill, including macroinvertebrates, amphibians, and any species that utilizes gills in some part of its life cycle.*

FWP Response: This information is discussed in detail in Section 3 of the EA. The Forest Service has wilderness management responsibility and has the authority to issue the pesticide use permit.

Comment Q: *Please respect federal Wilderness and the ideals that established it by prohibiting FWP helicopters, motorboats, and other motorized equipment out of the Scapegoat Wilderness. It was set aside to be free of the contraptions of modern society.*

FWP Response: The Forest Service has wilderness management responsibility and has the authority to authorize restricted uses in wilderness through their required process. Their analysis of the proposed action's effects on wilderness character is included in the MRDG document in Appendix B.

Comment R: *There is no wilderness benefit from this project, and it does not meet any need for Wilderness protection. In fact, the project is antithetical to Wilderness as a place "where the Earth and its community of life are untrammeled by [humans]." Westslope cutthroat trout--nor any fish for that matter--did not naturally occur in these streams. The FWP should stop all fish stocking in naturally fishless waters and let nature "manage" the area as the Wilderness Act intends. If FWP intends to pursue fish removal, it should consider more wilderness-compatible ways using liberal fishing limits, netting, or other means that don't involve poisons, helicopters, and generators to suppress the population. Creating more angling opportunities is not a legitimate justification for trammeling and manipulating Wilderness.*

FWP Response: The effects on wilderness character are analyzed in the MRDG document in Appendix B. Furthermore, alternative methods of fish removal are discussed in Section 2.2 of the EA. The primary goals of the project are described in Section 1.2 of the EA and creating angling opportunities is not considered an objective. This is first and foremost a conservation project, although we do acknowledge in Section 4.1.3 that successful implementation of the preferred alternative would provide a secondary benefit of improved angling. However, this is not the impetus for conducting this project, and we explicitly state that the primary goal of the project is native fish conservation. Fishless waters above passage barriers in the project area will not be stocked (Page 27, Appendix A).

Comment S: *While it is common practice to poison aquatic habitats so we humans may "manage" them as we see fit, it does not make this action morally or ethically correct - we have already managed the watershed in such a way that has created the current situation you are attempting to fix. Furthermore, to poison a watershed, knowing that you will be unable to reach a 100% kill rate of the invasive species seems to be simply reckless. Even with large stocking events, surviving hybrid populations will still pose a risk to cutthroats in the long term. Additionally, the small strong hold that amphibians (an environmental health indicator species, AND one that has been drastically in decline) may have will be completely shattered with this poison-all approach. The damage created by humans is done and it seems best to allow the situation to play itself out, rather than play tiny gods by throwing poison and farm raised fish into the mix.*

FWP Response: We acknowledge that eradication on nonnative fish is unlikely with a single rotenone application, which is why our proposed action includes genetic swamping to address the few remaining hybrids that are likely to survive. The large stocking events are based on stocking rates that were evaluated and demonstrated as effective in the South Fork Flathead westslope cutthroat trout conservation project. The potential effects to non-target organisms, including amphibians, is discussed in detail in Section 3 of the EA. Furthermore, this comment mischaracterizes the project by describing it as "poison all". There are large sections of the project area that are currently fishless where rotenone will not be applied resulting in no disturbance to the other aquatic organisms present in those

locations. FWP is mandated to conserve native species and establishing populations above fish barriers is an effective way to achieve Objective # 3 (seek collaborative opportunities to restore and/or expand each cutthroat trout subspecies into selected suitable habitats within their respective historical ranges) in the *Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout and Yellowstone Cutthroat Trout in Montana* (MCTSC 2007). Section 2.2.11 of the EA describes the rationale for selecting the M012 strain as the stocking source and its proven success in establishing an adapted native fishery.

Comment T: *In the long term I doubt this project will be effective with a one-shot poisoning. Therefore, I oppose it. Another FWP waste of money.*

FWP Response: The proposed piscicide plan and subsequent stocking plan is anticipated to have a high chance of achieving project objectives based on the existing fish distribution and relatively low densities present throughout most of the project area. More than a decade worth of baseline data collection, as well as a pilot level bioassay, have been devoted to thoughtfully developing this proposal to ensure that the combined method of a single-year application with subsequent high stocking rates will have a high likelihood of establishing a conservation population of westslope cutthroat trout

Comment U: *It should be acknowledged, however, that the project's primary goal: "to minimize non-native genes," and to remove as many (hybrid) fish as possible in one season while "stocking large numbers" of pure WSCT for the next five years is not necessarily a native fish restoration project. Instead, the project's goal is to reduce (but not totally eliminate) the presence of non-native rainbow and Yellowstone cutthroat genes in this subbasin of the Blackfoot River drainage. And the tool is genetic swamping, after reducing the number of non-native hybrids in the system.*

FWP Response: As stated in the first sentence of the executive summary, the primary purpose of the project is to establish a conservation population of westslope cutthroat trout above the falls. Although we acknowledge that full eradication of the hybrid trout is unlikely and some nonnative genes will remain, the establishment of a new, secure conservation population of westslope cutthroat trout is consistent with the *Memorandum of Understanding and Conservation Agreement for Westslope and Yellowstone Cutthroat Trout in Montana*. The proposed action falls under objective 3, which directs signatories to "seek collaborative opportunities to restore and/or expand each cutthroat trout subspecies into selected suitable habitats within their respective historical ranges". Therefore, this project is appropriately considered a native fish conservation project.

Comment V: *The EA states throughout that a primary goal of the venture is to reduce the threat of hybrids leaking into the lower North Fork Blackfoot and thereby increasing genetic introgression in the WSCT population that currenttly occurs there. However, nowhere in the EA or supporting document is there a description of the existing size, demographics and genetics of the WSCT population that currently occurs in the lower North Fork or main Blackfoot River. And thus, it's not clear if the primary threat to genetically unaltered or nominally genetically altered fish below the falls are hybrids that leak down from above the falls. After all, it appears the fish in the upper reach have been there for a long time but in low abundance. It could be that a larger threat, or at least a very significant threat, are the rainbows and rainbow cutthroat hybrids that already occur in the main Blackfoot or lower North Fork. Certainly, the non- native genetics of the fish above the falls is much more significant than fish below the falls. However, the EA*

doesn't address what is known about the reproductive success of the fish above the falls leaking downstream. This might be unknowable, or, something that would be difficult to ascertain.

FWP Response: The EA introduces the primary objective as the establishment of a conservation population of westslope cutthroat trout above the falls. However, we acknowledge that it should have been more explicit and consistently described throughout the document that this is the paramount goal, while reducing/eliminating the source of hybrid genetics is a secondary objective or an added benefit of implementing the action to achieve the primary objective.

The implementation plan in Appendix A had the bullet-point list of project objectives in the incorrect order further leading to confusion about the primary objectives of this project. If the sole objective was to eliminate the source of nonnative genes above the falls, we would not be pursuing this action, because as the comment noted correctly, there is an equal (and maybe greater) risk of further invasion/spread of rainbow genetics from the lower North Fork Blackfoot and the mainstem Blackfoot River. Rainbow trout are distributed throughout the entire North Fork below the falls, with densities increasing near the confluence with the Blackfoot. Regarding the rainbow trout observed below the falls in the Scapegoat Wilderness, we do not know whether they originated above the falls or migrated up from lower in the drainage. Furthermore, the hybridization documented in the Dry Fork of the North Fork could be the result from either source.

Comment W: *Even if this project succeeds in its objective to significantly suppress the existing upstream population, hybridization is still likely to occur in the lower North Fork and main Blackfoot simply because of the existing presence there of rainbow trout and rainbow/WSCT hybrids.*

FWP Response: The commenter is correct that hybridization will still occur below the falls even with removal of nonnatives above the falls, which is why the primary reason for proposing this project is to establish a conservation population of westslope cutthroat trout above the falls. In doing so, this will significantly reduce or eliminate a large source (not the only source) of nonnative trout. Following completion of the project, westslope cutthroat trout below the falls will still be at risk of hybridization from the rainbow trout and hybrid trout distributed throughout the North Fork Blackfoot drainage.

Comment X: *Therefore, the primary goal of this project should be to come as close as possible to eliminating as many of the hybrids in the upper North Fork in order to enable the development of a population of genetically unaltered (or minimally altered after several generations) of WSCT –- with the main purpose being the establishment of a large, well distributed conservation population of WSCT secured within a sizeable and connected watershed with a decent likelihood of being buffered from a changing climate and resilient to stochastic change. In fact, this should be the primary objective FWP cites seeking support for the project from non-anglers and wilderness advocates. Securing refugia for native species is one of the scientific purposes of areas established by the Wilderness Act and this project aids that objective.*

FWP Response: We agree with this comment and acknowledge that the EA (including appendix A) should have been more explicit that establishment of the population above the falls is the primary goal of the project and reducing/eliminating non-native genetics is a secondary goal that will result from achieving the primary objective.

Comment Y: *I am disappointed that FWP will be depending solely on restocking the area with the MO12 strain of WSCT. There is good reason for this, of course: These fish are available now, abundant and 100 percent WSCT. However, they are not an aboriginal strain of wild fish. It is a manufactured genetic type, combining Clark Fork and Flathead fish. And thus, the project in essence is replacing a non-native fishery with a hatchery generated genetic type, albeit one that usually prospers in the wild. I recognize the urgency in restocking the area after treatment, and the difficulty, expense and time it would take to develop a near-neighbor Blackfoot WSCT stock for reintroduction. However, I worry this could develop into the default for future native fish conservation efforts because it is the easiest path. FWP should clearly state that using MO12s for this project is a one shot deal, and not a direction that would be replicated for other projects that claim to restore native fish.*

FWP Response: FWP and planning partners dedicated considerable effort to develop a decision-making framework to determine the best potential donor source for the project (see Appendix M in Pierce et al. 2018). Among considerations were preventing spread of disease from wild donor sources, effect of gamete harvest on wild donor populations, genetic diversity of donor source, suitability of a source for the project area, and logistics associated with translocation. The M012 strain emerged as the best choice under this decision-making framework.

The M012 donor source brings numerous advantages compared to the other options examined. The M012 strain does not contain local Blackfoot donor sources, but its use in this project is still consistent with the "nearest neighbor" philosophy given the proximity, similar environment, and similar selective pressures of donor sources from the South Fork Flathead drainage. The M012 strain is genetically diverse and regularly infused with wild genes. Moreover, the M012 source has been shown to not only be successful in watershed level establishment of westslope cutthroat trout, but this stock outperformed locally collected gametes in a large-scale introduction of westslope cutthroat trout into reclaimed waters (Andrews et al. 2016). FWP hatcheries have the capacity to produce enough young fish, which prevents the need to make numerous trips into remote wilderness to tend RSIs. Its use precludes the need for extensive genetic and disease testing to ensure wild donor stocks are not hybridized and are disease free.

Comment Z: *I urge FWP to evaluate whether it couldn't take a similar path to that it took in the South Fork Flathead, which was to use MO12s for immediate stocking (for recreational purposes and swamping), and then to eventually switch to a near neighbor strain more representative genetically of what occurred within the basin.*

FWP Response: Please see Appendix M in Pierce et al. (2018) for an investigation of 7 possible donor sources. Information about population size, disease presence, and genetic status were all included in the decision-making framework to select the best possible source for seeding habitat in the project area. We discuss the outcomes of the decision framework in Section 2.2.11 in Appendix A of the EA and provide the justification for selecting M012 as opposed to one of the other seven candidate sources.

Comment AA: *The Piscicide Implementation Plan accompanying the EA (Clancey et al 2020) is well thought out, very detailed and includes a lot of important information that should address most public concerns. And that is what should be expected given the talent that developed it. However, it does seem to conflict with the EA in its description of some of the planning regarding using helicopters and stock in the wilderness. Or, at least it's confusing. The EA on page 10 discusses only using helicopters for transporting potassium permanganate, pumps,*

generators and other equipment to a decontamination site above the North Fork falls. It mentions it would take 10 flights over 2 days to move gear in, and five flights over 2 days to move items out. The piscicide plan, however, discusses additional helicopter use for moving gear, people and camps around the project area, with a potential for up to 140 flights (including for initial fish stocking). It's a little confusing. I suspect this is, or will be, a big topic of discussion with the Forest Service, which must approve the use of helicopters (as well as the use of motors on Parker Lake). FWP should not underestimate how important the concept of minimum tool use is to the Forest Service. If not approached right (with indeed motorized use and access minimized), the project could be stymied by challenges from public organizations concerned with nonconforming uses in wilderness.

FWP Response: The main body of the EA document contains the correct number of flights associated with the proposed action. The implementation plan in Appendix A has been in various stages of development for the past few years and has been somewhat of a "living" document that helped outline the plan as well as highlight comparisons of alternative techniques for development of the MRDG. As the MRDG process modified our original proposal, including duration and extent of aerial support, we focused on ensuring the EA document reflected the selected alternative. We changed some items in Appendix A but retained portions of the original comparisons to provide context for how the MRDG was developed. We agree that the MRDG is a critical process for the Forest Service and it resulted in significant changes to our original proposal. The selected MRDG alternative, which is reflected in FWP's preferred alternative in the EA, maintains a high chance of project success while maintaining wilderness values and avoiding unnecessary trammeling.

Comment BB: *Finally, FWP should consider establishing an ad hoc advisory group comprised of different interests concerned with native fish conservation and wilderness management. The group could track the project, and perhaps include fishery professionals, wilderness advocates, anglers, commercial outfitters and so forth. The group could serve in both an advisory capacity and as an ambassador for the project.*

FWP Response: We thank the commenter for the suggestion and agree that engaging a diverse group of interested stakeholders and specialists is important for project success. Rather than establish a formal working group, FWP chose to conduct multiple years of outreach with various stakeholder groups to understand concerns and inform development of the project proposal. This began in the conceptual phase of project development and has been ongoing. Input has been incorporated into the current proposal. We also solicited guidance from independent experts as well as interdisciplinary experts within FWP throughout the state. As part of this current EA process, FWP participated in a Forest Service- organized meeting with representatives from primary wilderness groups in the area to describe the project and hear about their concerns. Furthermore, FWP has been developing this proposal with an interdisciplinary team of Forest Service personnel. FWP will continue providing project updates to interested stakeholders and conduct outreach as project implementation occurs.

Comment CC: *I read with great dismay this plan to poison all of the brookies and rainbow trout and "wrong kind" of cutthroat. I saw this in the Helena paper where I live. There are almost 350 angry people in the emoji area just in our paper. A lot of people don't write comments especially during the distraction during Covid.*

FWP Response: Brook trout are not present in the project area. The proposed action would use rotenone to reduce or eliminate hybrid trout that contain rainbow, Yellowstone,

and westslope cutthroat trout genetic contribution. Section 2.1 of the EA discusses fish presence and distribution in the project area.

Comment DD: *To see all of the bad in the world right now, the poisoning of water for any reason when so many organizations are fighting so hard to keep our waters pure and clean for what future we may have left is an absolute travesty. Why do you have to do this now??? And! don't forget during Covid, camping and fishing and dogs and kids swimming is a widespread activity in our state right now. I immediately had to email my family who recreate in the Spanish Creek area. All kinds of people and animals will be in this water.*

FWP Response: The project would occur in August 2021 and waters would be closed during the period of application, which would last for up to 3-4 weeks. Furthermore, the selected timeframe coincides with the period of lightest use. This area of the Scapegoat Wilderness is visited heavily during the popular backcountry rifle season but does not receive high levels of visitation during the summer. This comment is a mischaracterization by implying that "poisoning" of the waters is a long-term change. Rotenone creates a temporary toxicity to gill breathing organisms and poses no long-term water quality risks. See Section 3.5 in the EA for an in-depth discussion of effects on water resources.

Comment EE: *Native species are important I know but having tons of dead fish with poison in them floating around and on banks is just one more horrible thing to endure and think of. The planet is dying! Why do people fixate on killing rather than keeping it clean right now?? And a future poison area that has to have helicopters to get it in there?? What is one good reason to terrify wildlife already losing their habitat to fires and greed by mankind? I cannot help but spew out my anger at this! And there are so many areas where you are poisoning the fish I can't even think of all of them to write to.*

FWP Response: The stream sections in the project area are generally sparsely populated, so concentrations of carcasses are unlikely. Although higher densities of fish are present in some of the lakes, carcasses in lakes typically sink rather than accumulate along the shoreline. We discuss this in detail in section 3.4 of the EA.

Comment FF: *PLEASE DON'T DO THIS!! It is dangerous for people and pets too, and the wildlife that drink out of these waters. This is a dangerous project. Even Trout Unlimited when I called the guy was so nonchalant. He told me "oh, don't worry they are just using rotenone and it goes away." What a ridiculous argument. Isn't that what they said about Roundup?? It just goes away and now there are thousands of cases of people with cancer. You don't know it is safe.*

FWP Response: Detailed discussions about rotenone and its effects on wildlife, water resources, and human health are described in sections 3.4, 3.5, and 4.5 of the EA.

Comment GG: *Please accept my comments regarding poisoning the N Fork Blackfoot and headwaters lakes. The poisoning itself is a gross manipulation that is not legal or advisable in Wilderness. I am sure those waters are not "barren",but may well be after you indiscriminately kill much of the aquatic life with Rotenone. The wisdom and ethics of your "playing god" approach to increasing FWP's cash crop of preferred species by way of a final solution of poison should speak for itself, but apparently is not heard by you. Please do not impose species manipulation, poison and a barrage of motorized intrusions into Wilderness. It is not legal. It says a lot that this ill-conceived project has reached the point that it has.*

FWP Response: The Forest Service has authority over wilderness management and can authorize restricted uses in wilderness. They will follow their required process for approving the pesticide use permit and restricted uses in wilderness. The Forest Service analyzed the effects to wilderness character as documented in the MRDG document in Appendix B of the EA. We do not consider these waters "barren" and do not use that terminology in the EA. This proposal is a direct action to conserve a native species, not increase a "cash crop". This action is consistent with objective #3 in the *Memorandum of Understanding and Conservation Agreement for Westslope Trout and Yellowstone Cutthroat Trout in Montana* (MCTSC 2007). Regarding the claim that these waters may be devoid of aquatic life following rotenone application, please see Section 3.4 in the EA.

Comment HH: *I write to request the Montana FWP and USDA Forest Service cancel a proposal to poison the North Fork Blackfoot, lakes, streams and tributaries to re-establish another illegal Montana FWP for-profit fish hatchery within the Scapegoat Designated Wilderness Area. Fish and livestock farms are illegal within wilderness and all public owned lands.*

FWP Response: The proposed action is a native fish conservation project consistent with statutory mandates under state law (§ 87-1-702, MCA; § 87-1-201[9][a], MCA). The term "fish farm" is a mischaracterization. The goal is to establish a self-supporting population of native westslope cutthroat trout in a secure watershed as a measure to protect the species, which is a responsibility under the agreement to conserve cutthroat trout in Montana (MCTSC 2007). The Forest Service analyzed the effects to wilderness character in the MRDG in Appendix B of the EA. Furthermore, the Forest Service has the authority to issue the pesticide use permit and authorize restricted uses in wilderness.

Comment II: *Fishless streams support a wide variety of aquatic life that must be protected and valued. Nature made it that way so it is perfect as is. Therefore I want the Scapegoat designated Wilderness to continue being shaped by nature and allowed to evolve over time through naturally occurring processes and events only, never through or by the hand and scheming of mankind. The above is a key critical requirement to protecting and preserving desisting wilderness. Meddlers and lawlessness carried out by government authorities must be banned or all is destroyed rapidly to make a fast buck then run and hide. Fishless streams are not barren, they are teeming with life and must not be poisoned due to their lack of monetary value measured and decided upon by Montana FWP self-serving commercialism and greed on vivid display in the poison proposal itself. Let designated wilderness be wilderness and nothing but wilderness. It is the law and I will fight like Hell to uphold the letter of the law of the Wilderness Act of 1964. Thank you for reading this letter and carrying out my important request. Cancel the misguided fish, wildlife and wilderness destroying poisoning proposal now.*

FWP Response: FWP agrees that fishless waters have inherent value. The proposed action limits rotenone application to fish-bearing waters and only proposes stocking those waters that currently support fish or allow for volitional fish colonization from specific stocking locations. Large sections of confirmed fishless waters above know barriers in the project area with be left untouched and not stocked. Regarding wilderness character comments, the Forest Service analyzed the proposed action's effects on wilderness and the MRDG document is in Appendix B of the EA.

Comment JJ: *I hope that you will consider my comments on the Draft EA for the North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. I live in Hamilton and spend time on the North Fork of the Blackfoot and surrounding area. I am tired of manipulation of*

these streams as they follow their own natural processes and support their own systems. Why introduce a fish that has never been there? And why poison the rest of the life in the streams to rid them of what were misguidedly added years ago. This is not about fishing. It is about water, clean beautiful water that needs to be left to its own devices.

FWP Response: Westslope cutthroat trout are native to, and currently present, in the North Fork Blackfoot River within the Scapegoat Wilderness. While there is no unequivocal evidence regarding historical fish presence in the project area, these waters were stocked before wilderness designation, and therefore, trout are considered indigenous to the project area under the Cooperative Agreement for Fish, Wildlife and Habitat Management On National Forest Wilderness Lands In Montana (FWP 2008). Under this agreement, FWP retains the authority to change the species present to establish a secure population of native westslope cutthroat trout. Given that the current population is comprised of hybrid trout with predominant genetic contributions of nonnative fish, the proposal to reduce and eliminate the hybrids and restock with a native species (i.e., westslope cutthroat trout) is consistent with this agreement. Please see section 3.4 in the EA for an in-depth review of the effects to fish and wildlife and section 3.5 for a discussion of the short-term and minor impacts to water quality.

Comment KK: *Leave the Bob Marshall/Scapegoat Wilderness alone. Wilderness is to be left to be Wilderness. So many things happen in ecosystems that we still know little about. There needs to be areas where those processes are left alone and allowed to progress of their own volition. Man does not have to manipulate everything. It seems what he has messed with continues to cause problems and the solutions continue to be meddling. After over 100 years of this, maybe we could learn the lesson and leave things alone. We would learn more from nature if we sat back and observed. Adding poison to Wilderness goes against the grain of all things human and the 1964 Wilderness Act.*

FWP Response: The Forest Service analyzed the effects to wilderness character in the MRDG in Appendix B and has the authority to issue the pesticide use permit and authorize restricted use in wilderness through their required process.

Comment LL: *Rotenone should not be used anywhere. We come up with these poisons to solve a problem but rarely consider the collateral damage they cause. The North Fork is filled with natural non-fish communities that are working away in that river to make it the beautiful, healthy place that it is. I know you want to get rid of your own mistakes, but what is done is done. See what nature does to correct the situation or learn to live with it. Maybe we should start learning from nature and adapt to new situations rather than control them.*

FWP Response: Please see section 3.4 in the EA for a review of effects on fish and wildlife. Furthermore, large sections of the project area will not receive rotenone application and the aquatic communities will be undisturbed.

Comment MM: *And for hundreds of years, man was able to connect and work within Wilderness areas without machines, helicopters, motorboats, and all other mechanized contraptions. This should continue. Hire some people who are willing to sweat a bit and do what is best for the Wilderness quality. That is your mission. Protect that quality at all costs. Do not use machines motorized or mechanized to work in Wilderness. I use a crosscut saw, it is great exercise as are many of the sturdy man powered tools of the past.*

FWP Response: The Forest Service analyzed the effects to wilderness character in the MRDG in Appendix B and has the authority to issue the pesticide use permit and authorize restricted use in wilderness through their required process.

Comment NN: *This project is exactly the opposite of preserving Wilderness. You are misreading your mission. If you really want to reduce non-native fish, increase fishing limits or use netting or other means to remove the fish that do not use mechanization, poison and generators. Generators? Seriously? Are we so pitiful that we cannot get along without electricity in the backcountry? You should rethink your hiring requirements and hire some folks that are comfortable in the outdoors. Leave Wilderness alone, or use non-motorized, non-mechanized, non-man-made poison solutions. We have so little Wilderness, it should be preserved and protected not manipulated. I am glad that you are worried about the health of ecosystems, but you are misguided in this endeavor. Please scrap this project and rethink it.*

FWP Response: We considered numerous alternatives to the proposed action. Detailed explanations regarding each of those can be found in Section 2 of the EA. Generators are necessary for the operation of the deactivation station. The effects from mechanized use are a short-term disruption to visitor experience and will not create a lasting impact. The Forest Service analyzed the effects to wilderness character in the MRDG in Appendix B and has the authority to issue the pesticide use permit and authorize restricted use in wilderness through their required process.

Comment OO: *I would consider new funding mechanisms so that you are not ruled by hunters and fishermen. They are not the only ones who use our public lands. We should all share in their support and share in the decision-making process from its inception.*

FWP Response: This project is a native fish species conservation project and consistent with agency mandates under state law (§ 87-1-702, MCA; § 87-1-201[9][a], MCA). Although successful implementation of the project will likely lead to improved fishing opportunity in the project area, the goal of the project is native species conservation and any improvement to angling quality will be coincidental.

Comment PP: *The North Fork of the Blackfoot River is my favorite river in Montana. I have spent countless days over the past 40 years backpacking, kayaking, and fishing it, and I am concerned that your large-scale experiment poisoning 70 miles of its headwaters will have significant detrimental and unforeseen ecological effects on this special area. If the project area has the "wrong" type of fish, it is only because you put them there. Usually when man tries to correct his past mistakes, he makes new mistakes, and the environment suffers. Obviously, nature has adapted to your past mistakes: leave it alone now. This is designated Wilderness, and is to be protected as "untrammeled by man". That you have trammeled it in the past does not give you reason to further trammel it.*

FWP Response: The action to remove nonnative fish and establish a conservation population of native westslope cutthroat trout is consistent with statutory mandates outlined in Montana Code Annotated ((§ 87-1-702, MCA; § 87-1-201[9][a], MCA. The Forest Service analyzed effects to wilderness character which are described in the MRDG document in Appendix B.

Comment QQ: *You dropped alternatives that would be less impactful and potentially have similar benefits. For example, you play God by favoring westslope cutthroat over bull trout.*

Introducing bull trout would be less impactful and potentially help a threatened species that is already present in the lower reaches of the NFBR. Genetic swamping using westslope cutthroat could also provide benefits and would have less significant ecological effects. And if they are better adapted than hybrids to the conditions, wouldn't evolution eventually favor their genes, which appears to be the goal of the project? And if you are so concerned about the westslope cutthroat, why not spend your efforts protecting habitat that currently hosts populations by preventing road building and logging or by buying up irrigation rights and returning that water to the rivers?

FWP Response: We evaluate alternatives in Section 2 and provide justification for the inability of the alternatives to meet project objectives when compared to the preferred alternative. Specifically, we describe why genetic swamping alone is unlikely to achieve project objectives, and why it is not a preferred alternative for a variety of logistical reasons. Westslope cutthroat trout are not favored over bull trout. As mentioned in the EA, bull trout are a desirable future component in the broader North Fork Blackfoot native fish conservation effort, but this current EA process is limited to the westslope cutthroat trout phase of the project. Westslope cutthroat trout are a major focus of many conservation and restoration actions throughout the Blackfoot River and elsewhere in the state. This proposal is not in lieu of implementing the other actions mentioned by the commenter. Rather, this project is a compliment to previous and ongoing habitat restoration work occurring in the North Fork Blackfoot and Blackfoot River. Myriad habitat actions including water conservation projects, removal of passage barriers, stream channel restoration projects, and riparian improvements have facilitated increases in abundance and distribution of native trout species (Pierce et al. 2019).

Comment RR: *The commenter stated it is bad policy, bad ecologically, bad politically and bad economically and is opposed to the entire plan.*

FWP Response: FWP is responsible for fish and wildlife management and is statutorily mandated to conserve native species under state law ((§ 87-1-702, MCA; § 87-1-201[9][a], MCA). This project is consistent with that direction as well as the *Memorandum of Understanding and Conservation Agreement for Westslope Trout and Yellowstone Cutthroat Trout in Montana* (MCTSC 2007). Specifically, MOU objective #3 is applicable to this project because it involves the establishment of a new conservation population of westslope cutthroat trout. Economic effects associated with the project are addressed in sections 4.1, 4.2, and 5 of the EA.

Comment SS: *Would the proposed native fish restoration project in the upper North Fork Blackfoot involve the use of helicopters or any other mechanized equipment in designated Wilderness? Do you know whether the Forest Service is preparing a NEPA document for authorizing MDFWP to use mechanized equipment in designated Wilderness?*

FWP Response: The proposal involves the use of helicopters for equipment transport and fish stocking, as well as the use of generators and outboard boat motors. Specific numbers of flights and other mechanized use details are described in Section 2.1.1. The Forest Service analyzed the effects to wilderness character in the MRDG in Appendix B and has the authority to issue the pesticide use permit (PUP) and authorize restricted use in wilderness through their required process.

Comment TT: *Aside from a draft minimum requirements decision guide (MRDG), of presumably FWP authorship, which is not a NEPA document and cannot be substituted for NEPA compliance for the Forest Service, the EA is largely silent. It does admit, "The modest gains in fish mortality when eradication is not the goal does not justify the expense, effort, and repeated disturbance in designated wilderness resulting from additional years of treatment." EA at 12. This is puzzling as the neither the EA nor the MRDG fully analyzes other methods of fishing removal. Rather, they are dismissed as ineffective or even causing more harm to Wilderness.*

FWP Response: The Forest Service analyzed the effects to wilderness character in the MRDG in Appendix B. The EA describes and analyzes alternatives to chemical removal in Section 2.2. The alternatives were infeasible or would not achieve project goals.

Comment UU: *There is no good evidence that fish inhabited the area above the falls. The EA tries to shoehorn the idea that fish may have been there on page 4, but there is no hard evidence. The EA states this is "in part because extensive fish stocking has obscured genetic traces of preexisting Oncorhynchus fisheries (Pierce et al. 2018)." Such a conclusion, that stocking has obscured genetic traces, is biased because it presupposes that fish were indeed present prior to stocking. The lack of replicable genetic data suggests the opposite, especially given the advances in DNA detection technology. Since the one instance (supposedly) of Westslope cutthroat genetics from above the falls in Cooney Creek can't be replicated, it would appear that is more likely the result of a testing error or stocking of fish that had Westslope cutthroat genes in the relatively recent past rather than evidence of Westslope cutthroat in the area prior to the first fish stocking that took place.*

FWP Response: We do not have evidence to say with certainty that westslope cutthroat trout were present historically, nor can we prove they were not present. We discuss this in Section 1.2 of the EA. The undifferentiated cutthroat trout stocked in the watershed could have been Yellowstone cutthroat trout or westslope cutthroat trout. Stocking of Yellowstone cutthroat trout has been far more widespread than introductions of westslope cutthroat trout; however, it is possible that westslope cutthroat trout were introduced at some point before the distinction between the subspecies was acknowledged. Historical stocking records indicate westslope cutthroat trout were stocked in East (upper) Twin Lake in 1988 and 1989. Meadow Lake was also stocked throughout the 1940s and 1950s with fish translocated from below North Fork Falls, which were presumably westslope cutthroat trout. The anomalous finding of a nonhybridized westslope cutthroat trout is an outlier, and we do not take this as evidence for the historical presence of westslope cutthroat trout in the watershed.

The evidence of historical presence of fish, as defined as since the early 1880s, is equivocal at best. Regardless of the historical condition, the rainbow trout × Yellowstone cutthroat trout × westslope cutthroat trout hybrids in the project area are not what would be present in a natural system and do not contribute to conservation goals for the Blackfoot River watershed. Furthermore, this hybrid population is a source of nonnative genes that can further spread throughout the Blackfoot. Moreover, the historical condition above the falls does not preclude it from being an ideal project area to accomplish the important conservation goal of establishing a secure westslope cutthroat trout population.

Comment VV: *The apparent absence of any other fish species also suggests a historically fishless area above the falls. There is no reference to sculpins or whitefish in the EA. Sculpins (see*

http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AFC4E02080 which describes a species that could be present in the area) and whitefish (see http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AFCHA03060) both inhabit cold clear streams. It would stand to reason if Westslope cutthroat were found above the falls because of connectivity with other subbasins in the North Fork or adjacent basins of the Blackfoot during "climatic or hydrologic events" (EA at 4), then other fish species like white or sculpin would also be present.

FWP Response: The absence of mountain whitefish and sculpin from the project area is not evidence for a historically fishless condition. Regardless of the historical condition above the falls, the project area is currently an ideal location to establish a secure conservation population of westslope cutthroat trout above a fish passage barrier that will be resilient to climate change.

Comment WW: *Indeed, many of the headwater streams in and around the Bob Marshall Wilderness Complex (the South Fork Flathead is a notable exception) were considered fishless as evidenced by MFWP's own mapping of native trout historic range at during the online meeting. The claims that other falls exist in adjacent tributaries ignore the fact that the North Fork Falls is particularly high. The fact that no good evidence exists that the area contained fish should be reason enough for the Forest Service (at least) to deny this proposal. There is no Wilderness purpose, unlike what the MRDG tries to claim. It is not restoring natural conditions, which is a dubious endeavor anyway in Wilderness when it involves trammeling. As noted above, Wilderness experts have explained Wilderness is about process not end points.*

FWP Response: The distribution of fish across the landscape needs to be considered in context of geological time, with the recognition that glaciers affected fish distribution and waterfalls are not permanent features. Earthquakes, glacial rebound, or other geomorphic changes to the landscape can form or eliminate barriers. The fish isolated upstream of the waterfall in the Landers Fork are likely the progeny of fish that were present in the streams since the end of the Ice Age. We acknowledge that the historical presence of a fishery in the project area is unknowable. Regardless of the historical presence of the fish in the project area, the existing fishery is comprised of nonnative fish and does not contribute to conservation goals in the North Fork Blackfoot River.

These waters were stocked before wilderness designation, and therefore, trout are considered indigenous to the project area under the *Cooperative Agreement for Fish, Wildlife and Habitat Management* on *National Forest Wilderness Lands in Montana* (FWP 2008). Under this agreement, FWP retains the authority to change the species stocked in favor of a native species.

Comment XX: *The claim that this action will benefit the pure Westslope cutthroat in the Wilderness below the falls (a short section of the main stem and any tributaries that are fish bearing are within the Wilderness), and therefore would be necessary, is also dubious for two reasons. The unprecedented size of this proposal would poison 67 miles of wilderness streams and three lakes. That trammeling action alone is far greater than the short segment of the North Fork within the Wilderness. Further, and even more important, the stream reaches below the falls are not distant from genetically impure fish that reside further below in the drainage. These fish could just as easily come up from the lower North Fork (or from the Main Blackfoot and then up the North Fork) versus other impure fish surviving the long drops over the falls. In fact, the MRDG recognizes a "potential upstream expansion of downstream rainbow trout" which it tries to twist into a reason to have a Westslope cutthroat population above the falls in spite of the fact*

there is no good evidence they existed there prior to stocking. The EA admits there has been decades with non-native fish above the falls (and there are rainbows and other fish in the Blackfoot River system below). Why haven't those fish above the falls (and those below as well) already affected the supposedly purer WCT populations below the falls by now?

FWP Response: First, we would like to clear up the genetic nomenclature used in the comment. In casual or nontechnical use, "genetic purity" is often used to describe genetic status of a population or individual fish. Fisheries scientists do not typically use words like purity or pure in communicating genetic status in technical writing, as this terminology is imprecise and has misleading connotations, although occasional documents prepared for the public are not edited with these semantics in mind. Consistent with writing standards for the American Fisheries Society, the EA uses the terms nonhybridized, non-introgressed, or genetically unaltered for populations or fish that have only genetic markers for westslope cutthroat trout. The MRDG and piscicide implementation plan apply the casual term of "pure". In this context, "pure" means genetically unaltered, non-introgressed, and nonhybridized, meaning the population does not have genetic markers for nonnative fishes. The terms "impure" or "purer" are not used in the documents associated with this project.

Hybrid fish are present below North Fork Falls, although it is unknown how much of the contribution resulted from fish migrating downstream over the falls or upstream from the lower North Fork. A genetic marker for Yellowstone cutthroat trout was detected in a sample of fish in the Dry Fork of the North Fork. However, this was interpreted as a westslope cutthroat trout polymorphism rather than indicating hybridization with Yellowstone cutthroat trout, which would have originated from above the falls. No other records of Yellowstone cutthroat trout genetics have been documented below North Fork falls. Rainbow trout are present in the Scapegoat Wilderness below the falls and down through the remainder of the North Fork. However, it is unknown whether rainbow trout genetics are coming from above the falls or from downstream sources. Nevertheless, the potential is real, and downstream invasion of rainbow trout over a waterfall has been found to result in recent and increasing hybridization of Yellowstone cutthroat trout in the past decade despite being present for decades (Heim et al. 2020).

Regardless of the historical state, the primary objective of this project is to establish a conservation population of westslope cutthroat trout above the falls. The secondary objective, which is primarily a benefit of achieving the first objective, is eliminating or substantially reducing a source of nonnative genes. Given the broad distribution of rainbow trout in the lower North Fork and Blackfoot River in general, eliminating the source above the falls would not eliminate risk of hybridization below the falls, but would still help reduce this additional source.

Comment YY: *Thus, the EA and MRDG want it both ways. FWP claims the area above the falls has to be cleared of fish, trammeling the Scapegoat Wilderness, even though the real threat to the purer strain of Westslope cutthroat fish in the North Fork below the falls is from further downstream and outside the Wilderness. FWP also claims it is important to put Westslope cutthroat above the falls for a refugia, even though no good evidence exists they were ever found there. This is simple sophistry masquerading as analysis.*

FWP Response: The rationale for putting nonhybridized westslope cutthroat trout in the project area is not to restore it to a historical condition. The current condition is what matters, and the nonnative hybridized population is not desirable for fish conservation goals or maintaining wilderness character. State and federal law requires FWP and the USFS to

implement projects to conserve cutthroat trout in its historical range and prevent their listing under the Endangered Species Act. The agencies are also signatories of a memorandum of understanding (MOU) that requires action to protect existing populations of westslope cutthroat trout with emphasis on protecting the genetically unaltered populations (MCTSC 2007). The primary goal is to establish a conservation population above the falls regardless if westslope cutthroat trout were ever present historically. By doing this, a large source of nonnative genes will be removed. The existing rainbow trout in the North Fork below the falls, and elsewhere in the Blackfoot drainage, likely pose a greater long-term threat. Rainbow trout sustain the sport fishery for a large portion of the Blackfoot River. The composition of trout in the lower Blackfoot is >70% rainbow trout and the composition in the middle Blackfoot is >40% rainbow trout. The North Fork, as well as other priority westslope cutthroat trout tributaries in the drainage are managed for connectivity and migratory life history expression, at the expense of increasing hybridization. Fortunately, there are numerous unaltered, isolated populations throughout the Blackfoot where we intentionally maintain isolation and conduct habitat restoration to enhance population persistence within those isolated sections. The primary benefit of this project is fulfilling conservation goals and establishing a secure population above the falls. Nonetheless, the commenter is correct that even if hybrid trout are removed from the project area, nothing is preventing rainbows and hybrids from further expanding and hybridizing with westslope cutthroat trout below the falls.

The MOU includes establishment of cutthroat trout populations upstream of barriers that were historically fishless among priority activities to secure cutthroat trout in a protected area. In most places, nonnative salmonids are incompatible with native cutthroat trout. A substantial body of research has evaluated the strategy of isolation of cutthroat trout in headwater streams as a means to protect and conserve these native fishes (Thompson and Rahel 1998; Hilderbrand and Kershner 2000; Kruse et al. 2001; Novinger and Rahel 2003; Peterson et al. 2008a; Peterson et al. 2008b). The consensus view is that isolation in headwaters is an essential tool in the preservation of native *Oncorhynchus*. Moreover, the project area has the features determined by the researchers listed above to provide long-term security due to the extent, quality, diversity, and connected nature of the habitat. More recent research has emphasized the real threat climate change poses to native cutthroat trout, and the project area is within a “climate shield” or area that modeling indicates will remain cold enough to support cold-water stenotherms like westslope cutthroat trout (Isaak et al. 2015; Isaak et al. 2017).

Comment ZZ: *The purpose and need section does not articulate a defensible wilderness-based need for fish poisoning followed by fish stocking and does not indicate how artificial fish stocking is necessary to administer the Scapegoat Wilderness “so as to preserve its natural conditions” and maintain the wilderness as “an area where the earth and its community of life are untrammeled by man.” 16 U.S.C. § 1131(c). Indeed, it would be incredibly difficult to articulate a need for artificial fish stocking in wilderness streams that were historically fishless. See “Nonnative Trout in Natural Lakes of the Sierra Nevada: An Analysis of Their Distribution and Impacts on Native Aquatic Biota” (noting that “trout stocking serves to maintain an artificial fishery that has substantial impacts on native aquatic biota” and that stocking is necessarily at odds with wilderness, “areas managed for their natural values”); see also “Non-Native Fish Introductions and the Reversibility of Amphibian Declines in the Sierra Nevada” (Forest Service publication noting that the introduction of non-native trout into naturally fishless lake ecosystems is a major cause of decline in certain amphibians). Both studies, by Knapp, are attached. It should also be noted, the goal of this project is not to return this area to a fishless state, which was the likely condition prior to stocking.*

FWP Response: The rationale for establishing a secure conservation population of westslope cutthroat trout is to address current and ongoing losses of suitable habitat for westslope cutthroat trout that is occurring due to climate change and the presence of nonnative trout. The agencies are following their requirements under state and federal law to implement projects to prevent listing of westslope cutthroat trout as threatened or endangered. In the larger picture, we are working to further offset losses of westslope cutthroat trout to prevent extinction, which has become a more urgent need with advancement of climate models that predict major losses of suitable habitat over the next few decades (Isaak et al. 2015; Isaak et al. 2017).

The Sierra Nevada example of fish introductions and declines of amphibians is not relevant in the North Fork Blackfoot River project area. The Sierra Mountain yellow-legged frog that declined to the point that it required protection under the Endangered Species Act evolved in an environment lacking fish. As described in the EA, the amphibians in the North Fork Blackfoot River coevolved with westslope cutthroat trout and are abundant in waters throughout their historical range where they are sympatric with westslope cutthroat trout. Nonnative trout are functionally different predators (Benjamin et al. 2011; Lepori et al. 2012), and their sympatry with the native amphibians is a concern. The project area would support a coevolved assemblage of fish and amphibians that was once widespread in western Montana but is increasingly rare due to the diminishing number of westslope cutthroat trout populations

The aquatic invertebrate assemblage present in the project area has been sympatric with a heavily hybridized fishery for decades. Its nature before fish introductions, regardless of the presence of fish historically, is unknowable. Extensive sampling throughout the watershed (Pierce et al. 2018) found an assemblage typical of headwater mountain streams with no species present that are not tolerant of sympatry with fish. That said, removal of the hybrids and replacing them with westslope cutthroat trout would restore an assemblage of coevolved fish, invertebrates, and amphibians. As the invertebrate assemblages have coevolved with westslope cutthroat trout, stocking westslope cutthroat trout would establish a coevolved community of fish, invertebrates, and amphibians that is increasingly rare with the dramatic declines in distribution of westslope cutthroat trout.

Comment AAA: *Rotenone is a poison that kills all organisms that utilize gills during part of their life cycle. These organisms include not only the targeted non-native fish, but amphibians, macroinvertebrates, and other non-target organisms that use gills. See Erman 2012, Dalu et al. 2015, and Mangum and Madrigal 1999.*

FWP Response: This comment is nearly verbatim from the comment submitted on the pilot study EA that FWP prepared to assist in the development of this EA and the proposed approach to achieve project goals (see *Pilot-Level Bioassays and Fish Distribution Testing for Proposed North Fork Blackfoot River Native Fish Restoration Project, Draft EA*[3]*, FWP 2018a*). In both cases, the comment omits mention of the extensive literature review presented in the EAs describing response and recovery of populations of nontarget aquatic organisms in waters treated with rotenone, and the natural strategies aquatic life has for recovering from disturbance. See pages 20-23 in the EA for our literature review and

[3] Available on FWP's website at <http://fwp.mt.gov/news/publicNotices/environmentalAssessments/speciesRemovalAndRelocation/pn_0077.html> Accessed 5 Nov 2020.

discussion. The weight of evidence from a thorough review of the scientific research is that species vary in their sensitivity to rotenone; however, populations of gill-respiring aquatic invertebrates and amphibians recover rapidly, usually within 1 year, and projects using rotenone are typically scheduled at a time of year when juvenile amphibians are no longer or are less susceptible to rotenone. The conclusion in the EA based on a thorough review of the scientific literature is that mortality of nontarget species is short-term and minor.

As we have already prepared comments detailing the issues with the research presented by the commenter, we will not reiterate it in full here; however, interested parties can find this review in the *Pilot-Level Bioassays and Fish Distribution Testing for Proposed North Fork Blackfoot River Native Fish Restoration Project, Decision Notice*[4] prepared in 2018 (FWP 2018b). A condensed version is appropriate at this point.

Erman (2012) is not original research but is a criticism of laboratory studies of the sensitivity of rainbow trout and species of aquatic invertebrates to rotenone (Finlayson et al. 2010). The authors of the original research responded to Erman (2012) and detailed how his criticism was not relevant or accurate with regard to their study (Finlayson et al. 2012). Erman criticized the authors for not reporting instar stage of invertebrates tested and not accounting for how size of trout affects sensitivity to rotenone. He also criticized their method of testing.

Finlayson et al. (2012) present a cogent rebuttal to each of Erman's points. The criticism of not reporting instar stage was irrelevant as Erman's justification for this criticism was from a study of uptake of, not sensitivity to, an unrelated pesticide. Finlayson et al. (2012) selected from the most sensitive of aquatic invertebrates so that differential sensitivities among instar stage would likely be minor. In the original research, Finlayson et al. (2010) found trout to be more sensitive to rotenone than the tested aquatic invertebrates. The laboratory results were consistent with field studies in a rotenone project to restore Pauite cutthroat trout to its historical range with little change in the benthic assemblage found after treatment with rotenone.

Finlayson et al. (2012) also rejected the arguments over size of fish and supposed problems in testing standards. Although one study found size of fish affected sensitivity to rotenone, others have not, and decades of field observations have also not found a relationship between size of fish and sensitivity to rotenone. The criticism of their testing methods was without merit. They used standardized testing of aquatic organisms approved by the American Society for Testing and Materials and the U. S. Environmental Protection Agency. Moreover, the testing met the generalized testing standards detailed in the study Erman presented in his critical review.

In the decision notice for the North Fork Blackfoot pilot-level bioassay studies, we prepared a lengthy review of the methods, assumptions, and major flaws in the Strawberry River study (Mangum and Madrigal 1999). This research has numerous shortcomings making scientific inference from it unsupportable. The concentration of rotenone was exceptionally high, the duration was exceptionally long, and treatment was followed a month later by another long treatment of high concentrations of rotenone. The assumptions made by the authors were not scientific, and they did not present enough data to evaluate changes in the assemblage. The study design had major flaws that preclude making scientifically supportable conclusions on the results.

[4] Available on FWP's website at < http://fwp.mt.gov/news/publicNotices/decisionNotices/pn_0911.html> Accessed 5 Nov 2020.

As detailed in the EA, research on the response of aquatic invertebrates and amphibians shows great consilience of evidence. Across continents and studies, researchers are finding aquatic invertebrate assemblages and amphibians recover rapidly following treatment with rotenone. The EA cites over 20 papers describing the research on response of nontarget aquatic organisms to rotenone and the mechanisms of recovery. The research in the EA does not have the shortcomings in study design and excessive treatment regime described by Mangum and Madrigal (1999).

The third paper cited by the commenter is another laboratory study of the sensitivity of aquatic invertebrates native to South Africa (Dalu et al. 2015). A tremendous amount of geographic and evolutionary distance separates North American from South Africa, so it is not a suitable analogy. Nevertheless, the methods followed standard practice for evaluating toxicity of rotenone to aquatic organisms. Despite the distance, South Africa supports congeners of taxa present in Montana, including a *Baetis* mayfly, *Daphnia*, and a snail of the genus *Physa*. After 6 hours of exposure to concentrations proposed for this study, nearly all zooplankton died, and *Baetis harrisoni* mortality ranged from an average of 55% after 6 hours of exposure and 80% after 18 hours of exposure. Tested odonates and belostomatid water bugs were relatively resilient to rotenone. These results are consistent with findings reported in the literature presented in the EA.

Dalu et al. (2015) conducted laboratory bioassays of nontarget invertebrates to guide decision-making and planning for a projects to remove nonnative fishes in the Cape Floristic Region, South Africa, This region has a high level of fish endemism; however, numerous nonnative species put many of these endemic fishes at risk of extinction. Fisheries managers applied rotenone to streams and lakes to remove nonnative fishes to prevent their extinction. Investigations of the response of nontarget invertebrates showed consilience with research cited in the EAs for the pilot study and the current project with rapid recovery of all taxa (Marr et al. 2019). Rotenone treatment was effective in eradicating nonnative fish, and lentic and lotic invertebrates, including the sensitive mayfly and zooplankton evaluated by Dalu et al. (2015), recovered within one year.

Comment BBB: *Active stocking and manipulation of fish populations in historically fishless streams is directly at odds with the Forest Service's management guidance. See FSM 2323.31 ("Provide an environment where the forces of natural selection and survival rather than human actions determine which and what numbers of wildlife species will exist."); see also FSM 2320.2 ("Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces."). Given the clear inconsistency with Wilderness Act mandates and the Forest Service's management guidance, the artificial fish-stocking component of the proposed action cannot be authorized. The EA indicates that the hybrids, which have a predominant contribution of genes from rainbow trout, are poorly suited to the cold waters in the project area, resulting in low densities and poor angling opportunities. Poor angling opportunity is not a legitimate reason to poison wilderness streams. Further, the low density of these fish may be an indication of a historically fishless (or troutless) subbasin rather than poorly adapted stocked fish populations that have nonetheless survived for nearly 100 years.*

FWP Response: The historical presence of fish above the falls is irrelevant because fish are present now, and were present at the time of wilderness designation, making fish indigenous to the project area per the under *Cooperative Agreement for Fish, Wildlife and Habitat Management On National Forest Wilderness Lands In Montana* (FWP 2008).

Moreover, stocking was widespread in the project area before wilderness designation giving FWP the authority to continue stocking and change the species stocked per the agreement.

The MEPA analysis includes evaluation of the effect of the project on recreation, among a wide range of effects on the natural and human environment. Although a locally adapted, secure population of westslope cutthroat trout would improve the recreational value of the fishery, this result is coincidental and not the driving rationale. FWP's MEPA analysis requires examining the effect on recreational values, and it would be disingenuous not to conclude improved angling would result from the project, but the EA clearly states the goals are related to native species conservation.

The low density of fish in the project area is not an indication of a historically fishless condition. Hybrid trout are less fit in general (Muhlfeld et al. 2009; Drinan et al. 2015). Westslope cutthroat trout are a cold-water stenotherm that require and thrive in cold environments (Bear et al. 2007). The substantial overlap in the historical ranges and occupied habitat between westslope cutthroat trout and bull trout, a species especially sensitive to warm temperatures (Selong et al. 2001), provides additional evidence that cold temperatures in the project area would not be limiting to westslope cutthroat trout but would be ideal. The warming projected by climate models (Isaak et al. 2015; Isaak et al. 2017) underscores the need to provide cold-water refuges to ensure the persistence of westslope cutthroat trout.

The failure of the existing heavily hybridized fishery to thrive, not just survive, does not provide evidence for or against a historically fishless state. The natural low fitness of hybrids (Muhlfeld et al. 2009; Drinan et al. 2015) and greater ability of rainbow trout to grow at higher temperatures (Bear et al. 2007) are likely the driving factors in limiting the abundance and size of rainbow trout hybrids in the project area. The area was chosen because of its thermal suitability for westslope cutthroat trout, and invertebrate sampling indicates productive waters with an adequate forage base for westslope cutthroat trout (Pierce et al. 2018).

Comment CCC: *The amount of helicopter use is not clear. The MRDG for the reduced mechanized use alternative clearly states there would be 59 flights for this project. MRDG at 36. However, adding up the flights later in the MRDG do not add up to that number. There would be 20 flights for activation (MRDG at 37), one day and an unknown number of flights that might be combined with short-term stocking for deactivation (MRDG 42), 40 flights for short-term stocking (Ibid.), and 7 for long-term stocking (MRDG at 43). Assuming all the flights for deactivation are also for stocking, the number is 67, not 59.*
The EA is equally unclear. It states the task "could be accomplished with about 10 flights in and out of the wilderness over a maximum of 2 days, and 5 flights over a maximum of 2 days to remove gear after the project has been completed." EA at 10. See also EA at 27. This raises two questions. Are in and out counted as one or two flight in the MRDG? If not, then there is an inconsistency. Why does the MRDG state it would take only one day for deactivation and the EA two days? The EA concurs it would take 7 flights for long-term stocking (EA at 11), but then confuses the issue by stating in the initial phases, "helicopters would be needed for up to 7 days, with up to 20 flights in a single day. This includes the stocking of trout in the first year, which would require trout (sic?) up to 30 flights and would occur over a maximum of three days." Aside from the 30 and 40 short-term stocking flights being inconsistent between the MRDG and the EA, the EA could have as many as 110 to 140 flights over the course of 7 days.
In an effort to mislead a reader into thinking this action might actually be compatible with Wilderness, the MRDG alleges that helicopters are more in keeping with Wilderness than are

impacts from pack stock use. For example, the MRDG suggests that helicopter use rather than stock will have fewer impacts on wilderness attributes "By fitting this mobilization into 2 days of helicopter time we will reduce the duration of the impact to Wilderness visitors' opportunity for solitude by reducing the number of pack stock that would need to use the trail network that is already very popular during the summer season." MRDG at 58. See also MRDG at 42 and at 56. Packstrings are compatible with Wilderness; helicopters are not.

The proposal also includes trammeling by breaching beaver dams to get better poison distribution. The assumption is beavers will rebuild the dams. However, that assumes that each dam is connected to an active beaver colony rather than an old dam that has been left after the beavers moved out. Thus, this would be a far greater impact that characterized.

FWP Response: The main body of the EA document contains the correct number of flights associated with the proposed action. The implementation plan in Appendix A has been in various stages of development for the past few years and has been somewhat of a "living" document that helped outline the plan as well as highlight comparisons of alternative techniques for development of the MRDG. As the MRDG process modified our original proposal, including duration and extent of aerial support, we focused on ensuring the EA document reflected the selected alternative. We changed some items in Appendix Abut retained portions of the original comparisons to provide context for how the MRDG was developed. The necessary equipment and supply distribution could be accomplished with about 10 flights in and out of the wilderness over 2 days, and 5 flights to remove gear after the project has been completed Additionally, stocking of trout in the first year would require up to 30 flights and would occur over a maximum of three days. In each of the two outyear stocking events, up to 7 flights will be conducted over a maximum of two days each year.

Beavers are broadly distributed throughout the upper East Fork of the North Fork, Meadow Creek, and Mineral Creek drainages. There are active and inactive dams present. Beaver dams are not permanent structures, so inactive dams that need to be breached would have failed naturally at some point in the future. The breaching of inactive beaver dams will not have impacts on beavers. Furthermore, it will not impact the stream system given that dams fail eventually when not actively maintained by beavers.

Comment DDD: *Size and complexity of the proposal almost guarantees failure. The literature cited in the EA and the EA itself note that the habitat complexity make it impossible to have a complete kill of fish. If the desired percentages of genetic purity are not met, then what?*

FWP Response: The proposal was developed to have the best chance of success using a single treatment followed by three significant stocking events. This proposed action is based on more than a decade of data collection and informed by other similar projects to develop an implementation plan that has a high chance of success given the complexities and logistical challenges associated with the project area. While certainly challenging, this type of action has been performed in relatively similar drainages and similar circumstances, so there is a high likelihood of success. FWP will conduct long-term monitoring to assess post-project success. At this point, we do not have any contingencies built into the proposal. Monitoring results will inform the success of the project and if project objectives are not achieved, a future environmental analysis would be developed for any desired future actions.

Comment EEE: *Rotenone is a poison that kills all organisms that utilize gills during part of their life cycle. These organisms include not only the targeted non-native fish, but amphibians,*

macroinvertebrates, and other non-target organisms that use gills. See Erman 2012, Dalu et al.2015, and Mangum and Madrigal 1999. In particular, it is important to note the EA cites to Finlayson et al. 2010 in looking at impacts from rotenone. Erman 2012 states, "The study by Finlayson et al. (2010) had serious methodological problems in toxicity testing and analysis that render their conclusions suspect or incorrect."

FWP Response: As described in the EA, the assertion that rotenone kills all gill-respiring organisms is inaccurate for concentrations of rotenone used in fish eradication projects. We have also addressed the limitations of the Strawberry River study (Mangum and Madrigal 1999) in making inference about piscicide projects using current practice, and the major flaws in that paper's assumptions and study design. Likewise, Erman (2012) provides no support for the assertion that rotenone "kills all organisms that utilize gills during part of their life cycle". This paper is commentary on primary research (Finlayson et al. 2010) that was cogently rebutted by Finlayson et al. (2012), who effectively dismantled of all of Erman's points. The Dalu et al. (2015) investigation was a laboratory investigation of select invertebrates that did not find that rotenone kills all gill-respiring organisms, although some taxa experience moderate to nearly total mortality, and others show low to no response to rotenone. This South African study was in preparation for application of rotenone to eradicate nonnative fish to prevent the extinction of endemic fishes in the Cape Floristic region, and field studies found rapid recovery of nontarget organisms after rotenone treatment (Marr et al. 2019). Likewise, researchers in New Mexico, Montana, and Norway report rapid recovery of nontarget organisms following application of rotenone, adding to the consensus view that populations of nontarget organisms are resilient to rotenone treatment and recover from it as they recover from the natural disturbance regimes they evolved under.

Comment FFF: *The Montana Chapter of the Wildlife Society cites other studies relating to rotenone dealing with an amphibian known to inhabit the area, the Rocky Mountain tailed frog. In Montana all amphibian larvae as well as tailed frog (Ascaphus truei) adults … either use some sort of aquatic respiration or may be unlikely to exit treated water bodies depending on the time of day and presence/absence of humans (Daugherty and Sheldon 1982 and Ernst et al. 1994). Thus, all of these species are likely to suffer mortality through the application of piscicides." Joslin, G., and H. Youmans, coordinators 1999 at 2.7.*

FWP Response: The EA addresses the potential for rotenone treatment to affect Rocky Mountain tailed frogs in depth. This species has an extended gilled phase of up to 4 years that would make individuals potentially vulnerable to rotenone. Rocky Mountain tailed frogs live up to 14 years, so reproduction by multiple adult year classes would make the population robust to the loss or substantial reduction of a single year class. Rotenone treatment in the South Fork Flathead River occurred in 15 lakes, and Rocky Mountain tailed frogs abundance as reported by field observations was unchanged after rotenone treatment in 10 lakes (Fried et al. 2018).

We consulted with Dr. Bryce Maxell, program manager with the Montana Natural Heritage Program and a herpetologist by training about the potential for this project to harm Rocky Mountain tailed frogs. Specific to Rocky Mountain tailed frogs, he observed multiple age cohorts in Overwhich Creek the year after rotenone treatment in 2 consecutive years indicating many gill-respiring individuals survived 2 treatments of rotenone. Apparent mortality of tadpoles during the third treatment was substantial; however, the abundance of multiple age cohorts after treatment in the previous 2 years suggested behavioral avoidance of rotenone through burrowing in the gravel resulted in an abundance of tadpoles after the 2

treatments, or that apparent mortalities were stunned and would have revived. Future study is being planned; however, his opinion was that Rocky Mountain tailed frog populations were resilient to rotenone treatment, and short-term mortality of individuals was worth the benefit of removing nonnative trout.

Comment GGG: *The EA also tries to evade the real possibility it may drastically and negatively affect species in one genus:*

> *Posttreatment monitoring would assess the status of Utacapnia in Sourdough Creek; however, interpretation of monitoring results should consider the species rarity (Newell et al. 2008) and the natural variability of species presence in samples (Vinson et al. 2010). Rare species may be absent from samples but still present in streams. Although winter stoneflies have reduced dispersal capability compared to other species of aquatic invertebrate, the broad geographic range of the Columbian stonefly (Dosdall and Giberson 2014) indicates they can disperse from other streams.*

EA at 24. The research we have cited on the negative impacts of rotenone are applicable here. At the very least, there is scientific controversy over the effects of rotenone on macroinvertebrates and amphibians. This scientific controversy needs to be honestly and directly addressed. The EA downplays impacts because it is written from a fisheries-centric perspective. For example, see the EA at 20 and 21. Regardless, chemicals like rotenone and potassium permanganate would bring a significant trammeling to the wilderness character of three lakes and 67 miles of streams in violation of the basic tenants of the 1964 Wilderness Act (16 U.S.C. 1131-1136).

FWP Response: We discuss the potential effects to macroinvertebrates in Section 3.4.1 of the EA. A short segment of Sourdough Creek, the stream where *Utacapnia* were found, supports fish, but over 2 miles of fishless headwaters would not be treated. *Utacapnia*, regardless of species, are expected to be resilient to piscicide treatment as drift from the fishless headwaters would be a continuous, diverse, and abundant source of this taxon and other aquatic invertebrates to the treated area. Moreover, long-term monitoring of capniid stoneflies in the South Fork Flathead project area experienced slight or no decline and quick recovery following rotenone treatment (Niall Clancy, FWP, personal communication), suggesting a general resilience of small winter stoneflies to rotenone treatment.

The research cited in the EA shows consilience of evidence of rapid recovery of aquatic communities following treatment with rotenone. These results are consistent across studies and continents, and the scientific experts in the field of rotenone concur that nontarget organisms recover rapidly. The controversy is not within the scientific community, which has dedicated considerable research effort across continents to evaluate the potential for rotenone to cause long-term harm. Instead of finding lasting harm, scientists are building the foundation for scientific consensus that rotenone treatment results in disturbance that is similar to natural disturbance, and that aquatic assemblages recover rapidly through mechanisms they evolved to recover from the regular, punctuated events that cause displacement and mortality.

Comment HHH: *The safety measures required in the EA suggest rotenone is not as benign as the EA leads one to believe. For example, the EA states, "Likewise, as detailed in the assessment on effects on wildlife and fish, rotenone-treated water would not pose a health risk to horses and mules drinking from streams. Stock owned by the outfitters contracted to assist with the project would not be allowed to drink from any surface water on the day of it being*

treated." If stock are not allowed to drink from water treated that day and humans need to wear safety gear, why are the impacts to wildlife considered nil?

> **FWP Response:** The FWP piscicide policy (FWP 2017) includes direction to find ways to keep livestock away from treated water. That is an added precaution, and even though it is not part of the label requirements, it is consistent and in the same vein as language on the label to avoid feeding fish carcasses to animals. Humans are required to wear safety gear because workers are potentially exposed to the undiluted chemical when handling the rotenone. Wildlife and livestock would be exposed to dilute concentrations in the water (≤ 4 ppm formula or 200 ppb rotenone) or in the carcasses themselves. As stated, livestock are prevented from drinking treated water at the time of treatment as a precautionary measure not required by the label.

Decision

Based on the analysis in the Draft Environmental Assessment (EA), along with applicable laws, regulations and policies, it is my decision to select the proposed action (Alternative 1) and proceed with the North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. FWP expects work to begin in July or August 2021.

I have determined that the decision to proceed with the proposed action will not have a significant negative effect on the natural or human environment. Therefore, an Environmental Impact Statement will not be prepared. By notification of this Decision Notice (DN) long with the additional information described herein (FWP Responses to Commenters), the draft EA along with the DN is hereby made the final EA.

The draft EA with this Decision Notice may still be viewed at or obtained from Montana Fish, Wildlife & Parks at the address on page 1. The EA is available for review on FWP's website http://fwp.mt.gov/ under "News," then Recent Public Notices" (enter "north fork blackfoot" in "Search Public Notices"). This DN will likewise be posted on FWP's website.

11-6-2020

Randy Arnold
Region 2 Supervisor
Montana Fish, Wildlife & Parks

Date

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Appendix A. Public Comment

All comments for the proposed North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project and its Draft EA, received by FWP during the comment period of July 9 through August 14, 2020. (Comments received via E = email, Ph = phone, PM = Public Meeting.)

Commenter #	Via	Paragraph	Comment
1	E		I have read through the Draft EA and support the proposed alternative and associated actions to reduce non native trout and stock pure WCT.
2	E		I fully support the project. The project holds great promise to not just native trout in the wilderness but also to downstream populations. Please make it happen and hopefully the goals will be met. Best of luck!
3	E		I support the restoration and rehabilitation of the North Blackfoot River Westslope Cutthroat Trout Conservation Project as proposed.
4	E		I support the proposed North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. As much as I enjoy fishing for Rainbow and Brown Trout, I believe that where possible, FWP should manage for healthy populations of native species. Similar to the situation found in the South Fork Flathead Drainage, the North Fork of the Blackfoot has a travel barrier that will help keep non native species out of the project area after the Retinone treatment. The high elevation and cold water found in this stretch of water along with it being isolated in a wilderness, make this an ideal location for this kind of project.
5	E		Thanks. [Name] and I chatted about this EA yesterday, briefly. I have hiked and fished in much of the area covered in this EA, many years ago I would add. I look forward to seeing this project move forward with broad support. Take care and stay healthy.
6a	E	1	I want to comment on the poisoning of the fish in the North Fork of the Blackfoot River.
		2	I see from the Seeley Swan Pathfinder the FWP wants to put pure WCT above the falls.
		3	I have no problem with that, but then they want to poison the fish below the falls.
		4	That is a bad idea, with as many small streams that flow into that stretch of river they will never get all the hybrids.
		5	Plus what about any Bull Trout that might be in the river at the time of poisoning.
		6	I will tell you a story, when I was a young ladd the FWP poisoned the clearwater river from the Rainy Lake fish barrier down to the barrier behind the Emily A. They were trying to get rid of the trash fish, well they did not get rid of the trash fish.
		7	Within a few years the lakes were as full of Perch as they were before and there were a few Sockeye plus others.
		8	The fishing in that stretch of the Clearwater has never been as good as it was before the poisoning.
6b	E	1	I may have misunderstood some of the program.
		2	A friend that is in the know say the only poisoning will be above the falls.
		3	Unless their detox station does no work very well.
7	E	1	Sorry I won't be able to get onto your virtual public meeting on 7/22. These are my comments:
		2	• Overall, this is a good plan. I support establishing a genetically pure population of westslope cutthroat trout above the falls.
		3	• My primary concern is the potential for an overdose of rotenone making it over the falls and impacting that lower stretch of the North Fork. This has happened in other rotenone uses and it could happen here. What plans do you have to neutralize a spill like this once it gets below the falls? *This has to be part of your contingency plans.*
8a	E		...To stream of public meeting on NorthFork WCT . Very frustrating. Have tried two websites and followed directions (very minimal) found in DEA report. This meeting should be rescheduled to allow those of us who live on the North Fork to learn, listen, question, and comment. Grrr.
8b	E		Thanks for responding. You were listed as the contact. Yes, clearly there was a glitch which I learned about after I sent you my email. Hopefully a reschedule will work better.
8c	E		Thank you Sharon for this update. I do think the deadline for comments should be moved forward a week also!

8d	PM	1	The commenter stated that she was very impressed with the science, numbers, and all the work so far. She has known about the project since early in the conceptual phase. She said the EA did not address worst case scenario. Also, she stated that there will not be 100% kill, so there will still be hybrids in the system. She also was interested to learn more about the source of fish because she said she did not know anything about M012 strain. She asked a lot of questions about the strain and made comments suggesting they are not technically native. She wanted to know what would happen to the "natural" stuff downstream. She also stated that there are too many bull trout eating all the cutthroat trout in the North Fork.
		2	She then mentioned that she "get's a little tired of collaring everything, banding everything, and trying to redo what God has done to us." Sandra stated that she has spent a lot of time and effort protecting the stretch of river along her property. Protecting from cattle, putting in fish screens, etc. Not overfishing, which she says is currently happening. She is "just trying to protect this fish, and if they're funky fish, that's fine." Not sure we need to over manage everything. What are the ramifications of not killing everything – will you go back and do it all again?
		3	She asked about how far rotenone would travel over the falls and if it would kill fish below.
9	E		Hello my name is [name] and I've fished many of Montana's rivers including the Blackfoot river. I fully support this project and I was interested if there was any sort of volunteer work for this project and if so I wouldn't mind helping out.
10a	PM		Thanked the agency for the hard work and good science. Stated that MTU will submit detailed written comments, but wanted to enthusiastically support the proposal in front of the public. Believes the science is strong and it's a great way to move forward with native fish conservation. MTU is speaking on behalf of the many local chapters that support this proposal.
10b	E	1	Thank you for the opportunity to provide comments on the proposed project to restore native Westslope cutthroat trout to the North Fork Blackfoot River (NFBR). Montana Trout Unlimited has partnered with the Department of Fish Wildlife and Parks (FWP) during stages of developing this project and supports the proposed alternative in this Draft Environmental Assessment (DEA). We appreciate the Department's close consideration of a few comments on the proposed alternative we have to offer in this letter.
		2	Founded in 1964, Montana Trout Unlimited (MTU) is the only statewide grassroots organization dedicated solely to conserving, protecting, and restoring Montana's coldwater fisheries. MTU is comprised of 13 chapters across the state and represents approximately 4,500 TU members.
		3	As the DEA states: "Protecting nonhybridized populations is the highest conservation priority for cutthroat trout in Montana and is imperative if westslope cutthroat trout are to persist into the future." In particular, the NFBR is one of the, if not THE highest priority areas of the Blackfoot watershed for native trout conservation and restoration, whereas nonnative hybridization is one of the primary threats to that goal. MTU has and is interested in continuing to invest in native trout conservation, protection and restoration in the Blackfoot River system, including in this project. In addition to strongly supporting the proposed alternative in the DEA, MTU looks forward to the opportunity to partner in making it a long-term success. This project complements the many projects and millions of dollars that have been invested in native trout conservation in the Blackfoot River drainage by our Big Blackfoot Chapter of TU and partner organizations, including FWP, the Forest Service, U.S. Fish and Wildlife Service and many landowners in the valley.
		4	This project is an ambitious and good long-term investment in native trout conservation for the state of Montana. The project area is predicted to be extremely resilient to the impacts of climate change on coldwater streams and their habitats, therefore reestablishing a robust conservation population of Westslope cutthroat trout (WCT) in the project area will be very likely to endure. Meanwhile, the nonnative and hybrid populations currently in the project area exist at very low densities, indicating that they are not well suited to this environment. Restoring a pure, or nearly pure WCT population should allow for higher densities of fish with better age/size distribution in what will be an extensive, unique backcountry native trout fishery.
		5	While the project area is quite expansive, making complete eradication of nonnative fish and the establishment of a completely pure strain of WCT is highly unlikely, a high level of stream connectivity in the project area will allow WCT to move throughout the project area promoting gene flow and recolonization if/when catastrophic natural events impact portions of the population. Restocking should not ever be necessary. The natural barrier (waterfall) on the North Fork of the Blackfoot River will prevent future in-migration on nonnative fish. Restoration of this WCT population above the North Fork falls would also benefit the native westslope populations downstream of the project area. As genetically intact WCT from the project area swim down past the falls, they will increase genetic diversity and WCT genes in the populations of WCT throughout the Blackfoot drainage. Thus, the expense and time invested in doing this large project right will reap long-term rewards within and below the project area, and those benefits are expected to endure.

		6	Restoring WCT to this project area entails using a common piscicide to kill a high percentage of the existing nonnative and hybrid fishery. MTU has been involved in or supported numerous FWP trout restoration projects that included use of piscicides, including those being proposed for this effort. We deem this treatment necessary and effective at accomplishing the goals of this project. Coupling the piscicide treatment as described in this DEA with multiple stockings of genetically pure WCT should achieve the goal of establishing a genetically intact WCT population above the North Fork falls, while being adequately protective of overall aquatic health within and beyond the treatment area. Short-term impacts to aquatic invertebrates and amphibians will be outweighed by their rapid recovery and the long-term benefits of establishing this WCT conservation population.
		7	MTU also supports future consideration in a separate analysis of introducing bull trout to the project area. The area's diverse, connected and complex habitat, along with consistent cold water, would provide an exceptional refuge for this Endangered Species Act species to pursue its full life history and migratory needs. As a conservation population, bull trout in the project area could also benefit populations downstream of the North Fork falls, similar to the goal for WCT in this project.
		8	While MTU strongly supports the overall project, we do have one specific concern and strong recommendation. It is unclear that there *will* be sufficient post-treatment monitoring and evaluation. MTU would very much like to see a definitive commitment to do some post-treatment evaluation for effectiveness of the rotenone. MTU strongly supports extensive use of sentinel fish at the lower ends of each treatment zone to make sure rotenone is effective. The short Effectiveness Monitoring section of the draft EA states: "Following completion of piscicide treatment, project partners *may* [emphasis added] evaluate the effectiveness of the removal effort through electrofishing and collection of water samples to test for eDNA. Gillnets may be deployed in lakes. Furthermore, genetic analyses will assess changes in non-native trout admixture throughout the project area. These efforts may result in subsequent changes to the level and frequency of stocking in waterbodies not meeting conservation objectives."
		9	We strongly urge the project partners to absolutely evaluate effectiveness of the removal effort through electrofishing, especially in stream sections where the highest density or population of hybrid trout reside based on prior pre-treatment surveys. Electroshocking equipment and personnel will already be present for use in capturing sentinel fish. Given the complexity and difficulty of getting equipment and people into this project area, both the equipment and people should be put to maximum beneficial use while there, even if that means extending the project time to gather sufficient evidence that removal efforts were effective. It's especially worth considering investing more time in electroshocking to determine effectiveness than collecting post-treatment eDNA samples. Literature shows that eDNA is not as effective at showing population. Rather it is used for presence-absence determinations. If the assumption is that rotenone treatment will not likely eradicate fish completely than a simple presence-absence evaluation by eDNA is not particularly informative. Plus, the literature on eDNA shows that DNA matter can linger in streams and lakes long after fish are gone. That would seem to be the case when the treatment is slated to leave dead fish to sink and decay. Collecting eDNA after such treatment might be no different than collecting it in the same stretch of water before treatment. The fish and their DNA will still be present. In short, we urge you to replace "may" with "shall" or "will" in regard to post-treatment evaluation of rotenone effectiveness.
		10	Please do not hesitate to contact us with any questions, or if you need additional information regarding the comments that we have submitted (via email at david@montanatu.org or by phone at 406-543-0054). Again, we thank you for the opportunity to comment on this worthy project.
11	E		I would leave this area alone, there isn't a way to stop the poison from going over the falls into a super bull trout fishery a lot of us have known for years. I doubt there are enough fish/rainbow or hybrid to risk killing some of the biggest bull trout we have left in any part of the Blackfoot which once had them all the way down to the Bonner Mill, I know, caught several in both places, had a hard time catching something else just below the fall in the Scapegoat when I camped there in July
12	E	1	You people make this way too hard!
		2	1. Encourage anglers to keep all non-native fish in the watershed; rainbows, brown and brook trout. Either keep these species for the frying pan, or toss them over your shoulder (that's good luck at the Trevi Fountain in Rome!) and feed the wildlife. If need be, pay a bounty for these fish.
		3	2. Call Trout Unlimited and ask for volunteers. You'll get more than you think.
		4	3. Buy a few dozen Whitlock-Vibert boxes (https://flyfishersinternational.org/Conservation/Projects-Programs/Whitlock-Vibert-Box) and once a year in spring, in conjunction with MFW&P, get those boxes into the streams.
		5	4. Go back weeks later and confirm the hatch and presence of fry.
		6	5. Continue with the above for five years. Done.
13	E		I support DFWP's proposal to use rotenone to restore WCT to the NFBR above the falls. Question: How are the fish hybridized now and what will prevent the future hybridization, especially below the falls?

14a	E		I agree 100% with the proposed project. Anything we can do to protect, preserve and enhance Montana's native fish species should be undertaken. Best of luck with the implementation of this important project.
14b	E		Anything we can do to preserve, protect and expand Montana's native fish species should always be a number one priority. It is unfortunate that because of past management practices and bucket biologists, our remaining opportunities now reside above natural migration barriers. I support this project 100%.
15	E		I fully support this Environmental Assessment, provided the agency include long-term monitoring after the project is completed.
16	E		I generally support this effort to restore native westslope cutthroat trout to the north fork of the blackfoot river. However as with the use of any biocide, and with a project having such a major impact on the existing aquatic ecosystem it is important to have a well planned ongoing monitoring program to monitor the impact of the piscicide as well as the success and impact of the reintroduction of the native cutthroat on the ongoing health of the stream.
17	E		I support the plan to create a cutthroat trout exclusive zone above the North Fork falls.
18	E		I have had the opportunity to review the Environmental assessment of the North Fork Blackfoot River WCT Conservation Project. I had worked for MTFWP as a project biologist in the project area for a couple of decades. It was always a disappointment to see the proliferation of non-native trout species is such a pristine area. Now with global climate change and hybridization throughout the WCT's range taking a further toll on this native species, we are left with few really good opportunities to do something of benefit for WCT. This conservation project is great news. I fully support this effort to re-establish WCT in this pristine range.
19	E	1	This is a great project. It will establish a population of westslope cutthroat in 67 or more miles of interconnected streams with varied habitat plus 3 lakes. That will form a robust population that should have great persistence. The barrier falls at the downstream end will protect the project area.
		2	It is prudent to restock the project area. It may have historically contained westslope cutthroat. More importantly, in a system this complex it is likely that some hybrid trout will survive and recreate the existing fishery over time. Immediate restocking with multiple year classes of M012 WCT will swamp out the genetics of any hybrids that may survive.
		3	It is great to see a project on a system-level basis. This is a complex area, the draft North Fork Blackfoot WCT Restoration EA and Draft Piscicide Implementation Plan show a great deal of preplan inventory and reconnaissance activity that should ensure success. This will not be an easy project to implement but success will contribute greatly to WCT distribution and persistence.
20	E	1	Subject: Reject proposal to poison the North Fork Blackfoot and its tributaries. Please stop stocking fish in naturally fishless waters in the Scapegoat Wilderness -- Comments on North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project Draft EA
		2	Dear FWP Director Martha Williams and Regional Supervisor Randy Arnold,
		3	I strongly oppose the proposals put forward in the Draft Environmental Assessment for the "North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project" to poison the North Fork Blackfoot and its tributaries. I also strongly oppose stocking fish in naturally fishless waters in the Scapegoat Wilderness
		4	“With regard to areas of wilderness, we should be guardians not gardeners.”--Howard Zahniser, author of the Wilderness Act
		5	A project like this should not occur within any designated Wilderness, let alone the iconic Bob Marshall Wilderness Complex / Scapegoat Wilderness, the first citizen-proposed Wilderness to be designated. Wilderness areas should be protected as Congress intended under the 1964 Wilderness Act, not poisoned and manipulated.
		6	The poison rotenone should never be used in Wilderness. Rotenone kills many species beyond the "undesirable" fish that Montana Fish, Wildlife & Parks (FWP) wants to kill, including macroinvertebrates, amphibians, and any species that utilizes gills in some part of its life cycle.
		7	Please respect federal Wilderness and the ideals that established it by prohibiting FWP helicopters, motorboats, and other motorized equipment out of the Scapegoat Wilderness. It was set aside to be free of the contraptions of modern society.

		8	There is no wilderness benefit from this project, and it does not meet any need for Wilderness protection. In fact, the project is antithetical to Wilderness as a place "where the Earth and its community of life are untrammeled by [humans]." Westslope cutthroat trout--nor any fish for that matter--did not naturally occur in these streams. The FWP should stop all fish stocking in naturally fishless waters and let nature "manage" the area as the Wilderness Act intends. If FWP intends to pursue fish removal, it should consider more wilderness-compatible ways using liberal fishing limits, netting, or other means that don't involve poisons, helicopters, and generators to suppress the population. Creating more angling opportunities is not a legitimate justification for trammeling and manipulating Wilderness.
		9	Please reject the proposal to poison the Scapegoat Wilderness and its lakes, rivers, and streams.
		10	"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."-- Aldo Leopold
		11	Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.
21	E	1	I am writing to voice my concerns regarding the DEA for North Fork Blackfoot River Westside Cutthroat Trout Conservation Project.
		2	It is my opinion that Montana FWP and collaborators should focus on alternative 2 and perform NO ACTION in the discussed watershed.
		3	While it is common practice to poison aquatic habitats so we humans may "manage" them as we see fit, it does not make this action morally or ethically correct - we have already managed the watershed in such a way that has created the current situation you are attempting to fix. Furthermore, to poison a watershed, knowing that you will be unable to reach a 100% kill rate of the invasive species seems to be simply reckless. Even with large stocking events, surviving hybrid populations will still pose a risk to cutthroats in the long term. Additionally, the small strong hold that amphibians (an environmental health indicator species, AND one that has been drastically in decline) may have will be completely shattered with this poison-all approach. The damage created by humans is done and it seems best to allow the situation to play itself out, rather than play tiny gods by throwing poison and farm raised fish into the mix.
		4	Thank you for your time and consideration,
22	Ph		Commenter said he had long history of fishing the North Fork Blackfoot River and had bull trout snatch westslope cutthroat trout he had hooked. He had mentioned this in public comments on the pilot study EA. We discussed his experience fishing the river over several decades, the status of bull trout, the coevolution of bull trout and westslope cutthroat trout, and the high value he places on the North Fork Blackfoot River. His specific comment was that it was a good study and he liked the photos. (He did not specifically offer support or opposition to the project.)
23	E		In the long term I doubt this project will be effective with a one shot poisoning. Therefore I oppose it. Another FWP waste of money.
24	E		FWP needs to stay out of the Scapegoat. They ruined Flathead with mysis shrimp and didn't do the Jewel Basin or Sunburst any good either. Pretty much all of the Kokanee are gone around here. Invasive fish like pike and walleye need controlled before you ruin another fishery. I know of no fisherman that was unhappy with the Sunburst drainage or Jewel Basin fishing. FWP officials should be elected so we can boot them out.
25	E	1	I was a commercial outfitter in the Lincoln Scapegoat for over 50 years. My earliest trips were with the White Tail Ranch, Tom Edwards. At that time Tom had a fishing camp at Meadow Creek Lake (1957). We packed many parties into that area to fish. We built a small dam at the outlet of the East Fork of the Blackfoot River with steel fence posts and chicken wire and dammed the lake up with the mosses from the bottom of the lake. We raised the water a foot and half to two feet. The White Tail Ranch ran the fishing camp through the 50's and 60's. I personally fished that lake many times with guests using log rafts that we built on site. We could float out over the springs that came up from the bottom of the lake and catch many cut-bow trout. Obviously, rainbow were bucketed in from other areas.
		2	I also fished the North Fork above the falls and I had a camp at the crossing just above the Falls and took many guests to fish that stretch of the North Fork and the East Fork. One of my earliest experience on the North Fork above the falls was packing in a geology and survey group that worked for the Northern Pacific Railroad. I established a camp just above the falls on a rocky ledge. The Northern Pacific Railroad was planning to set up a hydroelectric plant at that site, however, the rocks were too rotten and the plan was discarded.
		3	My experience above the Falls on the North Fork and the East Fork of the Blackfoot River has been extensive and I highly support your efforts in bringing that drainage back to native cutthroat like it was in the beginning.

		4	I also have ran a packing school for nearly sixty years and many of the biologists in your various departments have taken the course.
		5	Thank you for allowing me to comment.
26	E	0	Please accept these comments on the North Fork Blackfoot WSCT Restoratiion project. Thank you.
		1	Thank you for the opportunity to comment on the draft environmental analysis (“EA”) for the proposed North Fork Blackfoot Westslope Cutthroat Conservation Project (“Project”). In a number of discussions with FWP staff over the years while representing Montana Trout Unlimited I strongly supported and encouraged the concept of restoring wild populations of genetically unaltered native westslope cutthroat trout above the falls on the North Fork Blackfoot River. The reasons for this support: 1.) to expand the occupied range of genetically unaltered westslope cutthroats in Montana; 2.) to create an additional population in an area that could be buffered from the adverse effects of a warming climate; and, 3.) to reduce actual or potential leakage of hybrid fish into the lower North Fork system, which, it appears, might still harbor genetically unaltered, aboriginal-strain westslope cutthroats.
		2	After reviewing the EA and some of the supporting documentation, I support this project, but with some reservations.
		3	There is one thing I can say without reservation: If the personnel that have planned this project and contributed to the EA are the same personnel responsible for its implementation, the public should feel confident that it will be carried out professionally and that the likelihood of meeting its objectives are high. Some of these folks are among the best fishery professionals in the country when it comes to implementing piscicide projects and restoring native fish populations.
		4	It should be acknowledged, however, that the project’s primary goal: “to minimize non-native genes,” and to remove as many (hybrid) fish as possible in one season while “stocking large numbers” of pure WSCT for the next five years is not necessarily a native fish restoration project. Instead, the project’s goal is to reduce (but not totally eliminate) the presence of non-native rainbow and Yellowstone cutthroat genes in this subbasin of the Blackfoot River drainage. And the tool is genetic swamping, after reducing the number of non-native hybrids in the system.
		5	The EA states throughout that a primary goal of the venture is to reduce the threat of hybrids leaking into the lower North Fork Blackfoot and thereby increasing genetic introgression in the WSCT population that currently occurs there. However, nowhere in the EA or supporting document is there a description of the existing size, demographics and genetics of the WSCT population that currently occurs in the lower North Fork or main Blackfoot River. And thus, it’s not clear if the primary threat to genetically unaltered or nominally genetically altered fish below the falls are hybrids that leak down from above the falls. After all, it appears the fish in the upper reach have been there for a long time but in low abundance. It could be that a larger threat, or at least a very significant threat, are the rainbows and rainbow cutthroat hybrids that already occur in the main Blackfoot or lower North Fork. Certainly, the non- native genetics of the fish above the falls is much more significant than fish below the falls. However, the EA doesn’t address what is known about the reproductive success of the fish above the falls leaking downstream. This might be unknowable, or, something that would be difficult to ascertain.
		6	The point is: Even if this project succeeds in its objective to significantly suppress the existing upstream population, hybridization is still likely to occur in the lower North Fork and main Blackfoot simply because of the existing presence there of rainbow trout and rainbow/WSCT hybrids.
		7	Therefore, the primary goal of this project should be to come as close as possible to eliminating as many of the hybrids in the upper North Fork in order to enable the development of a population of genetically unaltered (or minimally altered after several generations) of WSCT –- with the main purpose being the establishment of a large, well distributed conservation population of WSCT secured within a sizeable and connected watershed with a decent likelihood of being buffered from a changing climate and resilient to stochastic change. In fact, this should be the primary objective FWP cites seeking support for the project from non-anglers and wilderness advocates. Securing refugia for native species is one of the scientific purposes of areas established by the Wilderness Act and this project aids that objective.
		8	I am disappointed that FWP will be depending solely on restocking the area with the MO12 strain of WSCT. There is good reason for this, of course: These fish are available now, abundant and 100 percent WSCT. However, they are not an aboriginal strain of wild fish. It is a manufactured genetic type, combining Clark Fork and Flathead fish. And thus, the project in essence is replacing a non-native fishery with a hatchery generated genetic type, albeit one that usually prospers in the wild. I recognize the urgency in restocking the area after treatment, and the difficulty, expense and time it would take to develop a near-neighbor Blackfoot WSCT stock for reintroduction. However, I worry this could develop into the default for future native fish conservation efforts because it is the easiest path. FWP should clearly state that using MO12s for this project is a one shot deal, and not a direction that would be replicated for other projects that claim to restore native fish.

		9	I urge FWP to evaluate whether it couldn't take a similar path to that it took in the South Fork Flathead, which was to use MO12s for immediate stocking (for recreational purposes and swamping), and then to eventually switch to a near neighbor strain more representative genetically of what occurred within the basin.
		10	The Piscicide Implementation Plan accompanying the EA (Clancey et al 2020) is well thought out, very detailed and includes a lot of important information that should address most public concerns. And that is what should be expected given the talent that developed it. However, it does seem to conflict with the EA in its description of some of the planning regarding using helicopters and stock in the wilderness. Or, at least it's confusing. The EA on page 10 discusses only using helicopters for transporting potassium permanganate, pumps, generators and other equipment to a decontamination site above the North Fork falls. It mentions it would take 10 flights over 2 days to move gear in, and five flights over 2 days to move items out. The piscicide plan, however, discusses additional helicopter use for moving gear, people and camps around the project area, with a potential for up to 140 flights (including for initial fish stocking). It's a little confusing. I suspect this is, or will be, a big topic of discussion with the Forest Service, which must approve the use of helicopters (as well as the use of motors on Parker Lake). FWP should not underestimate how important the concept of minimum tool use is to the Forest Service. If not approached right (with indeed motorized use and access minimized), the project could be stymied by challenges from public organizations concerned with noncomforming uses in wilderness.
		11	Finally, FWP should consider establishing an ad hoc advisory group comprised of different interests concerned with native fish conservation and wilderness management. The group could track the project, and perhaps include fishery professionals, wilderness advocates, anglers, commercial outfitters and so forth. The group could serve in both an advisory capacity and as an ambassador for the project.
		12	Again, thanks for the opportunity to weigh in on this project.
27	E	0	I have attached comments from BBCTU on the Draft Environmental Assessment pertaining to North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. Please contact me if you have any questions.
		1	Thank you for asking the Big Blackfoot Chapter of Trout Unlimited ("BBCTU") to comment on the proposed DEA for establishing a conservation population of westslope cutthroat trout ("WCT") in the upper reaches of the North Fork Blackfoot River ("NFBR"). BBCTU has been restoring and conserving cold water fishery habitat in Montana's Blackfoot River Watershed for over 30 years. We have partnered with local, state, and federal agencies, non-profits, foundations and private landowners to complete over 700 native fish habitat projects in the Blackfoot Watershed. Many of these habitat projects have targeted and benefitted WCT habitat. Based on a science-based habitat restoration priority assessment, the North Fork Blackfoot River has been the focus for many BBCTU habitat restoration projects.
		2	BBCTU supports the DEA's Alternative 1: Proposed Action. BBCTU compliments Montana Fish, Wildlife & Parks ("FWP") on clearly outlining rationale, goals, objectives and cumulative effects of the proposed project. We agree with FWP that the following issues threaten WCT populations throughout Montana:
		3	• WCT conservation populations, those with less than 10% hybridization, remain in only 16% of their historical habitat in Montana.
		4	• Currently, non-hybridized WCT are present in only 11% of their historically occupied habitat.
		5	With regard to specific WCT populations in the NFBR and Blackfoot Watershed, BBCTU agrees with FWP that the proposed project will address the following issues and threats:
		6	• The project area harbors a heavily hybridized population of rainbow trout x Yellowstone cutthroat trout x westslope cutthroat trout, with rainbow trout genes being the dominant proportion of genes in the project area.
		7	• Trout hybrids in the project area are a direct threat to a core population of WCT in the watershed downstream from the project area.
		8	• Establishing a secure conservation population of non-hybridized to slightly hybridized (<10% hybridization) WCT in the NFBR upstream of the barrier falls will conserve and protect WCT populations within the NFBR and larger Blackfoot River Watershed.
		9	• The project area will remain cold, clean and connected into the future and removing heavily hybridized WCT while establishing non-hybridized WCT will help offset declining habitat conditions projected to occur in the coming decades.
		10	BBCTU agrees with FWP that Alternative 1 will have minimal adverse short and long-term impacts on stream-dwelling aquatic invertebrates, Species of Special Concern and Sensitive, Threatened or Endangered Species, amphibians, birds and other animal species. We also agree that the project will have minimal short-term impacts on recreational activities and, conversely, there will be long-term benefits for anglers. BBCTU supports robust and consistent monitoring protocols that will help ensure that project objectives are achieved and verify that project impacts are minimal.

		11	In closing, over the past three decades BBCTU and our partners have invested millions of dollars to restore and conserve native fish habitat in the Blackfoot Watershed. We believe the North Fork Blackfoot River Cutthroat Trout Conservation Project will compliment and protect that significant investment.
		12	Please contact me if you have questions about BBCTU's comments on the DEA.
28a	PM		Thanked the panel for great a presentation. Stated that MWF will be submitting detailed written comments. MWF believes this project has immense value for native species conservation. Appreciates the department's efforts.
28b	E	0	Please see the attached comment letter from Montana Wildlife Federation on the Draft Environmental Assessment for North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. Thank you for the opportunity to comment on this great project and please don't hesitate to reach out if you have any questions.
		1	The Montana Wildlife Federation (MWF) is Montana's oldest and largest sportsmen-wildlife conservation organization. We work to protect Montana's public lands, clean waters, and abundant fish and wildlife for the benefit of the hundreds of thousands of Montanans and people all over the nation who hunt, fish, and value Montana's outdoor heritage. I am pleased to express our support for the Department's proposed action for the North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project.
		2	The North Fork of the Blackfoot River provides pristine habitat for native fish species like bull trout and westslope cutthroat trout. Both of these species require intact and protected habitat, especially bull trout, a threatened species which has the most complex habitat requirements of any cold water fish species in Montana.
		3	Westslope cutthroat trout, a species of concern, have declined throughout their historical range due to interactions with non-native species, habitat degradation, and the loss of thermally suitable habitat due to climate change. Conservation populations of westslope cutthroat trout occur in just 16% of their historical habitat in Montana.
		4	Despite these threats, the North Fork of the Blackfoot River continues to be a stronghold for native fish species. The habitat above the falls on the North Fork provides a unique opportunity to restore westslope cutthroat cutthroat to a place where they will be well protected and supplemental to the population below the falls.
		5	The current population of heavily hybridized trout from the falls upstream are a threat to the genetics of westslope cutthroat trout downstream and the EA also suggests that they are poorly adapted to the habitat they occupy (low fish densities compared to similar backcountry drainages with westslope cutthroat populations). Eliminating this hybridized population by using a rotenone application will protect the future viability of westslope cutthroat both above and below the falls.
		6	Establishing a secure population of westslope cutthroat trout above the falls fits within the Department's memorandum of understanding and conservation agreement for westslope cutthroat trout (2007). The established population would be protected from further hybridization by the falls, an upstream barrier to fish passage. Additionally, the remote location and Wilderness setting of the project area would make it extremely difficult for future illegal fish introductions of non-native species, a major problem for many native fisheries throughout Western Montana. Given declines in historic range and abundance, MWF sees this project as having significant conservation value conservation populations of westslope cutthroat trout.
		7	MWF also appreciates the Department's mention of future opportunities to introduce bull trout to the project area. The habitat above the falls has been identified as highly suitable for bull trout and it would be a significant thermal regime for the ESA listed species that has seen significant declines due to habitat degradation and climate change. Although introduction of bull trout is not being considered as part of the EA, MWF supports bull trout introduction as a desirable future condition for upstream of the falls (mentioned on page 14 of the EA). Additionally, MWF appreciates the Department's consideration of backcountry hunting district seasons by completing the rotenone application by September 15th.
		8	Seeing the potential for protecting native westslope cutthroat trout from ongoing threats to their persistence, the Montana Wildlife Federation fully supports the implementation of the North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. Thank you for the opportunity to comment on the draft EA.
29	E	1	I read with great dismay this plan to poison all of the brookies and rainbow trout and "wrong kind" of cutthroat. I saw this in the Helena paper where I live. There are almost 350 angry people in the emoji area just in our paper. Alot of people don't write comments especially during the distraction during Covid.
		2	I am a gardener, not a biologist with a degree, but I am an environmental activist and did write to tell Beyond Pesticides to make them aware of this project. I also am from a family of five generations of flyfishers who tie their own flies and was raised eating brookies and rainbows and taught by my grandpa. I am 70 now.

		3	To see all of the bad in the world right now, the poisoning of water for any reason when so many organizations are fighting so hard to keep our waters pure and clean for what future we may have left is an absolute travesty. Why do you have to do this now??? And! don't forget during Covid, camping and fishing and dogs and kids swimming is a wide spread activity in our state right now. I immediately had to email my family who recreate in the Spanish Creek area. All kinds of people and animals will be in this water.
		4	Native species are important I know but having tons of dead fish with poison in them floating around and on banks is just one more horrible thing to endure and think of. The planet is dying! Why do people fixate on killing rather than keeping it clean right now?? And a future poison area that has to have helicopters to get it in there?? What is one good reason to terrify wildlife already losing their habitat to fires and greed by mankind? I cannot help but spew out my anger at this! And there are so many areas where you are poisoning the fish I can't even think of all of them to write to.
		5	PLEASE DON'T DO THIS!! It is dangerous for people and pets too, and the wildlife that drink out of these waters. This is a dangerous project. Even Trout Unlimited when I called the guy was so nonchalant. He told me "oh, don't worry they are just using rotenone and it goes away." What a ridiculous argument. Isn't that what they said about Roundup?? It just goes away and now there are thousands of cases of people with cancer. You don't know it is safe.
30	E	0	I have attached my comments on the proposed project to establish a conservation population of westslope cutthroat trout in the upper reaches of the North Fork.
		00	Please include my letter of support for Alternative 1: Proposed Action.
		1	I am writing to provide comments on the proposed DEA for establishing a conservation population of westslope cutthroat trout (“WCT”) in the upper reaches of the North Fork Blackfoot River (“NFBR”).
		2	I am a resident of Missoula County and an avid fly fishing angler. I am an active member of numerous conservation organizations (TU, DU, BHA, TNC, etc.) and I spend a considerable amount of time recreating in the Blackfoot Valley and Bob Marshall Wilderness. I have carefully read the entire DEA and I strongly support Alternative 1: Propose Action. Genetically pure WCT populations are in peril throughout their range in Montana. This project will establish a new conservation population of non-hybridized to slightly hybridized WCT in the North Fork Blackfoot River. As habitat degradation and climate change adversely impact other Montana WCT populations, this project area will remain relatively pristine. I believe this new population will help mitigate adverse environmental impacts elsewhere in the State. I also believe that restoring this WCT conservation population will establish a new stronghold for this iconic native fish.
		3	This project will have minimal long-term impacts on other fish, bird, mammal, reptiles, amphibians and invertebrate species. Recreational opportunities will be enhanced as the WCT conservation population gains a foothold in the upper reaches of the North Fork.
		4	Please contact me if you have questions about my DEA comments and thank you for providing me an opportunity to comment.
31	E	1	Please accept my comments regarding poisoning the N Fork Blackfoot and headwaters lakes. The poisoning itself is a gross manipulation that is not legal or advisable in Wilderness. I am sure those waters are not “barren”, but may well be after you indiscriminately kill much of the aquatic life with Rotenone. The wisdom and ethics of your “playing god” approach to increasing FWP’s cash crop of preferred species by way of a final solution of poison should speak for itself, but apparently is not heard by you.
		2	Please do not impose species manipulation, poison and a barrage of motorized intrusions into Wilderness. It is not legal. It says a lot that this ill conceived project has reached the point that it has.
32	E	1	I appreciate the opportunity to review and comment on the Draft Environmental Assessment for North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project, July 2020 (draft EA). I support the conservation project as proposed in the draft EA, and I hope that the field work will take place in 2021. This project can take advantage of a unique opportunity, involving miles of high-quality westslope cutthroat trout stream habitat (and lakes) protected by a barrier waterfall, to conserve a significant population of westslope cutthroat trout.
		2	A few years ago I enjoyed several days backpacking along the North Fork of the Blackfoot River above North Fork Falls in the Scapegoat Wilderness. Notably, I recall that every fish I caught during that camping trip was a visually-apparent rainbow-cutthroat hybrid.
		3	Looking ahead, after the subject conservation project is successfully completed, I look forward to a backpack trip in the Scapegoat, along the North Fork, when the trout I can fool with a fly are westslope cutthroat trout.
		4	Thank you for your thorough work planning this important conservation effort.

33	E	1	I write to request the Montana FWP and USDA Forest Service cancel a proposal to poison the North Fork Blackfoot, lakes, streams and tributaries to re-establish another illegal Montana FWP for-profit fish hatchery within the Scapegoat Designated Wilderness Area.
		2	Fish and livestock farms are illegal within wilderness and all public owned lands..
		3	The proposal violates Wilderness Act Law in myriad ways to numerous to list here.
		4	Cancel the poison proposal now. It represents a purposeful violation of federal law by those supposedly sworn to uphold the laws of our nation?
		5	Fishless streams support a wide variety of aquatic life that must be protected and valued. Nature made it that way so it is perfect as is.. Therefore I want the Scapegoat designated Wilderness to continue being shaped by nature and allowed to evolve over time through naturally occurring processes and events only, never through or by the hand and scheming of mankind.
		6	The above is a key critical requirement to protecting and preserving desisting wilderness. Meddlers and lawlessness carried out by government authorities must be banned or all is destroyed rapidly to make a fast buck then run and hide.
		7	Fishless streams are not barren, they are teeming with life and must not be poisoned due to their lack of monetary value measured and decided upon by Montana FWP self-serving commercialism and greed on vivid display in the poison proposal itself.
		8	Let designated wilderness be wilderness and nothing but wilderness. It is the law and I will fight like Hell to uphold the letter of the law of the Wilderness Act of 1964.
		9	Thank you for reading this letter and carrying out my important request. Cancel the misguided fish, wildlife and wilderness destroying poisoning proposal now.
34	E		***NOTE: FWP received this same comment (or similarly worded, with the identical email subject title) by email up to 6,078 times. (This represented less than 6,078 persons, as some of those named individuals submitted this comment more than once.) This is what FWP is refers to as the Wilderness Watch "form-letter" type com4ent in the*** **Public Comment** ***portion of the*** **Public Comment Overview** ***section above (page 5).***
		1	Please accept these comments on the Draft EA for the "North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project."
		2	1. This project should not occur within any designated Wilderness, let alone the iconic Bob Marshall Wilderness Complex/ Scapegoat Wilderness, the first citizen-proposed Wilderness to be designated. Wilderness areas should be protected as Congress intended under the 1964 Wilderness Act, not poisoned and manipulated.
		3	2. The poison rotenone should not be used in Wilderness. Rotenone kills many species beyond the "undesirable" fish that FWP wants to kill, including macroinvertebrates, amphibians, and any species that utilizes gills in some part of its life cycle.
		4	3. Keep your helicopters, motorboats, and other motorized equipment out of the Scapegoat Wilderness. It was set aside to be free of the contraptions of modern society. Please respect the Wilderness and the ideals that established it.
		5	4. There is no wilderness benefit from this project, and it does not meet any need for wilderness protection. In fact, the project is antithetical to Wilderness as a place "where the Earth and its community of life are untrammeled by [humans]." Westslope cutthroat trout—nor any fish for that matter—did not naturally occur in these streams. FWP should stop all fish stocking in naturally fishless waters and let nature "manage" the area as the Wilderness Act intends. If FWP intends to pursue fish removal, it should consider more wilderness-compatible ways using liberal fishing limits, netting, or other means that don't involve poisons, helicopters, and generators to suppress the population. Creating more angling opportunities is not a legitimate justification for trammeling and manipulating Wilderness.
		6	Please scrap your plans to poison the Scapegoat Wilderness and its lakes, rivers, and streams.
35	E	1	I hope that you will consider my comments on the Draft EA for the North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project. I live in Hamilton and spend time on the North Fork of the Blackfoot and surrounding area. I am tired of manipulation of these streams as they follow their own natural processes and support their own systems. Why introduce a fish that has never been there? And why poison the rest of the life in the streams to rid them of what were misguidedly added years ago. This is not about fishing. It is about water, clean beautiful water that needs to be left to its own devices.

		2	Leave the Bob Marshall/Scapegoat Wilderness alone. Wilderness is to be left to be Wilderness. So many things happen in ecosystems that we still no little about. There needs to be areas where those processes are left alone and allowed to progress of their own volition. Man does not have to manipulate everything. It seems what he has messed with continues to cause problems and the solutions continue to be meddling. After over 100 years of this, maybe we could learn the lesson and leave things alone. We would learn more from nature if we sat back and observed. Adding poison to Wilderness goes against the grain of all things human and the 1964 Wilderness Act.
		3	Retenone should not be used anywhere. We come up with these poisons to solve a problem but rarely consider the collateral damage they cause. The North Fork is filled with natural non-fish communities that are working away in that river to make it the beautiful, healthy place that it is. I know you want to get rid of your own mistakes, but what is done is done. See what nature does to correct the situation or learn to live with it. Maybe we should start learning from nature and adapt to new situations rather than control them.
		4	And for hundreds of years, man was able to connect and work within Wilderness areas without machines, helicopters, motorboats, and all other mechanized contraptions. This should continue. Hire some people who are willing to sweat a bit and do what is best for the Wilderness quality. That is your mission. Protect that quality at all costs. Do not use machines motorized or mechanized to work in Wilderness. I use a cross cut saw, it is great exercise as are many of the sturdy man powered tools of the past.
		5	This project is exactly the opposite of preserving Wilderness. You are misreading your mission. If you really want to reduce non-native fish, increase fishing limits or use netting or other means to remove the fish that do not use mechanization, poison and generators. Generators? Seriously? Are we so pitiful that we cannot get along without electricity in the backcountry? You should rethink your hiring requirements and hire some folks that are comfortable in the outdoors.
		6	Leave Wilderness alone, or use non-motorized, non-mechanized, non-man-made poison solutions. We have so little Wilderness, it should be preserved and protected not manipulated.
		7	I am glad that you are worried about the health of ecosystems, but you are misguided in this endeavor. Please scrap this project and rethink it.
		8	I would consider new funding mechanisms so that you are not ruled by hunters and fishermen. They are not the only ones who use our public lands. We should all share in their support and share in the decision-making process from its inception.
		9	Thanks so much for your consideration of these comments.
36	E	1	Please see below my comments on the Draft EA for the North Fork Blackfoot River Westslope Cutthroat Trout Conservation Project .
		2	The North Fork of the Blackfoot River is my favorite river in Montana. I have spent countless days over the past 40 years backpacking, kayaking, and fishing it, and I am concerned that your large-scale experiment poisoning 70 miles of its headwaters will have significant detrimental and unforeseen ecological effects on this special area. If the project area has the “wrong” type of fish, it is only because you put them there. Usually when man tries to correct his past mistakes, he makes new mistakes, and the environment suffers. Obviously, nature has adapted to your past mistakes: leave it alone now. This is designated Wilderness, and is to be protected as “untrammeled by man”. That you have trammeled it in the past does not give you reason to further trammel it.
		3	You dropped alternatives that would be less impactful and potentially have similar benefits. For example, you play God by favoring westslope cutthroat over bull trout. Introducing bull trout would be less impactful and potentially help a threatened species that is already present in the lower reaches of the NFBR. Genetic swamping using westslope cutthroat could also provide benefits and would have less significant ecological effects. And if they are better adapted than hybrids to the conditions, wouldn’t evolution eventually favor their genes, which appears to be the goal of the project? And if you are so concerned about the westslope cutthroat, why not spend your efforts protecting habitat that currently hosts populations by preventing road building and logging or by buying up irrigation rights and returning that water to the rivers?
		4	This project should not occur within a designated Wilderness. Wilderness areas should be protected as Congress intended as “untrammeled by man”, not poisoned and manipulated by man.
		5	The poison rotenone should not be used in Wilderness. Rotenone kills many species beyond the “undesirable” fish that FWP wants to kill (and who put them there in the first place), including macroinvertebrates, amphibians, and any species that utilizes gills in some part of its life cycle.
		6	Keep your helicopters, motorboats, and other motorized equipment out of the Scapegoat Wilderness. It was set aside to be free of the contraptions of modern society. Please respect the Wilderness and the ideals that established it.
		7	There is no wilderness benefit from this project, and it does not meet any need for wilderness protection. In fact, the project appears to be driven by the desire to create a westslope cutthroat fishery to benefit anglers.

		8	Please scrap this ill-conceived experiment in one of our few remaining pristine areas.
37	E	1	The following comments on the North Fork Blackfoot River Native Fish Restoration Project come from Wilderness Watch, a national wilderness conservation organization. Wilderness watch's headquarters is located in Missoula, with additional staff offices in Idaho and Minnesota. Our mission is to protect the wilderness character of all units of the National Wilderness Preservation System, including the Scapegoat Wilderness. While Wilderness Watch appreciates the concern for long-term viability of Westslope cutthroat trout expressed by this proposal, however we believe the project as proposed is contrary to the letter and spirit of the Wilderness Act and would do nothing to protect Westslope cutthroat. The size of the project is also unprecedented in Wilderness.
		2	While our comments are directed at the Montana FWP EA, a copy is being sent to the Forest Service since it is that agency that must approve, modify, or reject the proposal from the State of Montana. Montana is no responsible for administering the Scapegoat Wilderness. We do address Wilderness in this comment even though it is not the purview of the state because it appears the Forest Service may rely on comments submitted during this process.[Footnote 1] Nonetheless, we reserve the right to submit additional comments to the Forest Service on this proposal.
		3	[Footnote] 1. The EA states on page 5, "The proposed project area is in the Scapegoat Wilderness. The USFS will evaluate the potential for the project to affect wilderness values in their scoping effort, which will run concurrently with the public comment period of this EA." However, nowhere in the SOPAs for the past year for the Helena-Lewis and Clark National Forest or the Lolo National Forest is this project mentioned. It is not found on either of the two national forests' project web pages in the Under Analysis section. Given the online meeting, it appears to us the Forest Service is abdicating its duty to the American public. Moreover, 36 C.F.R. section 220.4(e)(1): **"Scoping is required for all Forest Service proposed actions, including those that would appear to be categorically excluded from further analysis and documentation in an EA or an EIS (220.6)."** (Emphasis added). The scoping process needs to involve the public, pursuant to 40 C.F.R. part 1501.7(a)(1): "As part of the scoping process the lead agency shall...[i]nvite the participation of affected Federal, State, and local agencies, any affected Indian tribe, the proponent of the action, **and other interested persons (including those who might not be in accord with the action on environmental grounds)**..." (Emphasis added). Wilderness is listed as potential extraordinary circumstances. It is particularly applicable in this case as motorized equipment and transport is proposed.
		4	**Background**
		5	As a result of the online meeting, we understand that the Forest Service would only prepare a cursory CE, We don't know if it would include public involvement. While this comment period is for the state MEPA process, the Forest Service cannot abdicate its duties to the American public in the administration of Wilderness to the State. Regardless of the expertise of Montana FWP in wildlife, it is not accountable to all US citizens and FWP does not have expertise in wilderness administration. As such, we question the applicability of the legitimacy of the MRDG and the analysis in the EA of Wilderness, both apparently prepared by FWP.
		6	**Wilderness Act**
		7	Congress defined "Wilderness" as follows:
		8	A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.
		9	16 U.S.C. § 1131(c). Congress stated that Wilderness areas "shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness …." *Id*. § 1131(a). Accordingly, "…each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such areas for such other purposes for which it may have been established as also to preserve its wilderness character." *Id*. § 1133(b). Congress and the federal courts have made clear that the goal of advancing recreation and research in wilderness, while allowable and encouraged, cannot trump the overriding statutory purpose to preserve wilderness character. *See id.* §§ 1131(a), (c), 1133(b)-(c); *High Sierra Hikers v. Blackwell*, 390 F.3d 630, 647 (9th Cir. 2004) (affirming that, under the Wilderness Act, the Forest Service may not "elevate[] recreational activity over the long-term preservation of the wilderness character of the land"). Consistent with these statutory mandates, the Forest Service's implementing regulations dictate that in wilderness, "[n]atural ecological succession will be allowed to operate freely to the extent feasible." 36 C.F.R. § 293.2(a).

10	Since the Forest Service did not prepare the EA, there is no analysis of impacts to Wilderness or wilderness character. In fact, the EA states as much, "The proposed project area is in the Scapegoat Wilderness. The USFS will evaluate the potential for the project to affect wilderness values in their scoping effort, which will run concurrently with the public comment period of this EA." EA at 5.
11	Aside from a draft minimum requirements decision guide (MRDG), of presumably FWP authorship, which is not a NEPA document and cannot be substituted for NEPA compliance for the Forest Service, the EA is largely silent. It does admit, "The modest gains in fish mortality when eradication is not the goal does not justify the expense, effort, and repeated disturbance in designated wilderness resulting from additional years of treatment." EA at 12. This is puzzling as the neither the EA nor the MRDG fully analyzes other methods of fishing removal. Rather, they are dismissed as ineffective or even causing more harm to Wilderness.[Footnote 2]
12	[Footnote] 2. The EA alleges that trammeling would be increased under mechanical removal, which presumably does not call for helicopters. EA at 13. However, the citation (Endicott 2017) is also the main author of this EA, an employee of FWP. FWP has no responsibility over wilderness administration.
13	Helicopter and motorized equipment use in the Wilderness is prohibited under the Wilderness Act "except as necessary to meet minimum requirements for the administration of the area" as wilderness. 16 U.S.C. § 1133(c); *see also* 36 C.F.R. § 261.18(c) (Forest Service regulations prohibiting "[l]anding of aircraft, or dropping or picking up of any material, supplies, or person by means of aircraft, including a helicopter" in National Forest Wilderness); 36 C.F.R. § 293.6 (prohibiting "mechanical transport," "landing of aircraft," and "dropping of materials, supplies, or persons from aircraft" in wilderness except as provided by Wilderness Act). Consistent with the Wilderness Act and its implementing regulations, the Forest Service's management direction makes clear "Wildlife and fish management programs shall be consistent with wilderness values," FSM 2323.32(3), and the Forest Service is directed to "[d]iscourage measures for direct control (other than normal harvest) of wildlife and fish populations," FSM 2323.32(4), and "[p]rovide an environment where the forces of natural selection and survival rather than human actions determine which and what numbers of wildlife species will exist," FSM 2323.31(1). If the Forest Service could approve helicopter-assisted management any time the state agency requests it, the statutory prohibition against helicopter use would be meaningless.
14	Accordingly, under the Wilderness Act, the Forest Service may only approve the use of helicopters and motorized equipment and poisoning of fish in the Scapegoat Wilderness if the Forest Service rationally demonstrates that it is necessary to meet minimum requirements for administration of the area (singular) for the purpose of the Wilderness Act, and there is no alternative to otherwise-prohibited uses that would achieve that purpose. *See* 16 U.S.C. § 1133(c). There is no wilderness purpose for this action as we discuss later in this comment.
15	The Wilderness Act contains a "narrow" exception authorizing helicopter use only where necessary to "further the wilderness character of the area." *Wolf Recovery Found.*, 692 F. Supp. 2d 1264, 1267-68 (D. Id. 2010) (quotation omitted). This exception permits otherwiseprohibited activities only in the "most rare of circumstances." *Id.* at 1268. Similarly, this circumstance, particularly in combination with other factors, raises substantial questions over the significance of the proposed action's direct, indirect, and cumulative impacts to wilderness. *See Wilderness Watch v. Vilsack*, No. 4:16-cv-12-BLW, at 17 (D. Id. Jan. 18, 2017) (finding 40 C.F.R. § 1508.27(b)(3) "is triggered because the project took place in the Wilderness Area.").
16	Aside from using prohibited means, this action would extensively trammel Wilderness. Howard Zahniser, drafter of the Wilderness Act, stated that "[a] wilderness is an area where the earth and its community of life are untrammeled by man. (Untrammeled – not untrampled – untrammeled, meaning free, unbound, unhampered, unchecked, having the freedom of the wilderness.)." While the Montana FWP is claiming this is necessary, "[t]hese threats do not justify further interventions into the natural processes within wilderness areas. These projects, whose purposes are to restore (or redirect) natural processes through the exercise of human agency, are precisely the intrusions of human culture that the Wilderness Act meant to exclude from these special places."[Footnote 3] This mandate is reflected in the epigram written by Howard Zahniser*, "*With regard to areas of wilderness, we should be guardians not gardeners."
17	[Footnote] 3. See attached, Sean Kammer, *Coming to Terms with Wilderness: The Wilderness Act and the Problem of Wildlife Restoration*, 43 Environmental Law 83, 86 (2013).
18	This fundamental tenet of wilderness stewardship was reiterated in a program review initiated by the four federal agencies and conducted by the Pinchot Institute for Conservation in 2001. The purpose of the study was to examine the critical management issues facing Wilderness. One of the eight "fundamental principles" for stewardship emphasized the need to preserve the wildness in Wilderness. As the Pinchot report stated, "Protection of the natural wild, where nature is not controlled, is critical in ensuring that a place is wilderness….Since wild is a fundamental characteristic of wilderness that is not attainable elsewhere, if there is a choice between emphasizing naturalness and wildness, stewards should err on the side of wildness." [Footnote 4] In *Keeping It Wild 2: An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System, Landres et al. 2015. RMRSGTR-340 [Footnote 5]* has this to say about untrammeled:

19	To preserve the Untrammeled Quality of wilderness, managers need to exercise restraint when authorizing actions that manipulate any aspect of the wilderness—in general actions that trammel should be avoided as an essential principle of wilderness stewardship unless it can be shown that these actions are necessary to preserve wilderness character as a whole (Kaye 2014).
20	[Footnote] 4. See attached Pinchot Report.
21	[Footnote] 5. While we have serious concerns with this protocol, see attached critique (Cole et al. 2015), it does recognize that trammeling negatively affects Wilderness. Our comments expand upon this concern.
22	Landres et al. 2015 at 34. It is hard to conceive of trammeling actions that would be necessary for this purpose. The Strategy cited above and its associated *Monitoring Selected Conditions Related to Wilderness Character: A National Framework. Landres, et al. 2005. RMRS-GTR-151* cite two of the Forest Service's preeminent wilderness researchers in describing how the untrammeled quality of Wilderness affects management. Cole (2000) in Framework states that untrammeled "suggests more about the *process* of management than it does about the *outcomes* of management." (Emphasis added). The Strategy paper states,
23	Lucas (1973, p. 151) stated, "If ecological processes operate essentially uncontrolled within the Wilderness frame of reference, the results, whatever they might be, are desirable by definition. The object is not to stop change, nor to recreate conditions as of some arbitrary historical date, nor to strive for favorable change in big game populations or in scenic vistas. The object is to let nature 'roll the dice' and accept the results with interest and scientific curiosity."
24	Landres et al. 2015 at 33. The proposed action is not consistent with these mandates for the reasons explained below.
25	**EA and MRDG Failings**
26	There is no good evidence that fish inhabited the area above the falls. The EA tries to shoehorn the idea that fish may have been there on page 4, but there is no hard evidence. The EA states this is "in part because extensive fish stocking has obscured genetic traces of preexisting *Oncorhynchus* fisheries (Pierce et al. 2018)." Such a conclusion, that stocking has obscured genetic traces, is biased because it presupposes that fish were indeed present prior to stocking. The lack of replicable genetic data suggests the opposite, especially given the advances in DNA detection technology. Since the one instance (supposedly) of Westslope cutthroat genetics from above the falls in Cooney Creek can't be replicated, it would appear that is more likely the result of a testing error or stocking of fish that had Westslope cutthroat genes in the relatively recent past rather than evidence of Westslope cutthroat in the area prior to the first fish stocking that took place.
27	The apparent absence of any other fish species also suggests a historically fishless area above the falls. There is no reference to sculpins or whitefish in the EA. Sculpins (see http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AFC4E02080 which describes a species that could be present in the area) and whitefish (see http://fieldguide.mt.gov/speciesDetail.aspx?elcode=AFCHA03060) both inhabit cold clear streams. It would stand to reason if Westslope cutthroat were found above the falls because of connectivity with other subbasins in the North Fork or adjacent basins of the Blackfoot during "climatic or hydrologic events" (EA at 4), then other fish species like white or sculpin would also be present.
28	Indeed, many of the headwater streams in and around the Bob Marshall Wilderness Complex (the South Fork Flathead is a notable exception) were considered fishless as evidenced by MFWP's own mapping of native trout historic range at during the online meeting. The claims that other falls exist in adjacent tributaries ignore the fact that the North Fork Falls is particularly high. The fact that no good evidence exists that the area contained fish should be reason enough for the Forest Service (at least) to deny this proposal. There is no Wilderness purpose, unlike what the MRDG tries to claim. It is not restoring natural conditions, which is a dubious endeavor anyway in Wilderness when it involves trammeling.[Footnote 6] As noted above, Wilderness experts have explained Wilderness is about process not end points.
29	[Footnote] 6. See also *Californians for Alternatives v. U.S. Fish & Wildlife Serv.,* 814 F. Supp. 2d 992 (E.D. Cal. 2011)**.**
30	The claim that this action will benefit the pure Westslope cutthroat in the Wilderness below the falls (a short section of the main stem and any tributaries that are fish bearing are within the Wilderness), and therefore would be necessary, is also dubious for two reasons. The unprecedented size of this proposal would poison 67 miles of wilderness streams and three lakes. That trammeling action alone is far greater than the short segment of the North Fork within the Wilderness.[Footnote 7] Further, and even more important, the stream reaches below the falls are not distant from genetically *impure* fish that reside further below in the drainage. These fish could just as easily come up from the lower North Fork (or from the Main Blackfoot and then up the North Fork) versus other *impure* fish surviving the long drops over the falls. In fact, the MRDG recognizes a "potential upstream expansion of downstream rainbow trout" which it tries to twist into a reason to have a Westslope cutthroat population above the falls in spite of the fact there is no good evidence they existed there prior to stocking. The EA admits there has been decades with non-native fish above the falls (and there are rainbows and other fish in the Blackfoot River system below). Why haven't those fish above the falls (and those below as well) already affected the supposedly purer WCT populations below the falls by now?

31	[Footnote] 7. Dry Fork of the North Fork is indeed dry during portions of the year in its lowest reach before the confluence with the North Fork. It is not part of the treatment area.
32	Thus, the EA and MRDG want it both ways. FWP claims the area above the falls has to be cleared of fish, trammeling the Scapegoat Wilderness, even though the real threat to the purer strain of Westslope cutthroat fish in the North Fork below the falls is from further downstream and outside the Wilderness. FWP also claims it is important to put Westslope cutthroat above the falls for a refugia, even though no good evidence exists they were ever found there. This is simple sophistry masquerading as analysis.
33	The purpose and need section does not articulate a defensible wilderness-based need for fish poisoning followed by fish stocking and does not indicate how artificial fish stocking is necessary to administer the Scapegoat Wilderness "so as to preserve its natural conditions" and maintain the wilderness as "an area where the earth and its community of life are untrammeled by man." 16 U.S.C. § 1131(c). Indeed, it would be incredibly difficult to articulate a need for artificial fish stocking in wilderness streams that were historically fishless. *See* "Non-Native Trout in Natural Lakes of the Sierra Nevada: An Analysis of Their Distribution and Impacts on Native Aquatic Biota" (noting that "trout stocking serves to maintain an artificial fishery that has substantial impacts on native aquatic biota" and that stocking is necessarily at odds with wilderness, "areas managed for their natural values"); *see also* "Non-Native Fish Introductions and the Reversibility of Amphibian Declines in the Sierra Nevada" (Forest Service publication noting that the introduction of non-native trout into naturally fishless lake ecosystems is a major cause of decline in certain amphibians). Both studies, by Knapp, are attached. It should also be noted, the goal of this project is not to return this area to a fishless state, which was the likely condition prior to stocking.
34	Active stocking and manipulation of fish populations in historically fishless streams is directly at odds with the Forest Service's management guidance. *See* FSM 2323.31 ("Provide an environment where the forces of natural selection and survival rather than human actions determine which and what numbers of wildlife species will exist."); *see also* FSM 2320.2 ("Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces."). Given the clear inconsistency with Wilderness Act mandates and the Forest Service's management guidance, the artificial fish-stocking component of the proposed action cannot be authorized.
35	The EA indicates that the hybrids, which have a predominant contribution of genes from rainbow trout, are poorly suited to the cold waters in the project area, resulting in low densities and poor angling opportunities. Poor angling opportunity is not a legitimate reason to poison wilderness streams. Further, the low density of these fish may be an indication of a historically fishless (or troutless) subbasin rather than poorly adapted stocked fish populations that have nonetheless survived for nearly 100 years.
36	The amount of helicopter use is not clear. The MRDG for the reduced mechanized use alternative clearly states there would be 59 flights for this project. MRDG at 36. However, adding up the flights later in the MRDG do not add up to that number. There would be 20 flights for activation (MRDG at 37), one day and an unknown number of flights that might be combined with short-term stocking for deactivation (MRDG 42), 40 flights for short-term stocking (Ibid.), and 7 for long-term stocking (MRDG at 43). Assuming all the flights for deactivation are also for stocking, the number is 67, not 59.
37	The EA is equally unclear. It states the task "could be accomplished with about 10 flights in and out of the wilderness over a maximum of 2 days, and 5 flights over a maximum of 2 days to remove gear after the project has been completed." EA at 10. See also EA at 27. This raises two questions. Are in and out counted as one or two flight in the MRDG? If not, then there is an inconsistency. Why does the MRDG state it would take only one day for deactivation and the EA two days? The EA concurs it would take 7 flights for long-term stocking (EA at 11), but then confuses the issue by stating in the initial phases, "helicopters would be needed for up to 7 days, with up to 20 flights in a single day. This includes the stocking of trout in the first year, which would require trout (sic?) up to 30 flights and would occur over a maximum of three days." Aside from the 30 and 40 short-term stocking flights being inconsistent between the MRDG and the EA, the EA could have as many as 110 to 140 flights over the course of 7 days.
38	In an effort to mislead a reader into thinking this action might actually be compatible with Wilderness, the MRDG alleges that helicopters are more in keeping with Wilderness than are impacts from pack stock use. For example, the MRDG suggests that helicopter use rather than stock will have fewer impacts on wilderness attributes "By fitting this mobilization into 2 days of helicopter time we will reduce the duration of the impact to Wilderness visitors' opportunity for solitude by reducing the number of pack stock that would need to use the trail network that is already very popular during the summer season." MRDG at 58. See also MRDG at 42 and at 56. Packstrings are compatible with Wilderness; helicopters are not. [Footnote 8]
39	[Footnote] 8. Even though the EA states it is not analyzing impacts to wilderness (EA at 5) it refers to a document (Endicott 2017), prepared by the author of the EA, in what appears to be a backdoor attempt to do wilderness analysis (EA at 13). That document is a publication of the Montana Fish Wildlife and Parks, which has no wilderness administration responsibility. That document is interesting not just in the mistakes it makes, but that it does admit to serious impacts from poisoning. For example, it erroneously conflates the impacts of helicopters and horses and backpacks by failing to recognize backpacks and horses are not incompatible with Wilderness:

40	Transportation of gear into remote areas also has potential to alter wilderness character, increase the human imprint, and diminish the visitor's enjoyment of the peace and tranquility. Personal gear, provisions, and field gear are transported by backpack, horse train, or helicopter. Each mode is a disturbance that increases human presence, causes noise, and results in conditions that may affect enjoyment of wilderness.
41	[portion of this sentence or paragraph missing from comment letter?] Endicott at 14. Yet, it does recognize, "[r]emoval of woody debris" as a serious problem (Ibid.). Ironically, the breaching of beaver dams, similar to removal of woody debris, is considered inconsequential in the EA because it is assumed beavers would rebuild the dams. In the case of old dams no longer occupied, this would not be the case. [end of Footnote 8]
42	The proposal also includes trammeling by breaching beaver dams to get better poison distribution. The assumption is beavers will rebuild the dams. However, that assumes that each dam is connected to an active beaver colony rather than an old dam that has been left after the beavers moved out. Thus, this would be a far greater impact that characterized.
43	Size and complexity of the proposal almost guarantees failure. The literature cited in the EA and the EA itself note that the habitat complexity make it impossible to have a complete kill of fish. If the desired percentages of genetic purity are not met, then what?
44	Rotenone is a poison that kills all organisms that utilize gills during part of their life cycle. These organisms include not only the targeted non-native fish, but amphibians, macroinvertebrates, and other non-target organisms that use gills. See Erman 2012, Dalu et al. 2015, and Mangum and Madrigal 1999.
45	In particular, it is important to note the EA cites to Finlayson et al. 2010 in looking at impacts from rotenone. Erman 2012 states, "The study by Finlayson et al. (2010) had serious methodological problems in toxicity testing and analysis that render their conclusions suspect or incorrect." The Montana Chapter of the Wildlife Society cites other studies relating to rotenone dealing with an amphibian known to inhabit the area, the Rocky Mountain tailed frog. In Montana all amphibian larvae as well as tailed frog (*Ascaphus truei*) adults … either use some sort of aquatic respiration or may be unlikely to exit treated water bodies depending on the time of day and presence/absence of humans (Daugherty and Sheldon 1982 and Ernst et al. 1994). Thus, all of these species are likely to suffer mortality through the application of piscicides." Joslin, G., and H. Youmans, coordinators 1999 at 2.7. The EA also tries to evade the real possibility it may drastically and negatively affect species in one genus:
46	Posttreatment monitoring would assess the status of *Utacapnia* in Sourdough Creek; however, interpretation of monitoring results should consider the species rarity (Newell et al. 2008) and the natural variability of species presence in samples (Vinson et al. 2010). Rare species may be absent from samples but still present in streams. Although winter stoneflies have reduced dispersal capability compared to other species of aquatic invertebrate, the broad geographic range of the Columbian stonefly (Dosdall and Giberson 2014) indicates they can disperse from other streams.
47	[portion of this sentence or paragraph missing from comment letter?] EA at 24. The research we have cited on the negative impacts of rotenone are applicable here.[Footnote 9] At the very least, there is scientific controversy over the effects of rotenone on macroinvertebrates and amphibians. This scientific controversy needs to be honestly and directly addressed. The EA downplays impacts because it is written from a fisheries-centric perspective. For example, see the EA at 20 and 21. Regardless, chemicals like rotenone and potassium permanganate would bring a significant trammeling to the wilderness character of three lakes and 67 miles of streams in violation of the basic tenants of the 1964 Wilderness Act (16 U.S.C. 1131-1136).
48	[Footnote] 9 Further, one of the advocates of rotenone use cited in the EA, either a current or former employee of FWP, is the lead author of a study that states, "Macroinvertebrates sampled within the detoxification area experienced similar, but greater, effects from the potassium permanganate than individuals within the treatment area that were exposed to rotenone." Skaar et al 2017. The EA is largely devoid of analysis of the negative impacts of sodium permanganate.
49	The safety measures required in the EA suggest rotenone is not as benign as the EA leads one to believe. For example, the EA states, "Likewise, as detailed in the assessment on effects on wildlife and fish, rotenone-treated water would not pose a health risk to horses and mules drinking from streams. Stock owned by the outfitters contracted to assist with the project would not be allowed to drink from any surface water on the day of it being treated." If stock are not allowed to drink from water treated that day and humans need to wear safety gear, why are the impacts to wildlife considered nil?
50	**National Environmental Policy Act Background**
51	NEPA directs federal agencies to prepare a detailed Environmental Impact Statement ("EIS") for federal actions that may significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C). The phrase "human environment" is "interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment." 40 C.F.R. § 1508.14. The purpose of an EIS is two-fold: 1) to ensure that the agency will have available and will carefully consider detailed information on significant environmental impacts when it makes decisions, and 2) to "guarantee that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Robertson v. Methow Valley Citizens*, 490 U.S. 332, 349 (1989); 40 C.F.S. § 1501.2(b).

52	**1. An Environmental Impact Statement is required.**
53	Pursuant to NEPA's implementing regulations, to determine whether an EIS is required, federal agencies may first prepare a less detailed environmental assessment. *See* 40 C.F.R. § 1501.4. An environmental assessment should consider several factors to determine if an action will significantly affect the environment, a circumstance that would mandate the preparation of an EIS. 40 C.F.R. § 1508.27. If the agency concludes the action will not significantly affect the environment, it must issue a FONSI to justify its decision not to prepare an EIS. 40 C.F.R. § 1508.13. The FONSI must provide a convincing statement of reasons why the action will not have a significant effect on the environment. *Id*. It is *only* when the proposed action will not have a significant effect on the environment that an EIS is not required. 40 C.F.R. § 1508.13.
54	The proposed action poses significant direct, indirect, and cumulative impacts to the environment and to wilderness character. Because the proposed action has the potential to significantly affect a designated wilderness and anticipates a precedent for future connected authorizations, with attendant cumulative impacts (including future poisoning and stocking actions in the watershed), it will result in cumulatively significant impacts, and result in a violation federal law (including the Wilderness Act). A full environmental impact statement should be prepared. See 40 C.F.R. § 1508.27.
55	It should be noted that in the case of the Carson-Iceberg Wilderness in California, an EIS was prepared to analyze the impacts of rotenone use due to a court ruling in 2005. When an EIS was prepared, the US District Court found that the EIS was inadequate and that it failed to follow the Wilderness Act. *Californians for Alternatives v. U.S. Fish & Wildlife Serv.,* 814 F. Supp. 2d 992 (E.D. Cal. 2011)**.**
56	**2. The Forest Service must take a hard look at and disclose the direct, indirect, and cumulative impacts of the project.**
57	NEPA requires the Forest Service to take a hard look at the direct, indirect and cumulative impacts of the project. Under NEPA, the direct impacts of an action must be analyzed based on the affected interests, the affected region, and the locality in which they will occur. 40 C.F.R. § 1508.27(a). Indirect effects of a proposed action are effects that are caused by the action but occur later in time or are further removed in distance. 40 C.F.R. § 1508(b). Cumulative impacts are "the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Cumulative impacts can result from "individually minor but collectively significant actions taking place over a period of time" and are "the impacts on the environment which result from the incremental impact of the action when added to other *past*, present, and *reasonably foreseeable future* actions regardless of what agency (Federal or non- Federal) or person undertakes such other actions." *Id*. (emphasis added).
58	For the proposed action, the Forest Service needs to disclose and analyze the full extent of the fish poisoning and stocking proposal, especially on Wilderness. What are the cumulative impacts of such a stocking program where the streams were historically fishless?
59	**Conclusion and Summary of Recommendation**
60	As it currently stands, this proposal is fatally flawed and should be scrapped. If this goes forward, Wilderness Watch strongly urges that Montana FWP and Forest Service perform comprehensive EISs that take a hard look at the direct, indirect, and cumulative impacts of this proposal. Then the agencies and the public will be able to make better-informed decisions about this project.
61	Please keep Wilderness Watch informed about this project. We request that you send us copies of decisions and future documents and keep us updated about any additional steps in this project.
62	**Literature Cited**
	[Note: Copies of the following citation documents were included with the Wilderness Watch comment letter. A copy of the Pinchot citation (see Footnote 4, paragraph 37.20 above) was also included; it is not in the citations listed below.]
63	Cole, et al. 2015. *The Definition of Wilderness Character in "Keeping It Wild" Jeopardizes the Wildness of Wilderness*
64	Dalu T., Wasserman R.J., Jordaan M., Froneman W.P., and Weyl OLF. 2015. *An Assessment of the Effect of Rotenone on Selected Non-Target Aquatic Fauna.* PLoS ONE 10(11): e0142140. doi:10.1371/journal.pone.0142140.)
65	Erman, Don C. 2012. *Comment: Rotenone Toxicity to Rainbow Trout and Several Mountain Stream Insects.* North American Journal of Fisheries Management, 32:1, 53-59
66	Joslin, G., and H. Youmans, coordinators. 1999. *Effects of recreation on Rocky Mountain wildlife: A Review for Montana.* Committee on Effects of Recreation on Wildlife, Montana Chapter of The Wildlife Society. 307pp.
67	Kammer, S. 2013. *Coming to Terms with Wilderness: The Wilderness Act and the Problem of Wildlife Restoration*, 43 Environmental Law 83, 86 (2013).

		68	Knapp, Roland J. 2004. Non-Native Trout in Natural Lakes of the Sierra Nevada: An Analysis of Their Distribution and Impacts on Native Aquatic Biota in USDA Forest Servcie Gen. Tech. Rep. PSW-GTR-193.
		69	Knapp, Roland J. 2004. Non-Native Fish Introductions and the Reversibility of Amphibian Declines in the Sierra Nevada" (Forest Service publication noting that the introduction of nonnative trout into naturally fishless lake ecosystems is a major cause of decline in certain amphibians).
		70	Landres, et al. 2005. *Monitoring Selected Conditions Related to Wilderness Character: A National Framework. RMRS-GTR-151*
		71	Landres et al. 2015. *Keeping It Wild 2: An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System. RMRS-GTR-340*
		72	Mangum, F.A. and Madrigal, JL. 1999. *Rotenone effects on aquatic macroinvertebrates of the Strawberry River, Utah: a five year summary.* Journal of Freshwater Ecology 14:125-135.
38	Ph		He said he was with Wilderness Watch. He stated it [FWP project] was bad policy, bad ecologically, bad politically and bad economically and was opposed to the entire plan.
39a	E		Would the proposed native fish restoration project in the upper North Fork Blackfoot involve the use of helicopters or any other mechanized equipment in designated Wilderness?
39b	E		thanks for your reply, but I'm disappointed to receive it after the public comment period ended. Do you know whether the Forest Service is preparing a NEPA document for authorizing MDFWP to use mechanized equipment in designated Wilderness?

[a] Commenter #34 is the form-letter comment generated by Wilderness Watch.