SFFW-001

JUN 30 2004

Spiering, Colleen A - KEC-4

From: Barbara Burns [sti4466@blackfoot.net]
Sent: Wednesday, June 23, 2004 1:42 PM
To: Spiering, Colleen A - KEC-4
Subject: fish kill

Please consider this as our comment to the proposed project.

Thank you,

Barb

www.wildernessranch.com

6/24/2004

January 20, 2003

To Whom It May Concern:

We have been made aware of a devastating situation that is planned to be implemented in the Bob Marshall Wilderness. This plan calls for the poisoning of certain lakes totally killing all of the fish in these lakes in the Bob Marshall Wilderness. The lakes in question are in our main camp area. We have operated in this area for thirty years and probably know more about the fish in these lakes than anyone associated with this ridiculous plan. These lakes have provided unequalled fishing to our guests and all others that have fished them. 1.1

We feel that this plan goes against all that is held sacred in a wilderness area. Wilderness areas were established in order to hold those areas in a pristine state without interference from human beings. We believe the "Wilderness Act" should be respected and these areas should not be tampered with. 1.2

The logic behind this plan is to obtain a genetically pure strain westslope cutthroat trout. The present fish in these lakes are thriving, healthy fish. Fishing for these "exotic" fish is excellent. Why should anyone be allowed to tamper with these healthy fish in order to obtain a genetically pure strain of fish? Isn't this what Hitler had in mind? 1.3

The plan also flirts with the use of helicopters to carry out the fish kill and poison the lakes. Helicopters are only to be used in the "wilderness" for emergency reasons. Is this an emergency? 1.4

If anything at all were proposed to eliminate the thriving, healthy fish in these lakes, saturation of the lakes with westslope cutthroats would be the most viable answer. But again, why kill healthy, viable fish for only genetic reasons. We believe this to be true in any location, but especially true in the wilderness which established areas to remain as they are. If fish are allowed to be tampered with in the wilderness, what next? 1.5

Virgil and Barbara Burns, Owners
Bob Marshall Wilderness Ranch

Date: May 3, 2003

To: Bonneville Power Administration

From: Virgil and Barbara Burns, Owners – Bob Marshall Wilderness Ranch

Re: Proposed Fish Kill in the Bob Marshall Wilderness

This devastating proposal should not be implemented in the Bob Marshall Wilderness. The alpine lakes under fire are in the same area I have outfitted in for the last thirty years. These lakes are very productive and have provided unequalled fishing to us, our guests and all others that have fished them. These thriving, healthy, big, fat fish should not be killed for purely genetic reasons. These fish pose no threat whatsoever to pure westslope cutthroat. 1.6

We feel this plan goes against all that is held sacred in a wilderness area. Wilderness areas were established in order to hold those areas in a pristine state without interference from human beings. We believe the "Wilderness Act" should be respected and these areas should not be tampered with.

The logic behind this plan is to obtain a genetically pure strain of westslope cutthroat trout. The present fish in these lakes are thriving, healthy fish. Fishing for these "exotic" fish in excellent. Why should anyone be allowed to tamper with these healthy fish in order to obtain a genetically pure strain of fish? Isn't this what Hitler had in mind?

1.7 The plan also flirts with the use of airplanes and powerboats to carry out the fish kill and poison the lakes. Airplanes are only to be used in the "Wilderness" for emergency reasons. Is this an emergency?

If anything at all were proposed to eliminate the thriving, healthy fish in these lakes, saturation of the lakes with westslope cutthroats would be the most viable answer. But, again, why kill healthy, viable fish for only genetic reasons? We believe this to be true in any location, but especially true in the wilderness, which established areas to remain as they are. If fish are allowed to be tampered with in the wilderness, what next?

1.8 Notes – wilderness landlocked
What effect on bears etc, eating poisoned fish
1.9 Another arm of the government obtaining $ for ridiculous purposes
If fish were sparse, unhealthy, etc do it to improve – but not the case here – lots of healthy, big, fat fish – (if it not broke don't fix it, especially tampering with nature in the wilderness!

Kuehn, Ginny - DM-7

SFFW-002
JUN 29 2004

From: Paul & Connie Stantus [stantus@frontiernet.net]
Sent: Tuesday, June 29, 2004 5:38 PM
To: BPA Public Involvement
Subject: South Fork of Flathead Cutthroat Plan

Dear Sirs:

21 I am a resident of Montana that has fished some these lakes for many years. I cannot believe you are proposing such a plan. The fish that inhabit these lakes are as native as you and I are. To kill off what you call non-native trout and grayling is the same as killing people because they are not the correct race. I think this was tried in Germany once.
They are beautiful lakes with very large trout. To poison these lakes would be a crime.

22 My family and many of my friends and their families have fished Handkerchief Lake for more than 10 years for the grayling. We make several trips a year to camp and fish for the usually large grayling in the lake. We fly fish in float tubes and release all the fish we catch so we can to continue to experience great grayling fishing. This lake up to last year held the state record for grayling. It is a beautiful fish that epitomizes the wild country it lives in. I cannot imagine Handkerchief Lake without grayling.
We camp and hike to other lakes in the area to experience their beauty and fish them, but Handkerchief is the gem.

I have worked for the U.S. Forest Service for 25 years and have always been a supporter of the Montana Fish, Wildlife, and Parks. I am a reasonable person, but I cannot and will not support what you are trying to do here.

I want to be put on the mailing list for any information regarding the plan to kill fish in these lakes. You may email me at my address or send hard copies to:

Paul Stantus
739 Greers Ferry
Libby, MT 59923
stantus@frontiernet.net

6/30/2004

SFFW-003

South Fork Flathead Watershed

JUN 30 2004

Telephone comment by Ginny Kuehn
6/30/2004

Doug Glenn

406-387-5787

31 I just called to comment on the poisoning of Sunburst Lake, Gray Creeks, and the other lakes up there. It is a good fishery already. I think if we get involved in it, we will screw
32 up more of the river than just the lakes. If you have any questions call me back please.

South Fork Flathead Watershed

SFFW-004
JUN 30 2004

Telephone comment by Ginny Kuehn
6/30/2004

Kurt Gentry
Spotted Bear Ranch

406-755-7337

I would like to comment on Bonneville Power funding process for poisoning the lakes in the wilderness and around the wilderness. I just would like to go on record that we don't think that it is a good idea. We have a healthy fishery right now. We like it that the Westslope Cutthroat is a very strong strain and that is pure in the lava areas. It seems like when the fish and game get involved in one of these processes it always takes longer than they think it is going to and usually there is more messes up there than improvements. So we don't want you to fund that process. However, we would like to see you contribute to grade the roads so people can come out to access the national forests. A lot of times these people tear up their vehicles driving up these roads that don't have any funding to go fishing. If they poison those lakes we won't have fish to fish for and roads worth driving on to get to. So a little common sense of letting the fishery that is already there and these lakes remain the same, would save a lot of money maybe a little money to grade roads would allow people to come up in the forest areas to enjoy these lakes. It would be far better use of your money than to allow some government project to be funded that probably won't work in the long run anyway. So if you would like to call me back I would be glad to talk to you about this.

4-1
4-2

Poisoning

SFFW-005

From: Steve Little [little2@llnl.gov]
Sent: Wednesday, June 30, 2004 11:20 AM
To: BPA Public Involvement
Cc: mtapples@cyberport.net; pstantus@fs.fed.us
Subject: Poisoning

BPA,

I'm writing concerning the poisoning of some wonderful fisheries. I live in California and travel to Montana to visit friends and relatives as often as possible. During my visits I enjoy fishing some of the wonderful lakes and streams Montana has to offer. The idea of poisoning some of these wonderful places is frightening. California has tried it with Lake Davis and failed miserably. In my opinion a better plan of attack is letting the anglers handle it by restricting creel limits on native cutthroat and increasing the limits on the unwanted species. 5.1 5.2

Thank you for your time, and please don't make the same mistake as California.

Steve Little
27937 S. Sharon Ct
Tracy Ca. 95304

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SFFW-006

From: joe kuzmic [summitz@centurytel.net]
Sent: Wednesday, June 30, 2004 11:28 AM
To: BPA Public Involvement
Cc: Hollie Fish
Subject: south fork fish

6.1 I oppose your plan. It will never work in those lakes. 6.2 There is 10 pound cutthroat in those lakes. If you kill the fish in the lakes, how many years will it take to get fish that size back? The lakes you want to kill out are the best fishing lakes we have. Leave them alone.
Even if you think it will work, all it takes is one person that does not agree with your plan to ruin it. It is a good idea on paper, but how often do these plans work? There is going to be a large grassroots force against you.

6.3 It is a nice gesture on your part, but I think it will be a waste of time and money.
thank you
Joe kuzmic

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file://Y|/EP3043%20-%20BPA/Flathead%20EIS/South%20Fork%20EIS/...Fk%20Flathead%20Watershed%20Trout%20Conservation%20Program.htm

From: Spotted Bear Ranch [info@spottedbear.com] SFFW-007
Sent: Friday, July 02, 2004 9:24 AM
To: BPA Public Involvement
Subject: S Fk Flathead Watershed Trout Conservation Program

I'm in favor of the concept of preserving the genetic purity of Westslope cutthroat trout in the South Fork drainage. However, **I have low confidence in the ability of the USFS and MFWP to achieve the stated goals.** 7.1 7.2

Government agencies, such as the USFS and MFWP, are typically run very inefficiently with a lower than normal degree of success compared to private sector counterparts. They love these programs as they create more work for themselves. The program goals could be more successfully achieved using private enterprise.

Removing the administration of this program from the hands of federal and state funded agencies would very likely increase the probability of success and reduce costs. Government agencies are much less effective simply because they're not required to be financially responsible. They're not financially responsible because they don't need to show a profit; they're able to spend freely without consequences. And, they tend to make decisions based upon job and benefit preservation. 7.3

This program is destined burn through a bunch of money with a low probability of success. And, this comment and public meeting-open house forum is a boondoggle – you're going ahead with the program anyway.

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file://Y|/EP3043%20-%20BPA/Flathead%20EIS/South%20Fork%20EIS/DEIS%20Comments/Native%20Cutthroat%20project.htm

From: Earl & Sheila Applekamp [mtapples@cyberport.net]
Sent: Friday, July 02, 2004 9:04 PM
To: BPA Public Involvement
Subject: Native Cutthroat project

SFFW-008

Dear BPA.

I'm writing regarding the proposed poisoning of the 20 lakes in the South Fork of the Flathead River drainage. Although I don't agree with this proposal at all, I can understand the concern regarding brook trout and rainbow trout threatening native bull and cutthroat. Where this is a problem I can understand wanting to prevent widespread population of these species. 8.1

What I cannot understand is the proposal of poisoning the grayling population in Handkerchief Lake! I strongly oppose poisoning this lake. Grayling are a rare fish in Montana, in the lower 48 states for that matter, and require special habitat to survive. There has been consideration to giving them T&E species protection because of their scarcity. However, because of the rare habitat, they are doing exceptionally well in Handkerchief lake. Other than consuming some food, they do not pose a threat to other fish. Genetically they are no threat to either the Bull Trout or the Cutthroat trout like brooks and rainbows. 8.2

8.3

I am an avid fly fisherman, and have fished handkerchief lake for 8 years, multiple times every year. I have caught and released hundreds of fish in this lake and have only caught grayling and cutthroat, never another species. The proximity of the lake with falls upstream and downstream somewhat confine the grayling. Although some do go downstream to the reservoir, the habitat in the deep water is not conducive to grayling and they cannot compete with the cutthroat and bull trout in this environment. (They probably provide a food source for the large Bull Trout!) 8.4

Please do not proceed with this poisoning proposal, and if you must, please exclude Handkerchief Lake!!!!!! 8.5

Earl Applekamp
120 Pleasant View Drive
Kalispell, MT 59901

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SFW-009

NATIVE FISH 2004

JUL 07 2004

I'm writing this letter in response to the article in the Hungry Horse News of the BBA,s plan to rid the South Fork drainage of non-native game fish with the use of rotenone and antimycin. I think that the less expensive method called (SWAMP OUT) would give the same end results with stocking of native cutthroats until they reproduce into genetically pure populations. The (swamp out) method would leave the lakes fishable while the regeneration takes place. The use of rotenone will attract every bear in the surrounding area and would be a threat to hikers and campers for quite some time. I have seen this happen when the Fish and Wildlife used this method on Lake Five,Halfmoon and Mud Lake in the 60,s . The dead fish ATTRACTED both Grizzly and Black bears from Glacier and the surrounding area .

The rehabilitation of the lakes in the South Fork of the Flathead should not be the responsibility of the BPA.

The Montana Fish Wildlife and Parks are the responsible party for the decline of the native Cutthroat and Bull Trout in the Flathead River Drainage system. There were a number of things that led up to the decline of the native trout. After the devastating flood of 1964 which reduced the number of all fish in the North and Middle Forks of the Flathead the MFWP left the 10 fish limit on Cutthroat rather than do a lesser limit or even better a catch and release method until the fish increased in population. In 1965 I discussed this issue with Montana fish and game officials in Kalispell office and their reply was that no one would buy a license if they put a catch and release or a restricted limit on Cutthroat and Bull Trout.

It took quite a few years before the FWP put a lesser limit on Cutthroat and a catch and release on Bull Trout. The MFWP would have been better off with the loss of revenue in license sales ,if any than the loss of the Native fish in the Flathead drainage.

The MFWP CAN ONLY HOLD THEMSELVES RESPONSIBLE for the loss of the Kokanne Salmon in the Flathead river system by the introduction of mythiss shrimp in Flathead Lake which had already been tried in Idaho without success.

The increase of Non -Native Lake Trout in Flathead Lake also took its toll on cutthroat.

The ILLEAGLE introduction of Northern Pike into the Flathead drainage is taking its toll on native fish. the MFWP now have a limit on the NORTHERN PIKE." WHY "?

The Montana Fish Wildlife & Parks have to be held accountable for their actions , not the BPA.

Yours Truly

Raymond F Mehring

Raymond Mehring
PO Box 260349
650 Spotted Bear Rd.
Martin City, MT 59926-0349

Page 1

South Fork Flathead Watershed – MT

SFFW-010
JUL 30 2004

Telephone comment by Ginny Kuehn
7/30/2004

Mark Moser
3217 Helena Drive
Missoula, MT 59803

406-251-3646

10.1 My comments concern George Lake. George Lake is a self-contained lake with no possible way for the trout to leave that lake. There is a 1,000 ft. waterfall at the end of the lake. My family, friends and I have been hiking into George Lake for the last two decades and thoroughly enjoyed the fishery in there. It contains eastslope cutthroat and
10.2 westslope cutthroat. We do not mind at all about the hybrid fish. The reintroduction would eliminate the fishery for five to ten years. We do not want that to happen. The survey I have taken, 100% of my friends and family would like to see this particular lake left as is. So I hope that lake could be an exception to the rule.

I appreciate being able to comment on the situation.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th St., Suite 3200
HELENA, MONTANA 59626

SFFW-011
AUG 04 2004

Ref: 8MO

July 29, 2004

Communications,
Bonneville Power Administration - DM-7,
P.O. Box 14428
Portland, OR 97293-4428

Re: CEQ #040274, Draft Environmental Impact Statement for the South Fork Flathead Westslope Cutthroat Trout Conservation Program

Dear BPA:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Environmental Protection Agency, Region VIII, Montana Office (EPA) has reviewed the South Fork Flathead Westslope Cutthroat Trout Conservation Program Draft Environmental Impact Statement (DEIS). The EPA reviews EISs in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major federal agency action. The EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document.

The EPA appreciates the efforts of the Bonneville Power Administration (BPA) and Montana Dept. of Fish, Wildlife, & Parks (MDFWP) in preparing this DEIS to analyze alternatives and environmental impacts associated with implementation of the South Fork Flathead Westslope Cutthroat Trout Conservation Program. The EPA supports the stated goals and objectives of the proposed project to preserve native genetically pure fluvial and adfluvial westslope cutthroat trout populations in the South Fork Flathead drainage, and to avoid and minimize adverse environmental impacts. We also recommend that maintenance of naturally functioning aquatic ecosystems and compliance with State Water Quality Standards be included among the project goals.

11.1
11.2

One of our primary concerns with the proposed project involves the need for additional details and information regarding project monitoring and evaluation and adaptive management. Monitoring and evaluation and adaptive management should be critical elements of this conservation program, particularly since there is uncertainty associated with the effects of the

11.3

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proposed activities. There should be a continuing process of planning, implementing, monitoring, and evaluating effects of project implementation, and adjusting implementation and/or mitigation when and where necessary.

11.4 We are pleased that the DEIS indicates that post-treatment monitoring would be conducted, but we are concerned that only general descriptions of monitoring activities are provided. The monitoring program to assess post-treatment effects and natural recovery or repopulation of the lakes by indigenous species should be more fully described, particularly monitoring for non-target species present in or around the lakes (e.g., macroinvertebrates, plankton, fish, amphibians, reptiles, birds, wildlife, etc,). Additional details of the monitoring efforts and adaptive management strategy should be presented to assure that consistent and meaningful information/data and is generated to evaluate effects of project implementation.

11.5 We also believe it is important to have contingency plans in the event that treatments do not eradicate the entire hybrid trout population, and in the event that continuing illegal reintroduction of non-native trout occurs after the proposed treatments. It is important to project success to both eradicate hybrid trout, and prevent the reintroduction of non-native trout into these lakes. We are concerned that the DEIS contains little information about the actions that would be taken or the strategy that would be employed to reduce these risks, particularly the risk of continuing illegal reintroduction of non-native trout. Contingency planning should also cover the unintended spill or release of toxic or hazardous chemicals during project implementation.

11.6 We recommend that a clear and complete list of advantages and disadvantages of the two proposed fish toxins, rotenone and antimycin, be provided, along with further discussion regarding use of one toxicant vs. the other. Such information will assist the decision maker and the public in understanding and evaluating the proposed use of the fish toxins. 11.7 We note that it will be important to use appropriate mitigation measures and management practices during project implementation to minimize the potential for human exposure to the piscicides and potassium permanganate.

11.8 The DEIS identifies genetic diversity issues associated with restocking the treated lakes with M012 brood stock. These issues include: 1) potential reduction of westslope cutthroat trout genetic diversity by restocking with a single M012 genetic stock, which may result in a monoculture exhibiting little genetic diversity; and 2) potential dilution of natural genetic uniqueness exhibited in adaptations and phenotypic variations of local westslope cutthroat trout. We recommend that the FEIS explain more fully how these concerns will be addressed.

11.9 Also, few specifics are provided regarding potential restocking of the lakes with other native non-target species that may be affected by treatments (e.g., macroinvertebrates, plankton, fish, amphibians, reptiles, birds, wildlife, etc,). We are concerned about potential loss of native non-target species, since proposed fish toxicants and potassium permanganate, used to neutralize the toxins, can be lethal to many aquatic organisms. The loss of non-target species and impacts on overall aquatic ecosystem integrity is an important issue. If some of indigenous species depend on isolated headwater habitat in the lakes or have evolved within the isolated headwater habitat they may not easily repopulate the lakes and may need assistance in repopulation.

Restocking and other proposed efforts to restore or compensate for unavoidable impacts that may occur to all affected species should be more fully addressed.

11.10

We also believe the potential effects of continuing to restock fish in originally fishless lakes should be more fully evaluated and disclosed in the FEIS. The introduction of trout to support recreational fisheries in lakes that were formally fishless has potential to affect lake ecology. Predation by introduced trout consumes native amphibians and benthic invertebrates and can reduce the population of larger zooplankton, which are effective grazers of the phytoplankton. With the restocking of fish to lakes that were originally fishlesss, additional biomass is added to the lakes that can influence nutrient cycling, and can have unintended effects to water quality and the biological integrity of the lake.

11.11

We recommend that restocking of fish to originally fishless lakes be based on monitoring and evaluation and full understanding of how lake ecology is affected by fish restocking. We recommend that a cautious approach to the trout restocking program be taken and that the stocking program be accompanied by a sufficiently robust monitoring and evaluation program to evaluate ecological effects of stocking fish in lakes that were originally fishless. Maybe some of the lakes should be left fishless for long-term monitoring and ecological comparison with lakes that are restocked? We note that decisions were made in the past to introduce non-native trout to these lakes without careful, thoughtful evaluation, and full consideration of potential ecological effects. This led to the ecological problems creating the need for this proposed project. We think it would be appropriate to proceed cautiously in restocking of fishless lakes, and to base restocking decisions on careful evaluation of monitoring data and information and full understanding of ecological effects.

11.12

We are enclosing our more detailed comments, questions, and concerns regarding this DEIS for your review and consideration. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the South Fork Flathead Westslope Cutthroat Trout Conservation Program DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). A copy of EPA's rating criteria is attached.

Our environmental concerns regard the need for additional details and information regarding: project monitoring and evaluation and the adaptive management program; contingency plans if treatments do not eradicate the entire hybrid trout population, and in the event of continuing illegal reintroduction of non-native trout after the proposed treatments, and in the event of spills or releases of hazardous chemicals; more complete identification of the advantages and disadvantages of proposed fish toxins, rotenone and antimycin; and additional information and evaluation regarding the restocking program.

If we may provide further explanation of our concerns please contact Mr. Steve Potts of my staff in Helena at (406) 457-5022 or in Missoula at (406) 329-3313. Thank you for your consideration.

Sincerely,

John F. Wardell
Director
Montana Office

Enclosures

cc: Larry Svoboda/Julia Johnson, EPA, 8EPA-N, Denver
Chris Levine, MDEQ, Helena
Grant Grisak, MDFWP, Kalispell
Dan Brewer, USFWS, Helena

EPA Comments on South Fork Flathead Westslope Cutthroat Trout Conservation Program DEIS

Brief Project Overview:

The Bonneville Power Administration (BPA) is proposing as part of the Hungry Horse Dam Mitigation Program to fund implementation of a Montana Dept. of Fish, Wildlife, & Parks (MDFWP) conservation program intended to preserve the genetic purity of the westslope cutthroat trout populations in the South Fork of the Flathead River drainage. The South Fork Flathead drainage contains one of the largest genetically pure populations of genetically pure native westslope cutthroat trout in the nation. This population is protected from invasion by non-native fish because of the barriers created by Hungry Horse Dam. Historic stocking introduced non-native trout species into the drainage years ago. The Fisheries Management Plan for the South Fork Flathead drainage developed by MDFWP, Forest Service and a Citizen's Committee lists management goals of 1) maintaining a self-sustaining fishery; 2) maintaining and improving genetic integrity of westslope cutthroat trout; 3) emphasizing quality fishery over quantity of harvest; and 4) manage fishery consistent with wilderness management guidelines. The MDFWP is also mandated by state law to manage in a manner that avoids listing fish and wildlife under the Endangered Species Act.

The proposal involves removal of hybrid trout from 21 lakes and their outflow streams in the South Fork Flathead drainage on the Flathead National Forest, and replacing them with genetically pure native westslope cutthroat trout over the next 10-12 years. Some of the lakes are in the Bob Marshall Wilderness area and Flathead National Forest Jewel Basin Hiking Area. Other lakes may also be included as additional information is discovered. Four alternatives have been evaluated. Alternative A is no action to remove hybrid trout in the drainage, which provides a baseline for comparison with other alternatives.

Alternative B is the proposed action and preferred alternative, that involves application of the piscicides rotenone and antimycin to remove hybrid fish. Antimycin would be used to remove hybrid trout from the lakes in the Bob Marshal Wilderness area and both rotenone and antimycin would be used in the other National Forest lakes. Piscicides would be applied in the Fall when water levels are generally low, and recreational use of the lakes is reduced, and the lakes summer thermal stratification has ended to allow more even dispersion of piscicides in the lakes. Piscicides and application equipment would be transported by livestock or flown by helicopters or fixed wing aircraft. Livestock transport would be used for wilderness lakes accessed by system trails. Helicopter transport would be used for wilderness lakes without system trails. Single engine aircraft tanker (SEAT) airplanes or helicopters would be used in non-wilderness lakes. Piscicide applications using drip stations would generally take a day or two, with motor boats used for application and mixing within the lakes, and detoxification would take several days, after which personnel would evaluate the lakes and collect and measure fish. Target rotenone concentrations would be 1 ppm, and target antimycin concentrations would be 7.5-8 ppb, but may vary depending upon water chemistry. Potassium permanganate would be

1

used for detoxification. Fish restocking would occur after sentinel fish cages demonstrated that piscicides were no longer present. Treatments would be staggered spatially over ten years or more to reduce angling effects.

Alternative C is similar to Alternative B, but involves differing methods of transport of materials and equipment to the lakes and application of fish toxins to the lakes. All transport would occur via helicopter and fixed wing aircraft. Livestock would not be used for transport. Motor boats would be used for application and mixing of piscicides.

Alternative D would not involve use of piscicides, but instead would use gill netting, trapping, and other mechanical means to remove hybrid fish in designated lakes, and where possible, in designated streams. An intensive "genetic swamping" program would then be implemented with intensive and frequent restocking in an attempt to dominate the remaining hybrid trout.

Comments:

Goals

1. 11.13 The EPA supports the stated goals and objectives (page 1-9) of the proposed project involving preservation of native genetically pure fluvial and adfluvial westslope cutthroat trout populations in the South Fork Flathead drainage, and avoiding and minimizing adverse environmental impacts. 11.14 We also recommend that maintenance of naturally functioning aquatic ecosystems and compliance with State Water Quality Standards be included among the project goals.

Project Proposal and Alternatives

2. 11.15 Thank you for including Table 2-1 (page 2-5) showing the lakes proposed for treatment, treatment method, method of equipment transport, outlet streams and detoxification measures, Table 2-4 (page 2-28) summarizing the proposed action, and for including the lake descriptions in Appendix C, and additional information on lake treatments in Table C-2 (page C-59). This greatly increases public ability to understand the proposed project.

3. 11.16 It is stated that likely rotenone dosage would be 1 mg/l, and antimycin dosage 7.5-8 ug/l (page 2-14), and that these target concentrations are based on assays conducted by MDFWP, although it is also suggested that higher levels may be needed based on water chemistry and fresh water inputs. It is our understanding that the 1 mg/l concentration of rotenone is based on using a five percent rotenone solution, so that the actual target concentration of the rotenone active ingredient would be 50 ug/l of rotenone (1 mg/l x 0.05 = 50 ug/l, page 3-54).

2

11.17 It is stated that antimycin is shipped by the manufacturer in two parts: the active ingredient of antimycin with some residual fats or lipids, and an acetone - detergent surfactant (page 2-10). We understand that the antimycin formulation used would be a 50:50 mixture by volume of the two parts. It should be clarified if the projected reference dose of 7.5-8 ug/l of antimycin is the concentration of the active antimycin ingredient or of the 50% formulation (which would appear to make the target dose concentration of antimycin approximately ~4 ug/l). Is our understanding regarding the target dosage of the antimycin active ingredient correct?

11.18 We are interested in seeing the lowest concentration of rotenone and antimycin used that will be effective at removing hybrid trout, in order to minimize adverse effects to other non-target species. We recommend that the lowest dosages of rotenone and antimycin that will achieve effective removal of target species be used in order to minimize adverse effects to non-target species. We believe it would be appropriate to identify the maximum expected concentration of these piscicides that would be used in order to better understand the potential impacts of proposed piscicides upon non-target species.

Some websites with useful information on the proposed piscicides include:
http://www.epa.gov/pesticides/
http://www.epa.gov/oppsrrd1/REDs/factsheets/rotenone_fs.pdf
http://msds.pdc.cornell.edu/msds/msdsdod/a192/m95857.htm
http://msds.pdc.cornell.edu/msds/msdsdod/a481/m240264.htm

11.19 We understand that Antimycin A currently has 1 active registration, Fintrol Concentrate (registration # 39096-2). The latest label is dated November 29, 1999. This "piscicide" is slated for reregistration sometime after 2006. The current chemical review manager is Mr. Dirk Helder, (phone, 703-305-4610).

Rotenone appears to have several active registrations (e.g., registration #'s 299-227, 655-421, 655-422, 655-804, 655-805, 655-806, 769-414, 1439-157, 1439-260, 5481-313, 6458-6) which can be researched at the EPA pesticides website shown above.

4. 11.20 Reasoning is presented (page 3-12) to explain why antimycin is a preferred fish toxin rather than rotenone in the 13 lakes in which bull trout occur downstream of the treated lakes (i.e., rapid detoxification in flowing streams, requires much lower quantity to kill fish, less bulky and easier to transport-fewer aircraft and packtrips and associated transport impacts). Antimycin is also less toxic to amphibians and other non-target species. However, it appears that there is greater experience with using rotenone than with use of antimycin, and that rotenone may be less expensive and more available, and that the chronic exposure public health risk for use of rotenone may be less than for antimycin (see our public health comment # 27 below).

We believe it would improve public and decision maker understanding to provide a clear and complete list of advantages and disadvantages regarding use of rotenone and antimycin, and further discussion regarding use of one toxicant vs. the other to allow the decision maker and the public to better understand and evaluate advantages and disadvantages of use of either toxicant.

5. It may be difficult to apply or precisely maintain consistent piscicide concentrations throughout the lakes due to practical considerations associated with difficulties of maintaining consistent piscicide concentrations horizontally and vertically in the lakes with applications by aircraft, boats, and drip stations and using boats for lake mixing and hoses and pressurized equipment to distribute toxins to deeper depths (page 2-22). It would be of interest to include additional discussion regarding piscicide monitoring and piscicide concentration gradients that may occur during treatments, and how piscicide application and mixing considerations would be managed to maintain the desired range of target dosages. Our interest is understanding how large variations in piscicide concentrations within the lakes and significant exceedances of toxic concentrations, and thus, additional impacts to non-targeted species would be avoided. It is important that efforts to avoid impacts to non-targeted species are described, and that unavoidable impacts to non-targeted species and overall ecosystem integrity are fully disclosed and mitigated.

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6. It is suggested that a dosage of potassium permanganate for detoxification would be 4.5 ppm (page 2-10) which includes 1.5 ppm to neutralize the fish toxin, and 3 ppm to account for the organic demand in the stream, although the amount may vary depending upon stream demand (page 2-14). The DEIS also states that bioassays show potassium permanganate toxicity to westslope cutthroat trout at 1.5 ppm (page 2-10). It would appear likely, therefore, that there is significant potential for potassium permanganate used for piscicide detoxification to kill aquatic biota itself, including biota of non-target species (e.g., amphibians, invertebrates). What precautions or mitigation measures are proposed to assure minimal effects on non-target species from use of potassium permanganate? Can locations of detoxification stations be identified? How far downstream from detoxification stations on streams will potassium permanganate or piscicide toxicity be evident to aquatic life?

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7. It is stated that bull trout are not found in any of the lakes to be treated, but they do occur in associated drainages downstream of some lakes (page 3-9). It is important that the bull trout, a threatened species, is not unduly impacted by the proposed project. We understand that the U.S. Fish & Wildlife Service (USFWS) has concurred that the proposed project does not have potential to cause an adverse effect on bull trout, impair suitable habitat necessary for the survival for the local population of bull trout (i.e., biological determination of, "may effect, but not likely to adversely affect," page 3-14). We note that it is important that toxicity in streams draining the lakes be neutralized before the bull trout sections of the streams are reached.

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8. It is stated that sentinel fish cages would be used in concert with potassium permanganate detoxification stations to evaluate effectiveness of treatment and to monitor effectiveness of detoxification (page 2-11). It is also stated that several days are anticipated to carry out detoxification and post-treatment cleanup (page 2-4), and that piscicide treatments are proposed to occur just before lake ice-up occurs (late September to early November). 11.24 Cold water temperatures, reduced water oxygenation and reduced sunlight after lakes ice-up are likely to reduce the rate of toxin decomposition. It appears, therefore, that unless the fish toxins are fully detoxified before lake ice-up there may be potential for residual toxicity to remain for long periods after the lakes ice over. Will full detoxification be required before lakes ice-up? We would expect additional potential for impacts to non-target species if long periods of toxicity are allowed, particularly with rotenone use. We believe that detoxification should occur before lakes ice up.

9. 11.25 It is suggested that a second piscicide treatment may be implemented if fish are detected following the first treatment (page 2-8), and that resultant action stemming from each treatment and post-treatment evaluation would be considered on a case-by-case basis. 11.26 The DEIS also states that unauthorized, illegal stocking with non-native species may occur as it has in the past (page 2-27). If unauthorized illegal stocking occurs after proposed treatments it would significantly reduce the effectiveness of this program to eradicate hybrid trout and preserve genetic purity of native westslope cutthroat trout. It appears important to project success to both eradicate hybrid trout and prevent the reintroduction of non-native trout into these lakes.

11.27 We believe it is important to have contingency plans in the event that treatments do not eradicate the entire hybrid trout population, and in the event that continuing illegal reintroduction of non-native trout occurs after the proposed treatments. Given the importance of these elements of the project, we are concerned that the DEIS contains little information about the actions that would be taken or the strategy that would be employed to reduce these risks, particularly risks of continuing illegal reintroduction of non-native trout. 11.28 Also, efforts should be made to educate the public on the effects of such illegal introductions, and to improve enforcement programs and deterrents (fines, creel inspections, etc,) to reduce potential for continuing illegal stocking or introductions of non-native species.

10. 11.29 It is stated that liquid rotenone would be the preferred formulation for this project (page 2-9). We recognize the hazards to applicators in using powdered rotenone (page D-6), but have some concerns regarding the aromatic solvents that are used as a dispersant in liquid rotenone formulations (page E-6). These aromatic solvents can include trichloroethylene, napthalene, 2-methylnapthalene, and xylene (page D-2), which can be detrimental to public health, and are generally persistent in the environment (i.e., they do not quickly biodegrade). We understand that 5,800 of gallons of liquid rotenone formulations will be used on the eight lakes in which rotenone is the proposed piscicide

(Table C-2). Has MDFWP monitored for the presence of these aromatic solvents in rotenone treated waters following treatments in their prior uses of liquid formulations of rotenone? Does BPA or MDFWP propose to monitor the presence and degradation of these compounds in the eight rotenone treated lakes with this proposed project? Are sentinel fish cages the only means of monitoring for toxicity? Is it just assumed that these compounds will dissipate, be diluted, and/or otherwise not result in any adverse effects?

11.30 Also, is it known if less persistent or more biodegradable solvents are available for use in liquid rotenone formulations?

11. 11.31 Thank you for providing Appendix D discussing use of rotenone, safety measures, and precautions and measures to be used during storage and transport of rotenone to reduce risk of accidental spills. Is similar information available regarding the history and use of antimycin?

11.32 Thank you also for providing the MSDS sheets on treatment chemicals in Appendix E. A spill contingency plan is mentioned on page 2-13, but we did not see the details of the spill contingency plan included in Appendix D. We believe information on the contingencies in the event of spill or release of toxic or hazardous chemicals should be included in the EIS appendices.

12. 11.33 We are pleased that it is stated that at least one applicator licensed by the Montana Dept. of Agriculture well versed in the state regulatory requirements regarding safe and legal use of the piscicides must be on-site to supervise or administer the project (page D-7). We are also pleased that the staff involved in implementing the project will receive safety training in regard to the proposed use of the toxic and hazardous chemicals.

13. 11.34 The method of transport of equipment, people and material to the lake sites and degree of disturbance associated with such access and transport provides an important distinguishing difference between Alternatives B and D and Alternative C. It is stated (presumably with Alternatives B and D) that crew sizes in wilderness lakes would not exceed 15 persons and pack strings would be broken into strings of 10 to 12 animals (page 2-16). No pack trains into wilderness areas would occur in Alternative C, since aircraft would be the mode of transport with Alternative C. It is not clear how many strings of 10 to 12 animals would be required in Alternatives B and D. The extent of potential ground disturbance, disturbance to trails and other resources, and other environmental impacts from use of pack train transport of equipment, people and material to the lake sites should be more fully described to provide an improved basis upon which to evaluate and choose among alternatives.

11.35 Wilderness experience and solitude and wildlife may be affected during transport of equipment, people and material to the lake sites in all action alternatives. It is stated that an estimated nine helicopter flights would be needed to execute the treatment procedure

in Blackfoot Lake (page 2-18). Are nine flights estimated to be the average number of flights to each lake?

11.36 It appears that environmental impacts and ground disturbance during transport may be least with Alternative C involving use of aircraft for transport of equipment, people, and material to all lakes and use of motor boats for application, although wilderness sites and wildlife would experience additional impacts to solitude from aircraft impacts within wilderness areas with Alternative C. While we realize that wilderness values and wildlife may be impacted in the short-term using Alternative C, it appears that there may be some benefits to Alternative C in reduced ground disturbance from long pack train transport to the wilderness lakes, and shorter disturbance periods. The extent of additional ground disturbance and impacts and intrusion from pack animals and longer durations of intrusion with Alternative B modes of transport should be more clearly and quantitatively compared with the aircraft mode of transport proposed with Alternative C. Improved comparative alternatives evaluation may better define the issues and provide a clearer basis of choice among options for the decision maker and the public in accordance with the NEPA implementing rules (40 CFR 1502.14).

14. 11.37 Table 2-6 (page 2-44) indicates that Alternative D that avoids use of fish toxins would not eliminate non-native trout from headwater lakes; involves unproven techniques; would be less effective; and would result in longer-term angling loss and fisheries impairment in the headwater lakes. Alternative D, however, would avoid many of the uncertain and difficult to quantify aquatic ecosystem impacts associated with use of fish toxins and potassium permanganate (no risk to plankton, insects, amphibians). We believe additional discussion and comparative evaluation of these benefits of Alternative D vs. the reduced effectiveness and risks to angling and fisheries should be provided to better define the issues and provide a clearer basis of choice among options for the decision maker and the public.

15. 11.38 The method of transport proposed to restock lakes with genetically pure westslope cutthroat trout is not clear to us. Will pack trains or aerial transport be used to transport fish for restocking wilderness lakes? Will aerial transport be used to transport fish for restocking non-wilderness lakes?

16. 11.39 Any effects on water quality (e.g., nutrient enrichment) from dead fish decaying in the lake should be addressed in the Water Resources Section 3.4 (page 3-26). Will nutrients released from decaying fish have any potential effects on trophic levels in Hungry Horse Reservoir or Flathead Lake downstream? Special attention should be made regarding the State's identification of Flathead Lake as a water body with impaired beneficial uses in its Clean Water Act Section 303(d) report. It is important that the proposed project does not further degrade Flathead Lake water quality, and that the conservation program be consistent with long term water quality recovery as proposed in the Flathead Lake Nutrient Management Plan and Total Maximum Daily Load (TMDL) (see

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http://www.deq.state.mt.us/wqinfo/TMDL/pdf/FlatheadDoc.pdf). Phase 1 of the Flathead Lake TMDL calls for a 25% reduction in nitrogen and phosphorus loads to the lake. The water quality goals for Flathead Lake are: 80 g carbon/m^2/yr; no declining trend in hypolimnionic dissolved oxygen; no measurable blooms of Anabaena or other pollution algae; 1.0 ug/l chlorophyll a maintaining or decreasing near-shore algal growth on rocks; 5.0 ug/l total phosphorus; <0.5 ug/l soluble reactive phosphorus; 95 ug/l total nitrogen; 30 ug/l nitrate+nitrate; <1.0 ug/l ammonia.

Monitoring and Adaptive Management

17. 11.40 It is stated that MDFWP has administered 74 rotenone applications on 63 lakes in the Flathead Basin, including seven lakes requiring multiple treatments (page 2-8), and that previous monitoring shows that short-term impacts to the fisheries resource caused by chemical treatment (using rotenone or antimycin) are undetectable within the first three years (page 3-13). References should be provided for these monitoring results to better support this statement (similar to the references provided on pages 3-22 and 3-23 regarding previous studies of effects on amphibians, plankton and aquatic insects).

18. 11.41 It is our understanding from the information in Chapter 3 that hybrid trout and westslope cutthrout trout are the only fish species present in the lakes to be treated, but that bull trout and whitefish are present in downstream drainages. Is this correct?

19. 11.42 It is stated that monitoring of restocked fish would continue for several years to determine population viability and associated characteristics and program success (page 2-5), and that a survey would occur the spring or summer following treatment with setting of gill nets, monitoring of caged fish, and, if possible, the evaluation of the status of non-target organisms like plankton, amphibians, and aquatic insects (page 2-25). Why is it stated that non-target organisms will be evaluated, if possible?

11.43 We believe it is important that before-and-after surveys and evaluation of proposed treatments be conducted for all aquatic and terrestrial biota that could potentially be affected by the proposed use of fish toxins to remove fish from the lakes, not just westslope cutthroat trout. Baseline monitoring should identify all indigenous aquatic species present in the lakes to be treated. The monitoring program to assess post-treatment effects and natural recovery or repopulation of the lakes by indigenous species should be more fully described, particularly monitoring for non-target species present in or around the lakes (e.g., macroinvertebrates, plankton, fish, amphibians, reptiles, birds, wildlife, etc,).

20. 11.44 The DEIS states that amphibian surveys have been conducted at each lake and are ongoing (page 2-12), and that four amphibian species and two reptile species were detected in the project area: long-toed salamanders, Rocky Mountain tailed frogs, western toads, and Columbia spotted frogs, and Western terrestrial garter snake and common

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garter snake (page 3-18). Four other species were believed to be in the project area, but were undetected (pacific tree frogs, northern leopard frogs, western painted turtles and rubber boa). The DEIS also states that these species are widely distributed throughout the project area.

It would be helpful to have a table that listed all aquatic species present in or that use each of the lakes to be treated and their abundance and life history stages at time of treatment (i.e., target and non-target species that occupy or use each lake). If species are present in some lakes that are not present in other lakes that should be identified as much as possible. If such baseline information is not available or unknown that should be clearly stated, although we believe such information should be obtained as much as is possible.

11.45 Are there any wetlands, springs, seeps and any other special or unique habitats on the edge of the lakes and treated streams that may be affected by the proposed project? If so, efforts to avoid adverse impacts to specialized aquatic habitats such as wetlands, springs, and seeps should be identified.

21. The DEIS states that substantial evidence collected from past rotenone treatments in the Flathead Basin indicates that rotenone would have no long-term impacts on amphibians in the project area, and that laboratory tests conducted by MDFWP indicate that antimycin would not have a negative effect on amphibians at the levels prescribed to kill fish (pages 2-25, page 2-26). The DEIS states that effects on amphibians from use of both compounds is "expected to be minimal or short-term" (page 3-23).

11.46 It does appear that impacts on amphibians from the application of antimycin are likely to be reduced, since antimycin is less toxic to amphibians than rotenone (pages 3-22 and 3-23). The proposed Fall application of piscicides should also reduce potential impacts on amphibians, since adult amphibians are affected less (page D-2), although Rocky Mountain tailed frogs are quite aquatic and even adult species could be significantly impacted by rotenone. We also note that potassium permanganate used for neutralizing the piscicides may also have toxic effects on amphibians and other aquatic species. We are concerned, therefore, that there may be potential for impacts to occur to amphibians and other aquatic species from the proposed project.

11.47 The DEIS states that if application of either compound show any anomalous effects on local amphibian populations, MDFWP would mitigate those impacts by replacing amphibians that may be impacted (page 2-26). It is stated that a follow-up survey for two years after treatment would be used to confirm whether amphibians are present within treated areas, and whether they need to be replaced. We are concerned, however, that few details are provided regarding follow-up surveys and amphibian monitoring before and after treatments. Lack of information on follow-up surveys and amphibian monitoring does not provide much assurance that any impacts on amphibians that may occur will be detected. More details regarding amphibian monitoring programs and

protocols should be provided to assure that any effects to amphibian species are detected, and then mitigated.

22. Information is presented in Appendix D that suggests that the temporary overabundance of dead fish immediately following treatment, and the subsequent temporary loss of fish supplies to predators that rely upon such food supplies will have little impact on bird or mammal populations because most animals can utilize other water bodies and sources for food. We understand that piscicide treatments will occur in the Fall (late September to early November) and that restocking will not begin until the following July, and then would occur annually until a population of westslope cutthroat trout is established (page 2-26). This would appear to leave a period of at least 8 or 9 months for each treated lake to be without fish and other aquatic species that are affected by the fish toxins and potassium permanganate, and perhaps it would take years to establish a healthy population of trout and other affected species. While treatments would be staggered spatially over ten years or more to reduce effects on other species as well as angling, it is surprising that lengthy periods of loss of aquatic life in the lakes will not impact the bird or mammal life near the lakes that may have developed a reliance upon fish and other aquatic species for food.

11.48

It is also not clear if the statement of predicted lack of impact on bird or mammals is based on actual monitoring of bird and mammal populations after actual piscicide treatments or on supposition. We are concerned that the MDFWP prioritizes monitoring on game fish, and monitoring for effects on other non-game species may be less attentive, so that effects on non-game species may occur without detection. There is a need to monitor for impacts to all species that may potentially be affected by the proposed use of toxic chemicals in these lakes and streams. We believe the BPA and MDFWP project monitoring and evaluation programs should include evaluation of impacts upon all potentially affected species, including bird and mammal populations that use aquatic species for food. Also, if impacts to bird or mammals from treatment are detected, efforts to mitigate or compensate for such impacts should be made.

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23. Monitoring and evaluation and an adaptive management strategy is critical to the success of project implementation, particularly since there is some uncertainty associated with the effects of the proposed activities. There should be a continuing process of planning, implementing, monitoring, and evaluating effects of project implementation, and adjusting implementation or mitigation where effects are not as predicted. It is only through monitoring of actual effects that occur that the BPA and MDFWP will be able to determine whether:

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1) goals and objectives are being met;
2) assumptions/indicators used in developing and implementing the conservation program are valid;
3) effects are as predicted (i.e., addressing uncertainties); and

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4) if mitigation is effective or should be increased or decreased or otherwise adjusted to be meet project goals and objectives.

11.51 A properly designed monitoring plan will also quantify how well the preferred alternative resolves the issues and concerns identified during scoping and DEIS review, and provides the flexible program for monitoring and feedback of monitoring results to improve predictive methodology and modify mitigation.

11.52 We are pleased that the DEIS indicates that post-treatment monitoring would be conducted (page 2-4), but we are concerned that the DEIS provides only general descriptions of monitoring activities that would be undertaken. Additional details of the monitoring efforts should be presented to assure that consistent and meaningful information/data and is generated to evaluate effects of project implementation. A well designed monitoring plan and adaptive management strategy is needed to assure that adequate monitoring is carried out and that results are evaluated and fed back to management for adjustments in project implementation and mitigation when and where necessary.

11.53 Specifically, we believe that information defining the follow-up actions to the rotenone and antimycin treatments (monitoring and evaluation of effects upon all potentially affected aquatic and terrestrial species, restocking plan for non-target indigenous species, contingency plans, plan for preventing reintroduction of non-native species) should be more completely developed and presented in the EIS. We believe monitoring and evaluation are equally as important as removing hybrid trout from the lakes and restocking with pure strain westslope cutthroat trout, since it is only through monitoring and evaluation that naturally functioning aquatic ecosystems will be restored and protected for the long-term.

11.54 We recommend that a monitoring and evaluation plan be completed and included as an appendix to the final EIS (and summarized in the Record of Decision) for the project. We believe that appending the monitoring and evaluation plan to the EIS provides the public with an opportunity to assist in developing and refining the elements of the plan which can potentially result in a better plan. We recommend that the following general components be included in the monitoring plan: repeat 4x

11.55 *Identification of Parameters or Resources to be Monitored* – The monitoring plan should specifically identify what is to be measured. For example, if amphibians are to be measured, the amphibian monitoring protocol should be identified. If water quality parameters (e.g., piscicide concentrations, potassium permanganate concentrations, aromatic solvent concentrations, pH, redox, dissolved oxygen, nutrients, temperature, alkalinity, other water chemistry parameters, physical and biological parameters, sentinel fish toxicity, etc,) are to be monitored, the monitoring methods and probable monitoring locations should be identified.

11.56 *Monitoring Methods to be Used* – The monitoring methods we are most familiar with are implemented using Standard Operating Procedures (SOPs) which outline how monitoring is done in a consistent, repeatable manner. Without SOPs, monitoring approaches could be applied haphazardly with the concomitant inconsistent reporting of the findings from that monitoring. We recommend that SOPs be contained in the monitoring plan or identified as being available by reference.

11.57 *Monitoring Frequency, Duration and Reporting of Results* – The monitoring plan should specify the frequency of the monitoring efforts and identify the time-frames within which results would be reported. We suggest that the monitoring plan identify the intended recipients of any monitoring reports and how the reports would relate to evaluating the relative successes and failures of project implementation. We also suggest that the plan identify the duration of the monitoring effort. We recommend that the duration of monitoring efforts be tied to the specific resources or parameters being measured and the reason for measuring them.

11.58 *Definition of Roles and Responsibilities of Involved Parties* – The monitoring plan should identify the parties that would be involved in the monitoring efforts and establish their respective roles (i.e., who will do what). This is particularly important in efforts that involve more than one agency and ensures that roles and expectations are established at the onset of the monitoring program.

Restocking

24. 11.59 The discussion at the top of page 1-11 regarding genetic diversity issues associated with restocking the treated lakes with M012 brood stock raises important concerns. These concerns include: a) potential reduction of westslope cutthroat trout genetic diversity by restocking with a single M012 genetic stock, which may result in a monoculture exhibiting little genetic diversity; and b) potential dilution of natural genetic uniqueness exhibited in adaptations and phenotypic variations of local westslope cutthroat trout. It is not clear to us how these important concerns are addressed with the restocking plan. We recommend that the FEIS explain more fully how these concerns will be addressed.

25. 11.60 Restocking of lakes with pure strain westslope cutthroat trout is discussed in Section 2.4.6 (page 2-26), and there is some discussion of restocking of amphibians. However, few specifics are provided regarding potential restocking of the lakes with other native non-target species that may be affected by treatments (e.g., macroinvertebrates, plankton, fish, amphibians, reptiles, birds, wildlife, etc,). We are concerned about potential loss of native non-target species, since proposed fish toxicants and potassium permanganate, used to neutralize the fish toxins, can be lethal to many aquatic organisms. The loss of non-target species and impacts on overall aquatic ecosystem integrity is an important

issue. We believe attention needs to be directed to potential impacts to non-target species.

11.61 If some indigenous species depend on isolated headwater habitat in the lakes or have evolved within the isolated headwater habitat they may not easily repopulate the lakes and may need assistance in repopulation. Restocking and other proposed efforts to restore or compensate for unavoidable impacts that may occur to all affected species should be more fully addressed. We have heard of potential longer term effects to invertebrates as a result of piscicide applications, most notably at Strawberry Reservoir in Utah where invertebrate populations have not been fully restored following rotenone applications there.

11.62 We are pleased that amphibians would be collected for release after treatment (page 2-21), and that MDFWP would replace amphibians that may be impacted (page 2-26). We also note that the DEIS states that tailed frogs could be collected from some streams prior to treatment and replaced following treatment (page 2-26), but does not definitively commit to such collection and restocking of tailed frogs and other amphibian species (i.e., the DEIS should say that all amphibian species will be collected from some streams prior to treatment and replaced following treatment). On page 3-23 it is also stated that efforts to mitigate impacts could include transplanting amphibians from neighboring populations, if necessary, and/or capturing specimens from within each project area before treatment then releasing them after it is complete. We believe such amphibian mitigation efforts should be committed to more definitively (i.e., "...would include transplanting amphibians...").

11.63 We also recommend that an accredited herpetologist be involved in supervising amphibian monitoring and evaluation and mitigation efforts. Amphibians have experienced significant decline in many habitats, and we feel particular precautions need to be taken to assure that populations of native amphibian species will be preserved and restored as much as possible in the treated waters.

26. 11.64 The potential effects of continuing to restock fish in lakes that were originally fishless should be more fully evaluated and disclosed in the EIS. It is our understanding that most or all of the proposed 21 lakes that are proposed for treatment were originally fishless. Is that correct? The DEIS says that MDFWP proposes to continue historical stocking of fish in these lakes order to maintain the current recreational and socioeconomic standards and to increase "biological integrity" by providing genetically pure westslope cutthroat trout to seed downstream areas (page 1-13). It is also stated (page 2-27) that unauthorized, illegal stocking may occur as it has in the past, and that such illegal stocking is likely to occur if MDFWP dose not restock the lakes that were originally fishless.

The introduction of fish to fishless lakes to create a recreational fishery can have adverse effects on the aquatic ecosystem. Predation by introduced trout consumes native

11.65 amphibians and benthic invertebrates and can reduce the population of larger zooplankton, which are effective grazers of the phytoplankton. With the restocking of fish to lakes that were originally fishless, additional biomass is added to the lakes that can influence nutrient cycling, and can have unintended negative effects to water quality and the biological integrity of the lake. It is not clear to us, therefore, if "biological integrity" is increased by introducing fish to lakes that did not originally have fish as part of their naturally functioning ecosystem. A case can be made that biological integrity or ecological integrity is compromised by introduction of fish to fishless lakes.

11.66 We recommend that restocking of fish to originally fishless lakes be based on monitoring and evaluation and full understanding of how lake ecology is affected by fish restocking. We recommend that a cautious approach to the trout restocking program be taken and that the stocking program be accompanied by a sufficiently robust monitoring and evaluation program to evaluate ecological effects of stocking fish in lakes that were originally fishless. Maybe some of the lakes should be left fishless for long-term monitoring and ecological comparison with lakes that are restocked?

11.67 We note that decisions were made in the past to introduce non-native trout to these lakes without careful, thoughtful evaluation, and full consideration of potential ecological effects. This led to the ecological problems creating the need for this proposed project. We think it would be appropriate to proceed cautiously in restocking of fishless lakes, and to base restocking decisions on careful evaluation of monitoring data and information and full understanding of potential ecological effects.

Public Health

27. 11.68 Thank you for including a discussion of public or human health effects associated with using rotenone and antimycin (beginning on page 3-54). The DEIS lists the elements used in deriving Clean Water Act Section 304(a) criteria as the basis for calculating the chronic exposure values for rotenone, antimycin and potassium permanganate. This is appropriate, but there are a few corrections that should be made as follows:.

Repeat 5k

11.69 - The new fish consumption value for the Clean Water Act 304(a) criteria is 17.5 grs/day instead of 6.5 grs/day (although you may be limited to 6.5 grs because that is the value in the current version of the State's WQB-7 criteria document).

11.70 - For rotenone, the document lists the appropriate Reference Dose (RfD), but we suggest you provide a citation for the value (i.e., EPA's IRIS document).

11.71 - For antimycin, the 0.5 mg/kg-day is a No Observed Effect Level (NOEL), not a Rfd. To arrive at a RfD, this value will have to be adjusted downward based on appropriate uncertainty factors. EPA's Regional toxicologist (Dr. Robert Benson) recommends an overall uncertainty factor of 3,000 rather than 300 based on the following:

1) a factor of 10 based on uncertainty in the animal to human translation;
2) a factor of 10 based on intra-human variability;
3) a factor of 10 based on the subchronic/chronic uncertainty; and
4) a factor of 3 based on data limitation (i.e., one study) = 3000 as the overall uncertainty.

The RfD for antimycin, then, would be 0.0002 mg/kg-day.

11.72 - For antimycin, the document notes that antimycin does not bioconcentrate, and therefore no bio-concentration factor (BCF) is used in the calculation of the human health value. We suggest that there be a reference supporting this conclusion (note: There are a number of toxicants, some metals for example, that do not bioconcentrate appreciably and are said not to concentrate, but even for these, the BCF is often greater than 1).

11.73 - For potassium permanganate, the document does not present a proposed human health water column value. Dr. Benson has calculated a value. Based on his calculation (see attached) the water column value should not exceed 0.8 mg/L.

11.74 It may be reasonable to base the chronic exposure scenario on the drinking water route of exposure only, since, as the DEIS explains, the fish targeted for removal will be killed quickly and the dead fish will be collected and disposed of (i.e., if the fish are quickly killed and disposed of, there would not appear to be much likelihood of bioconcentration and a fish consumption route of exposure). As a result, the chronic risk assessment calculation for the water column values might be based solely on the drinking water route of exposure. The reasonableness of this assumption, of course, would depend on a 100% (or close to) fish kill, dead fish collection and a short half-life for the chemicals used. Since the objective of a project such as this is generally 100% kill, limited potential for bioconcentration would seem to be a reasonable assumption.

11.75 Based on the adjustments discussed above (using the 17.5 grs consumption assumption for the rotenone "water+fish"), we suggest that appropriate toxicant target concentrations and human health values would be:

Toxicant	Water Column Target	Human Health Value	
		water+fish	water only
Rotenone	50 ug/L	18 ug/L	140 ug/L
Antimycin	7.5-8.0 ug/L or 4 ug/l*	-	7.0 ug/L
Potassium Permanganate	4.5 mg/L	-	0.8 mg/L

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* See our comment #3 above regarding uncertainty over the proposed target concentration of the antimycin active ingredient.

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Based on the figures in this table, the target concentrations for rotenone (50 ug/l) would be lower by greater magnitude than the estimated chronic "water only" human health value for rotenone (140 ug/l), more so than target concentrations and "water only" human health values for antimycin and potassium permanganate. This suggests that there may be a greater margin of safety in regard to human health risk for use of rotenone (at the proposed target concentrations) than for the other chemicals. Admittedly, this is an observation based on a limited amount of information and application of uncertainty factors, and it should also be noted that proposed target concentrations of these chemicals may be higher than shown to account for water chemistry and fresh water inputs. In any case, it is important that potential human health risks be considered along with other factors (e.g., rate of detoxification, quantity needed to kill fish, ease of bulk transport, toxicity to non-target organisms, piscicide availability, etc.,) in weighing the advantages and disadvantages of use of the chemicals.

11 76

In regard to acute toxicity and exposure, it appears that the DEIS uses LD50 values from the literature to estimate exposure scenarios that are highly unlikely to occur, such as drinking 12,000 liters of contaminated water in one day, as the basis for dismissing concerns about acute exposures. We believe it is inappropriate to use a lethal dose as the basis for reaching conclusions about public health protection. Also, the extreme exposure scenario approach to presenting the LD50 information may be misleading in a public disclosure document such as an EIS. There appears to a low amount of data with which to derive safe acute exposure levels for these chemicals. The EIS should disclose the uncertainty in human health exposure effects, and identify the mitigation measures and management practices that will be used to avoid and minimize human exposure.

Other Comments

28.

11 77

Thank you for identifying the permits and authorizations that would be needed to implement the proposed project (pages 2-14, 2-15), including the water quality exemption permitted under MCA 75-5-308 for short-term exemptions fro the purpose of elimination of undesirable and nonnative aquatic species (pages 3-26, 4-2, D-5). Generally the Montana DEQ establishes conditions that minimize risks to public health and the extent of exceedances of Water Quality Standards and the length of time during which an exceedance may occur. We believe the FEIS should also disclose the Montana DEQ's conditions for use of the MCA 75-5-308 water quality exemption.

11 78

Also, we did not see Clean Water Act Section 401 water quality certification included among the permits and authorizations discussed. It would be appropriate to discuss Clean Water Act Section 401 water quality certification that may be required from the Montana DEQ.

16

29. The EPA issued an Interim Statement and Guidance on Application of Pesticides to Waters of the U.S. in Compliance with FIFRA (Federal Insecticides, Fungicides, and Rodenticides Act) on July 11, 2003 that indicates that application of a pesticide to waters of the U.S., consistent with all relevant requirements of the FIFRA, does not constitute the discharge of a pollutant under the Clean Water Act. It is our understanding that this policy would cover use of piscicides for managing non-native fish species. Thus, EPA's current position is that the use of fish toxicants in waters of the U.S. for management of non-native fish would not require an NPDES permit (or in Montana- MPDES permit) under Section 402 of the Clean Water Act. You should understand, however, that EPA is still accepting public comments on this position, and that there may be case law with alternative views on such matters.

11.79

30. It is stated (page 3-61) that none of the alternatives would affect air quality, although a small possibility of odors from piscicides is noted. We note that there appears to be potential for emissions of air pollutants from aircraft and mechanical equipment used during transport, application and mixing of toxicants. These potential effects, while likely minor, should be assessed and disclosed, especially since emissions may occur in or near the Class 1 air quality areas of the Bob Marshall Wilderness and adjacent Glacier National Park.

11.80

17

18

11.80

Suggested Guidance for Application of Manganese RfD to Specific Scenarios

In applying the reference dose (RfD) for manganese to a risk assessment, it is important that the assessor consider the ubiquitous nature of manganese, specifically that most individuals will be consuming about 2-5 mg Mn/day in their diet. This is particularly important when one is using the reference dose to determine acceptable concentrations of manganese in water and soils. Following RfD/RfC Work Group deliberations, it was decided that having a single reference dose for total oral intake of manganese is most appropriate, but that guidance should also be provided as to how this reference dose might be applied in specific situations. It is recommended that the upper end of the range recommended by the NRC (5 mg/day, described below) be considered to represent a typical human intake from total dietary sources. For determination of acceptable concentrations of manganese in water and soil, then, the risk assessor would subtract this amount from the level specified by the RfD [i.e., 10 mg/day (RfD) - 5 mg/day (typical dietary intake) = 5 mg/day (remaining)]. For applying this number to a non-dietary scenario, it is also recommended that a modifying factor of 3 be applied. The rationale for this modifying factor is three-fold. First, while the data described in section I.A.4 of the IRIS file suggest that there is no significant difference between absorption of manganese as a function of the form in which it is ingested (i.e., food versus water), there was some degree of increased uptake from water in fasted individuals. Second, the study by Kondakis et al. (1989) has raised concerns for possible adverse health effects associated with a lifetime ingestion of drinking water containing about 2 mg/l manganese. While no data are available to quantify total intake of manganese, one would not expect this concentration of manganese in water to be a problem based on dietary information revealing intakes ranging from 2 to 10 mg/day that are not associated with adverse health effects. Third, although toxicity has not been demonstrated, there are remaining concerns for infants fed formula which typically has a much higher concentration of manganese than does human milk (see section I.A.4 of the IRIS file for further discussion). If powdered formula is made with drinking water, the manganese in the water would represent an additional source of intake.

Using the recommended appropriation of 5 mg Mn/day for dietary contributions and a modifying factor of 3 for exposures from soil and drinking water and a body weight of 70 kg, yields a value of 0.0238 mg/kg-day.

Exposure from water + Exposure from soil = (10-5)/(3x70) = 0.0238 mg/kg-day

Assuming no exposure from soil and a 70 kg person drinking 2 L/day, the suggested advisory level is:

0.0238 mg/kg-day x 70 kg x 1 day/2 L = 0.8 mg/L

19

20

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

SFFW-012
AUG 04 2004

File: M 03(I)

July 29, 2004

Bonneville Power Administration
DM-7, P.O. Box 14428
Portland, Organ 97293-4428

This letter responds to your June 18, 2004, request for comments from the U.S. Fish and Wildlife Service (Service) on the proposed Bonneville Power Administration (BPA) Draft Environmental Impact Statement (DEIS) for the South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program located in Montana. We appreciate the opportunity to review this project proposal and provide early comments. These comments have been prepared under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and the Endangered Species Act (16 U.S.C. 1531 et. seq.).

12.1 The Service reviewed an April 2002 biological assessment prepared by BPA and Montana Fish, Wildlife, and Parks (MFWP) for this project and concurred with the determination that the proposed project is not likely to adversely affect the threatened bull trout (*Salvelinus confluentus*), threatened grizzly bear (*Ursus arctos horribilis*), threatened bald eagle (*Haliaeetus leucocephalus*), threatened Canada lynx (*Lynx canadensis)* and the threatened gray wolf (*Canis lupus*) (UFWS, May15, 2002, letter of concurrence). Therefore, pursuant to 50 CFR 402.13 (a), formal consultation on the bull trout, or other federally listed species, was not required and incidental take of any threatened and endangered species within the project area is not anticipated. However, although incidental take is not anticipated, should unforeseen circumstances accidentally result in incidental take of a listed species, the Service must be notified. Further, if the final design of the project is changed so that it changes the effects on federally listed species, a revised biological assessment may be required.

12.2 The Service has reviewed the DEIS for the proposed project and supports the activities outlined in the DEIS that would reduce the threats to a native species that has been degraded due to anthropogenic factors, specifically westslope cutthroat trout.

12.3 The anticipated net effect of the proposed project will likely return portions of the Bob Marshall and Great Bear Wilderness areas to a condition that is consistent with the spirit and purpose of the Wilderness Act, and may help prevent westslope cutthroat trout being driven toward federal listing in the future.

12.4 The Service considers alternatives B and C as having the greatest potential of achieving westslope cutthroat trout conservation. We believe that MFWP is cognizant of the public's high regard for the qualities and values in designated wilderness areas, and that MFWP has provided the assurances that the Proposed Action represents a carefully considered attempt to balance

objectives that sometimes appear to conflict (i.e., protection of wilderness values opposed to conservation of rare species) with the reality of conducting business in a financially conscientious manner.

12-5 We wish to convey our appreciation of the agencies involved for actions that promote the conservation of westslope cutthroat trout. Projects such as what is proposed in the DEIS will be helpful in protecting the existing range and in increasing the number of populations of the westslope cutthroat trout. Such actions will be extremely beneficial for this rare species and we hope, will factor prominently into preventing the need to add this fish to the Secretary of Interior's list of federally threatened and endangered species.

The Service appreciates your efforts to incorporate fish and wildlife resource concerns into your project planning. If you have questions or comments related to this issue, please contact Dan Brewer at 406-449-5225, extension 216.

Sincerely,

R. Mark Wilson

R. Mark Wilson
Field Supervisor

Copy to:

MTFWP, Fisheries Division, Helena, MT (Attn: Chris Hunter)
AFR,-R6, MS 60140 (Attn: Mike Stempel)
FWS, Columbia River Native Fish Coordinator, Kalispell, MT (Attn: Tim Bodurtha)
FWS, Fish & Wildlife Management Assistance, Native Fish Branch, Bozeman, MT (Attn: Lynn Kaeding)

South Fork Flathead Watershed/Westslope Cutthroat
Trout Conservation Project

SFFW-013
AUG 12 2004

Telephone comment by Ginny Kuehn
8/11/2004

Doug Bell
76 Crestwood
Whitefish, MT 59937

406-862-0071

13.1 You need a sample of fish from Martin Lake tested before you poison them. I was asked to go with group of people to catch 25 fish as a sample (I was unable to go). The group didn't catch any fish to test.

13.2 The fish they have been catching from the lake look pure.

AUG-12-04 THU 10:16 AM STOLTZE LUMBER CO. FAX NO. 406 892 1612 P. 1

SFFW-014
AUG 12 2004

F. H. STOLTZE LAND & LUMBER CO

Lumber Manufacturers

Box 1429 • Columbia Falls, Montana 59912
Phone (406) 892-7000 • FAX (406) 892-1612
E mail info@stoltzelumber.com
www.stoltzelumber.com

August 12, 2004

S. F. Flathead Watershed Westslope Cutthroat Trout
Bonneville Power Administration-DM-7
P.O. Box 14428
Portland, Oregon 97293-4428

RE: South Fork Flathead Watershed Westslope Cutthroat Trout Program

Communications Committee:

In response to the recently published Draft EIS "South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program", F.H. Stoltze Land and Lumber Company offers the following comments.

14.1 1.) We understand the rationale behind this project and we think it is admirable for the BPA, USFS, and Montana Fish, Wildlife, and Parks to try to restore our native fisheries and eliminate introduced trout competition. Unfortunately, we introduced non-natives into these mountain lakes and watershed in the first place during past years and we may now be playing "God" again when we try to reverse those previous mistakes. We believe

14.2 it is highly unlikely that all hybridization and non-natives would be eliminated in this tremendously expensive project. It is unrealistic to think we can totally correct or "undo" our past.

14.3 If this project does continue as planned, we suggest that initial attempts be limited to one drainage or basin for a test case to be certain that it has the positive outcome you intend.

14.4 2.) The effect upon existing recreation opportunities is substantial ! This region has a rapidly expanding human population and the public is continuously demanding improved and increased recreational use days. The South Fork Westslope Cutthroat Trout Program would be harmful to the local public fishing opportunities as well as local outfitters'

14.5 livelihoods for nearly half a decade following the application of fish toxins. This effect

14.4 upon the loss of public recreation must be an important consideration during the EIS process.

Thank you for the opportunity to comment on your conservation program DEIS. Please keep us informed when a final analysis is presented and feel free to contact us for clarification of our comments.

Sincerely,

Chuck Roady

Chuck Roady
Lands & Resource Manager

Montana Department of
ENVIRONMENTAL QUALITY

Judy H. Martz, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • Website: www.deq.state.mt.us

SFFW-015
AUG 12 2004

10 August 2004

Communications
Bonneville Power Administration – DM –7
P.O. Box 14428
Portland, OR 97293-4428

RE: Comments pertaining to Draft Environmental Impact Statement DOE/EIS-0353, South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program

Dear BPA:

The following are Montana Department of Environmental Quality (DEQ) comments pertaining to the Draft Environmental Impact Statement DOE/EIS-0353, South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program. DEQ is responsible for the maintenance, protection and improvement of water quality and designated uses and authorizes or permits discharges to waters of the state that may affect water quality and designated uses.

General Comments

15.1 The Department has reviewed comments submitted by the Montana Office of the EPA dated July 29, 2004, and fully concurs with those comments. The only minor exception pertains to Human Health comment 27. Montana has not adopted the new EPA fish consumption value of 17.5 g/day. The adopted fish consumption value for calculating Human Health criteria is 6.5g/day. See the extensive comments previously submitted by the Department to the Department of Fish, Wildlife and Parks during the internal draft review pertaining to the calculation of Human Health criteria.

15.2 Since water quality sampling for rotenone may be difficult and a laboratory method for antimycin does not exist, instead of chemical monitoring, DEQ requests that biological monitoring for lakes and streams be performed at least during the first two years of the project. According to Sections 2.4.2.2 and 2.4.5 pre- and post- biological surveys are already planned and some of the information has been collected from lakes within the project area (Sections 3.3.2.2 and 3.3.3.1).

15.3 DEQ requests that information from pre- and post- biological sampling be organized into a report and submitted to Department after each year of treatment to document that no adverse short-term or long-term impacts to non-target species will occur. This

information will also justify allowing the project to continue if the information demonstrates water quality and beneficial uses will be protected.

Specific Comments

Chapter 1

15.4

1.5.4 In addition to the "308 Authorization" DEQ has §401 Certification authority for federal permits (i.e., Forest Service special use permits) that may cause a discharge to state waters. The §318 "Turbidity Authorization" should also be mentioned because construction of dams, weirs or other structures (that cause sediment or turbidity increases) may be installed during the life of the project.

Chapter 2

15.5

2.4.24 Add provisions for the §401 Certification and possible §318 Authorization. The 308 Authorization conditions listed are an example; additional conditions, such as biological monitoring, may be required by DEQ.

Chapter 3

3.4.1 Typical stream types found in the project area generally have gradients from 4 to 10percent, and are characterized by straight (nonsinuous) cascading reaches with ~~frequently~~ closely spaced pools. Many of the outlet streams associated with the lakes in this project have large waterfalls immediately downstream of the lakes, some reaching 200 feet tall. ~~Also common are~~ Streams with gradients from 2 to 4 percent; ~~these streams~~ usually occupy narrow valleys with gently sloping sides.

15.6

There are no federal or Montana numeric water quality standards for rotenone or antimycin. However, the Montana Water Quality Act has narrative standards for water quality that prohibit the introduction of substances into waters that are injurious to aquatic life or that affect exiting uses. Under this project, MFWP would apply piscicide for the expressed purpose of killing unwanted fish. ~~There may be some minimal and short-term impacts to other aquatic organisms, but the MDEQ will permit an exemption for this activity under section 75-5-308 of the MCA.~~ The Montana WQA in §75-5-308 MCA and the EPA through FIFRA acknowledge the use of pesticides under special circumstances is beneficial. FIFRA registration and label instructions reduce the potential for impacts to non-target organisms or long-term impacts and protects human health. Conditions imposed by DEQ when it issues a "308 authorization" will add an additional level of protection to non-target organisms and designated beneficial uses. The conditions may include limitations to the time of year the piscicides are applied, monitoring treated waters to ensure detoxification of the piscicides is complete, biological monitoring and ensuring that the duration of toxic conditions is as short as possible, among others.

3.4.3.1

Add a section describing the movement and detoxification of Antimycin by organic sediment.

Add a section about the proper management of Rotenone.

15.7

~~The only downstream users of water would be outfitter and private hunter camps.~~ Impact to drinking water use (human health) and livestock uses will be minimized by temporary closure of the project areas; and proper signing and advance notification that would allow users to find alternate sources for water if necessary.

~~Some livestock watering would be expected at some of these downstream locations.~~ A number of other precautions ~~factors would~~ will aid in the reduction or elimination of ~~project areas users'~~ exposure to these compounds by wildlife and other aquatic life : proper containment of piscicide treatments (low concentrations used for fish killing do not have harmful effects on mammals); rapid detoxification of both compounds in flowing streams and the treated lakes; ~~temporary closure of the project areas; and proper signing and advance notification that would allow users to find alternate sources for water if necessary.~~

Impacts to agricultural uses in the project areas is expected to be slight to no effect. Recreation (swimming) use impact will also be slight because of the time of year and cold water conditions when the treatments will be applied. Recreational fishing will be impacted until the restocking efforts are complete.

Chapter 4

15.8

4.1.5

Add sections discussing the §401 Certification and possible 318 Authorization.

Appendix D

Rotenone Effects

15.9

Describe in detail the environmental factors affecting the decomposition of Rotenone and Antimycin. Discussions with FW&P staff have described toxic conditions in a Rotenone treated lake well in the winter following treatment. Toxic conditions to aquatic life for months after treatment probably will not be considered short term as required in the 308 authorization. Outlet streams will have to be monitored and detoxified until a no effect level is reached.

Regulatory Status

15.10

Use the correct citations. The citation for 17.30.637(3)(b) does not exist. This was brought to your attention during the internal draft review comments.

Municipal Wastewater Applications

15.11 …Hydrogen sulfide is ~~one the~~ a deadly ~~gases~~ gas that can be formed in the collection and
treatment of municipal wastewater…

Cleanup

15.12 … sub-sample of the dead fish is collected…

Aesthetics is an important reason to clean up the dead fish, but odor control, bacteria and fungus control and removing the potential food source for bears, eagles and other wildlife to consume rotenone killed fish is even more important.

For more information please contact Mr. Christian J Levine, ph 406-444-0371, email clevine@state.mt.us.

Sincerely,

Christian J Levine
Environmental Science Spec
Water Quality Standards Section

SFFW-016
AUG 12 2004

Comment received at Public Meeting 7/12/04, Kalispell, MT

WARREN ILLI: Basically just two comments at this point. First is that we think that any lake that is poisoned needs to be restocked with -- to preserve that fishery. We would not support poisoning out the existing fish and keeping the lake fishless. 16.1 16.2

SHERI J. HAZLETT REPORTING, INC.
P.O. Box 8853 ~ Kalispell, Montana 59904-1853
406-752-4645 ~ 1-888-292-7822

The second comment is the use of mechanized equipment in the wilderness or Jewel Basin hiking area. We think it ought to be done in a way that's relatively cost effective as well as maintaining the wilderness qualities and the hiking qualities of the area. 16.3

So in summary, we support using some mechanized equipment. It seems to be a reasonable balance between maintaining the wilderness qualities as well as being cost effective in dealing with the fishery issue.

SFFW-017
AUG 1 2 2004

Comment received 7/12/04 at Public Meeting Kalispell

PROCEEDINGS

ARLEN ROLL: I fully support the project that's been presented, with one exception. The exception is Handkerchief Lake. It's my view that the resource; that is, the grayling, are of two high of value to be poisoned out. I appreciate the fact that they're going to trap and hold and restock, but it's my opinion that far too many grayling will escape the traps and be killed. And I just don't think that's the approach we should take based on the value of the grayling in our current societal situation.

17.1

I guess I would support poisoning the Graves Creek from the outlet down to the reservoir, which is where, in my view, the majority of the trout are.

17.2

I first began to fish Handkerchief in 1958 and have caught very, very, very few trout in the lake itself and lots and lots and lots of grayling. And I just think it's an inappropriate decision, and I'd like to speak for the fish and say, let's just bypass Handkerchief Lake on this one and go ahead with the remainder of the project and just leave that alone.

17.3

Spiering, Colleen A - KEC-4

SFFW-018
AUG 12 2004

Tim Taylor

From: ~~alan brown~~ [tintn8hr@hotmail.com]
Sent: Thursday, August 12, 2004 7:05 AM
To: Spiering, Colleen A - KEC-4
Subject: High mountain lake poisoning

Dear,Colleen Spiering:

18.1 I would like to voice that there be no fish removal or fish toxins used in the high mountain lakes.

18.2 I would like to see Montana Fish Wildlife & Parks plant pure strain westslope Cutthroat Trout on existing populations and bring the ninety to ninety-five percent (90 / 95%) genetically pure fish population up genetically by using a swamp out method instead of killing all the wild Cutthroat. This would be a lot more beneficial than using a fish toxin, and keep the water quality untouched by a foreign chemical in the water / drainage.

18.3 Not to mention the incidental killing of other aquatic life and small animals using the water to drink.

18.4 There is an artical in the Hungry Horse News from a former Biologist Joe Huston discussing this matter and was very concerned with the notion of MTFWP position on the removal of all these fish.

18.5 Montana Fish Wildlife & Parks has lost a lot of credibility in recent years and sportsman like myself would like to see them quit messing with the fish populations in region 1.

Thank you for your time.

Tim Taylor

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1

Page 1 of 1

Spiering, Colleen A - KEC-4

SFFW-019
AUG 12 2004

From: shelfie [shelfie@cyberport.net]
Sent: Tuesday, August 10, 2004 2:11 PM
To: Spiering, Colleen A - KEC-4
Subject: Re: EIS

Dear,Colleen Spiering
19.1 I would like to see Montana Fish Wildlife & Parks plant more pure strain westslope Cutthroat Trout on existing populations and bring the ninety to ninety-five percent (90 / 95%) pure fish population up genetically instead of killing all the wild Cutthroat. This would be a lot more beneficial than using a fish toxin, and keep the water quality 19.2 untouched by a foreign chemical in the water / drainage.
19.3 Not to mention the incidental killing of other aquatic mammals and small animals. Montana Fish Wildlife & 19.4 Parks has lost a lot of crediblity in recent years and sportsman like myself would like to see them quit messing with the fish populations in region 1.

19.5 I voice that there be no fish removal in the high mountain lakes.
Thank you for your time.
Shelly

----- Original Message -----
From: Spiering, Colleen A - KEC-4
To: shelfie
Sent: Friday, June 25, 2004 1:17 AM
Subject: RE: EIS

Items were mailed on 6/18. If you have not received them yet, please let me know.

Colleen Spiering
Environmental Specialist
Bonneville Power Administration KEC-4
PO Box 3621
Portland, OR 97208-3621
503-230-5756
503-230-5699 (FAX)
503-628-0295 (Home Office)

-----Original Message-----
From: shelfie [mailto:shelfie@cyberport.net]
Sent: Sunday, June 20, 2004 10:15 PM
To: Spiering, Colleen A - KEC-4
Subject: EIS

Just courios if the packet were sent out regarding the poisoning of south fork watershed in Kalispell Mt.
Sent my card in for printed pages and the cd of the rest of eis.
Shelly Toavs
182 Valley View Dr.
Kalispell Mt. 59901
thank you

8/12/2004

Spiering, Colleen A - KEC-4

SFFW-020
AUG 12 2004

From: kari and bob cole [karbo@montanasky.us]
Sent: Wednesday, August 11, 2004 4:01 PM
To: Spiering, Colleen A - KEC-4
Subject: South Fork Flathead Watershed Westslope Cutthroat TroutConservatiin Program

20.1 Have attended a meeting at FWP and read the DEIS. Please use alternative B.

Not sure I agree with all of your comments in the "question and answer" addendum to the summary of the DEIS but is OK in general.

20.2 Think the idea of moving some of the grayling from Hankerchief Lake during the poisoning is good, perhaps could move a few more than planned? I worry you might interrupt the spawning, perhaps similiar to Rogers Lake where no one seems to know what is altering the spawning there.

Bob Cole
1417 Hwy 2 W.
Kalispell, Mt,
59901

1

SFFW-021
Aug 12 2004

South Fork Drainage Fish Comments

21.1 I don't think we should destroy anymore fisheries by poisoning lakes in the drainage. Most of us fishermen like to catch cutthroat or any trout. I would guess 99.9% of us don't care if the fish we catch has papers or is possibly a pure strain.

21.2 Seems to me another way to create jobs and destroy more fishing. There is no way there is ever any reason for catch and release if the fisheries program is working. A perfect example of a failed program is keeping fish under 10" along with the salmon that disappeared.

Joe Fagan
862-3936
Whitefish

21.3 Walleye Comments:
Don't poison any more of Montana's waters with pike/walleye-Fort Peck and Yellowtail reservoirs are places for people to already fish for them.

SFFW-022
Aug 12 2004

Joe Moody
PO Box 337
Col. Falls, MT 59912

Dear Mr. Vashro,

22.1 Just finished reading the impact statement on the Westslope Cutthroat Conservation program. Your plan seems well thought out, although given the depth of some lakes I'm not sure fish kill will be as thorough as you would like.

22.2 In principle I'm still opposed to the project. I've spent a lot of time in my 64 years in the Flathead hiking and fishing in these areas and I can tell you that you are going to kill a lot of beautiful fish in some of these lakes. I also have a hard time with wiping out a healthy grayling population in Handkerchief Lake.

22.3 Given that there are already several lakes in the area which hold pure Westslope Trout, I question if they really are in danger of being listed as endangered and I wonder why every lake has to contain nothing but pure Westslope Cutthroat.

22.4 I've never been one to be critical of your department, I've always found your folks to be friendly, courteous, and helpful in my dealings with them and I think you are trying your best to do a very difficult job. In this case, however, I wish you would scale back and downsize the scope of the project. I really think it is being overdone and the money could be better spent.

Sincerely,

Joe Moody

South Fork Flathead Watershed/Westslope Cutthroat
Trout Conservation Project

SFFW-023
AUG 13 2004

Telephone comment by Ginny Kuehn
8/12/04

Richard Tagg
9290 Butler Creek Road
Missoula, MT 59808

406-549-4333

Commenting on the draft EIS. About the poisoning of hybrid fish in the South Fork of the Flathead drainage. I have read the DEIS that you sent. I don't entirely disagree with the scope of the project. But I have a specific concern that is George Lake which I have enjoyed going into and fishing several times with friends and family. My point would be, why destroy such a huge resource of beautiful fish when I seriously question how many of any fish survived the journey out of George Lake, down George Creek and into the South Fork. There are a couple of falls and in the DEIS you made a comment that of course fish can not get up into George Lake from this tributary and I seriously doubt how many if any would survive that journey out of it. I am 60 years old and I would like to be able to continue to go in with my friends and family to fish George Lake.

23.1 23.2

Thank you very much.

file:///Y|/EP3043%20-%20BPA/Flathead%20EIS/South%20Fork%20EIS/D...be%20Westslope%20Cutthroat%20Trout%20Conservation%20Program.htm

SFFW-024

From: Dennis Hoffman [dkhoff@montanadsl.net]
Sent: Tuesday, August 17, 2004 1:53 PM
To: BPA Public Involvement
Subject: Comments regarding the Westslope Cutthroat Trout Conservation Program

I have reviewed the above program and I have the following comments:

I am alarmed by the subject and scope of the proposed project. The need to establish a pure cutthroat species does not strike me as necessary since your on information states that the subject lakes originally had no fish in them. If you are trying to go "Pre-European", restocking with any species is unnecessary. 24.1

The vast majority of tax payers and voters could not differentiate between a cutthroat and a sore throat. This project appears to have all the markings of appeasing a tiny group of elitist conservationists while providing work for some misled wild life professionals. 24.2

I am not aware of any such project having any long term success as the interbreeding will undoubtedly re-occur naturally or through the acts of detractors. 24.3

The slaughter of thousands of fish to appease the whims of a few is not in the best interest of conservation or society. 24.4

What next? Slaughter all the ring necked pheasants and Hungarian partridge?

Please stop this nonsense. Cherry Creek and Bad Canyon are enough of a tragedy.

Dennis E Hoffmann
246 Wintergreen Lane
Bozeman MT 59715

file:///Y|/EP3043%20-%20BPA/Flathead%20EIS/South%20Fork...tslope%20Cutthroat%20Trout%20Conservation%20Program.htm9/16/2004 5:32:39 AM

SFFW-025
AUG 17 2004

Communications
Bonneville Power Administration- DM- 7
PO BOX 12999
Portland, OR 97212

Project: South fork flathead watershed westslope cutthroat trout conservation program

Dear Bonneville Power Administration:

I am responding to your request for comments for the deis of the above project. I am currently a graduate student attending the University of Montana researching fisheries health. I am very interested in this project due to its location and purpose. It appears that this project will preserve the integrity of the current westslope population while creating a location to restore a swindling statewide population. 25.1

I support the proposed action of removing non-native trout from the lakes in the south fork river drainage. My approved action would be action B, or the proposed action. My only concern would be with the introduced populations not establishing a healthy population in the lakes within the 10 year period and planting fish in historically fishless lakes. I am not concerned with angling pressures and would be interested in the process the ecosystem takes when fish are removed and restocked. 25.2 25.3 25.4

Please keep me informed on the progress of this project.

Sincerely,

Lindsay M. Arthur
2310 Wylie Ave.
Missoula, MT 59801

PLEASE USE ABOVE ADDRESS FOR CORRESPONDENCE

SFFW-016
AUG 20 2004

Swan View Coalition

"People Helping People Help the Earth"
3165 Foothill Road, Kalispell, MT 59901
406-755-1379 www.swanview.org

August 16, 2004

Communications
Bonneville Power Administration-DM-7
PO Box 14428
Portland, OR 97293-4428

Re: South Fork Flathead Westslope Cutthroat Trout Conservation Program

Dear Folks at Bonneville;

Please accept the following comments on the above DEIS on behalf of Swan View Coalition.

26.1 We have taken a look at the DEIS and ask that you revisit our scoping letter of June 20, 2003. We still have the same concerns and find that the DEIS fails to put them at rest.

26.2 In a nutshell, we remain supportive of the restoration of native fish but doubt this project/program will be of much value in this regard. The program would appear to be largely ineffective in totally eliminating non-native and hybrid species of fish so it is likely they will return to these waters over time. Moreover, the program is

26.3 intended largely to attempt to establish pure strain westslope cutthroat in lakes that were historically fishless anyway - so how is this to truly be viewed as restoration?

26.4 The lack of a sound monitoring program integrated in a step-by-step manner that moves forward from one lake or stream to the next only after success has been firmly established makes us all the more doubtful that this is a wise expenditure of time and money.

26.5 With these doubts in mind, we simply cannot lend our full support to a program that would, according to some alternatives at least, require the use of motorized vehicles and equipment in Wilderness areas, Jewel Basin Hiking Area, and other areas where motorized use is otherwise prohibited or a non-motorized backcountry setting is expected.

Thank you for this opportunity to comment,

Keith

Keith J. Hammer - Chair

SFFW-027
Aug 20 2004

Joe Moody
PO Box 337
Col. Falls, MT 59912

Dear Sir,

Finished reading your impact statement on the Westslope Cutthroat Conservation Program. It seems your plan is well thought out, however given the depth of some lakes I'm not sure fish kill will be as thorough as you like. 27.1

In principal I'm still opposed to the project. I know from personal experience that you are going to kill a lot of beautiful fish in some of those lakes—4 to 5 pounders. I also don't know how you justify wiping out a healthy grayling population in Handkerchief Lake. 27.2

Given that there are already some lakes in the area that hold pure Westslope Cutthroat I question why every lake has to be for pure Westslope Cutthroat. 27.3

I urge you to downsize the scope of the project, I think the money could be better spent. 27.4

Sincerely,

Joe Moody

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

SFFW-028

From: wallner@centrytel.net
Sent: Thursday, August 19, 2004 9:12 PM
To: BPA Public Involvement
Subject: Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

Montana
Mime-Version: 1.0
Content-Type: text/html; charset=UTF-8
Content-Transfer-Encoding: 7bit
X-Mailer: ColdFusion MX Application Server

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project Montana
View open comment periods on http://www.bpa.gov/corporate/kc/home/comment.cfm

Fred Wallner

wallner@centrytel.net
406-752-3699
40 Scovel Lane
Kalispell MT 59901
 28.1

I have mixed feelings about this project. Your intentions are good... your odds of success are not so good. Lakes the size of George, Woodward, or Sunburst are extremely hard to poison out successfully. You will have no way of knowing for years whether or not it was a success. In the meantime you spoil some first class fisheries in these lakes. You also have to wonder what the risks to the genetic pool in the South Fork really are. Those fish have 28.2 been in the lakes for a lot of years. A lot of money has been thrown at the problem with the various studies, the overstock program, etc. Maybe that money could be spent by the BPA better somewhere else. 28.3

28.4

Last, but not least, you have the distinct possibility of some "bucket biogist" dumping a bucket full of fish into the system at some time in the future. I suspect that you're going to upset some people when you poison out their favorite lake. Thanks for listening... RETHINK this isssue. 28.5

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

SFFW-029

From: AnonymousComment@somewhere.com
Sent: Friday, August 20, 2004 7:41 AM
To: BPA Public Involvement
Subject: Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

Montana
Mime-Version: 1.0
Content-Type: text/html; charset=UTF-8
Content-Transfer-Encoding: 7bit
X-Mailer: ColdFusion MX Application Server

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project
Montana
View open comment periods on http://webit2/corporate/kc/home/comment.cfm

DAVE WILLIAMS

No E-mail Address Submitted
406 7561493
350 SUMMIT RIDGE
KALISPELL MT 59901
 29.1
I am opposed to the poisoning of the roughly 20 lakes in the South Fork of the Flathead River system, to remove the hybrid trout. I believe the impacts to the total river system is not fully evaluated. Some of those lakes have fantasic fishing opportunities that will be changed for many years. This proposal will add more mistrust between anglers and MT. FWP. 29.2

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

SFFW-030

From: coopdog7@earthlink.net
Sent: Friday, August 20, 2004 8:07 AM
To: BPA Public Involvement
Subject: Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

Montana
Mime-Version: 1.0
Content-Type: text/html; charset=UTF-8
Content-Transfer-Encoding: 7bit
X-Mailer: ColdFusion MX Application Server

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project
Montana
View open comment periods on http://www.bpa.gov/corporate/kc/home/comment.cfm

Gordon Johnson
flathead native
coopdog7@earthlink.net
4067512407
57 Morning Glory Lane
Kalispell MT 59901
 30.1

I have tramped these hills and fished these waters for almost 50 years and I see no reason try to alter what has been fine for 50 years. The likelyhood that these lakes will stay genetically pure is remote. Just look at what has 30.2 happened to all the other lakes around here with the introduction of other species both by illeagal of legal means. How do you suppose they became slightly impure today? My choice is to keep these lakes as they are now with intermittent stocking of pure westslope cutthroat and this will gradually improve the purity. 30.3

SFFW-031

American Wildlands

40 East Main Street, Suite 2, Bozeman, Montana 59715
P.O. Box 6669, Bozeman Montana 59771
email: info@wildlands.org
(406) 586-8175; fax 586-8842

Communication
Bonneville Power Administration
P.O. 14428
Portland, OR 97293-4428

August 20, 2004

RE: Comments on the DEIS for South Fork Flathead Watershed Westslope Cutthroat Trout Restoration Plan

Dear Communication Staff:

Thank you for the opportunity to comment on the DEIS for the Westslope Cutthroat Trout (WCT) restoration plan in the South Fork Flathead Watershed. These comments are submitted on behalf of American Wildlands (AWL), a non-profit conservation organization dedicated to protecting the wildlands, wildlife, and aquatic integrity of the U.S. Northern Rockies. Our organization has been working on federal land management and native aquatic species issues for over 25 years.

American Wildlands was one of the organizations that first petitioned to list the WCT as a threatened species under the Endangered Species Act (ESA) in 1997. Our decision to file for ESA listing stemmed from the fact that populations of WCT have been in steady decline throughout their historic range due to a variety of pressures including, habitat destruction from logging, grazing and mining, urban development, agricultural practices, the operation of dams and past and ongoing stocking of nonnative fish species.

31.1 American Wildlands continues to strongly support the protection and restoration of both pure populations of WCT and their native habitat. However, we do have several concerns regarding the current BPA proposal for the South Fork Flathead Watershed:

Restocking of Fishless Lakes

31.2 Several of the twenty-one proposed project lakes were historically fishless before Montana Fish, Wildlife and Parks began an aggressive non-native stocking strategy in the 1950's. We would like to see that upon removal of all non-native fish species, each of the historically fishless lakes remain that way. We support the reintroduction of WCT only to those project lakes and streams where WCT historically inhabited. AWL does not believe it is appropriate to "restore" westslope cutthroat trout to lakes and streams where the fish never naturally occupied. We also would like

31.3 to see the project focus first on closed basin lakes, as past projects have shown the difficulty of eradicating hybrids in open basins.

Use of Mechanized Equipment in Wilderness Areas

31.4 The federal Wilderness Act defines a wilderness as "an area where the earth and its community of life are untrammeled by man…which is protected and managed so as to preserve its natural conditions…with the imprint of man's work substantially unnoticeable." The utilization of

helicopters, planes and motorboats in a wilderness area violates the directive of the Wilderness Act, as the law specifically prohibits the use of motorized equipment unless use demonstrates the minimum necessary for protecting the wilderness resource. American Wildlands therefore does not support the proposed alternative to use motorized mechanization to transport materials, chemicals and staff to the restoration sites. In all project areas within designated wilderness, we would like to see utilizations of solely non-motorized transport. In non-wilderness areas, we support the use of helicopters to transport materials, as this method would avoid conflicting with current Forest Service management prohibiting pack stock in the Jewel Basin.

Neighbor Stock

31.5 The Montana Department of Fish, Wildlife and Parks (FWP) should develop a local "near neighbor" stock of westslope cutthroat trout for restoration purposes. Although it does take time to develop the near neighbor stock, we prefer to see WCT reintroduction take place in its historical habitat with near neighbor stocks and not MO12 hatchery fish that lack the 100 percent locally developed genotype.

31.6 None of the lakes within designated wilderness should be stocked with MO12 fish.

Project Monitoring

31.7 The Final EIS must disclose specifically how the applications and affects of toxins and piscicide will be monitored.

31.8 The document should detail how undesirable genetic drift will be slowed in the South Fork watershed and eliminated in specific drainages.

31.9 The FEIS should disclose the specific impacts of the project on each wilderness lake and the impacts to recreational/angling usage.

31.10 In addition, the project must be carefully monitored to ensure that bull trout populations associated in downstream drainages from the treated lakes are not adversely impacted by the treatment. The FEIS must clearly define how the downstream detoxification stations will function and ensure that bull trout and other native downstream species of concern are protected.

Application of Toxins

31.11 We prefer the application of antimycin to remove the hybrid fish species from all the proposed project areas. As antimycin requires less volume per area treated than other piscicides such as rotenone, fewer trips and pack animals are required which would limit associated impacts. In addition, antimycin detoxifies more rapidly in streams after oxidation and photolosis, thus we prefer the use of this toxin to ameliorate any possible impacts on downstream bull trout and other native aquatic species.

Thank you again for considering our comments on this proposal. We look forward to reviewing the final decision that reflects the above suggestions.

Sincerely,

Amy Stix
Water Program Coordinator

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

From: AnonymousComment@somewhere.com SFFW-032
Sent: Friday, August 20, 2004 10:26 AM
To: BPA Public Involvement
Subject: Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

Montana
Mime-Version: 1.0
Content-Type: text/html; charset=UTF-8
Content-Transfer-Encoding: 7bit
X-Mailer: ColdFusion MX Application Server

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project
Montana
View open comment periods on http://webit2/corporate/kc/home/comment.cfm

Eric Rozell

No E-mail Address Submitted
752-4862
170 Arbour Drive
Kalispell Mt 59901
I am apposed to poisoning the listed lakes in your proposal. Due to the size and water volume in many of these lakes the cost would be huge. There is also no guarantee of 100% success. I feel available dollars could be used more wisely on productive projects.

32.1
32.2
32.1

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

SFFW-033

From: AnonymousComment@somewhere.com
Sent: Friday, August 20, 2004 10:53 AM
To: BPA Public Involvement
Subject: Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project

Montana
Mime-Version: 1.0
Content-Type: text/html; charset=UTF-8
Content-Transfer-Encoding: 7bit
X-Mailer: ColdFusion MX Application Server

Comment on South Fork Flathead Watershed/Westslope Cutthroat Trout Conservation Project
Montana
View open comment periods on http://webit2/corporate/kc/home/comment.cfm

Richard Smith

No E-mail Address Submitted
675-8977
5333 Doubletree Lane
Polson MT 59860
I have never, in 50 years of fishing in Montana, heard of a more stupid, ill-conceived idea than the present one of poisoning the lakes in the headwaters of the South Fork drainage. You are going to be destroying a precious resource that sportsmen have paid for with their yearly fees. Please do not go forward with this plan.

33.1

file:///Y|/EP3043%20-%20BPA/Flathead%20EIS/South%20F...20EIS/DEIS%20Comments/SFFW-033%20Richard%20Smith.htm9/16/2004 3:29:05 AM

South fork cutthroat comments

SFFW-034

AUG 20 2004

Kuehn, Ginny - DM-7

From: Arlene Montgomery [arlene@wildswan.org]
Sent: Friday, August 20, 2004 10:59 AM
To: Kuehn, Ginny - DM-7
Subject: South fork cutthroat comments

Following and attached as a Word document are Friends of the Wild Swan's comments on the South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program. I also sent a hard copy of them to you in today's mail. Please acknowledge receipt of this e-mail. Thank you.

August 20, 2004

Communications
Bonneville Power Administration - DM-7
P.O. Box 11428
Portland, OR 97293-4428

VIA E-MAIL TO: comment@bpa.gov

Please accept the following comments on the South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program on behalf of Friends of the Wild Swan. Friends of the Wild Swan supports native restoration however, this proposed project violates the Wilderness Act, is risky and does not restore native cutthroat trout. 34.1

NATIVE FISH RESTORATION

o The money being spent on this project would better serve native fish restoration if it was used to implement the road reclamation authorized under the Forest Service's Paint Emery and Bent Flat Records of the Decision. Road reclamation has proven benefits to native fish and their habitat. The Paint Emery project is located in westslope cutthroat trout streams in the South Fork Flathead drainage and the environmental analysis is completed. However, funding is lacking to reclaim the remaining 72 miles of road that fall under this decision. 34.2

The Bent Flat project is also located in the South Fork Flathead drainage and the environmental analysis is completed but funding is not available to reclaim the remaining 8 miles of road that fall under this decision. It would be consistent with Hungry Horse mitigation and restoration of cutthroat trout habitat to fund and implement these projects.

CUMULATIVE EFFECTS

o The DEIS fails to disclose that most suppression projects are not successful and could require repeated applications of the toxins into these lakes and streams. The Montana Bull Trout Scientific Group's paper Assessment of Methods for Removal or Suppression of Introduced Fish to Aid in Bull Trout Recovery concluded that toxicant use in lakes is more difficult in lakes with springs and inlet and outlet streams. And typically the suppression effort must be repeated every few years because the adversely interacting species usually return to pre-suppression levels. Repeated use of toxicants on these lakes was not analyzed in the DEIS nor disclosed as a possibility. The DEIS does not disclose whether these lakes are spring-fed and the increased difficulty of attempting to eradicate fish from these lakes. 34.3

Regarding the use of toxicants in streams the Scientific Group stated that typically toxicants needed to 34.4

8/20/2004

34.5 be used for two years in a row on a reach of stream. The DEIS does not analyze the cumulative effects of the repeated use of toxicants in these streams, the success rate of using toxicants in streams and the impacts of repeated use on amphibians, invertebrates and other wildlife.

34.6 o The DEIS fails to disclose that rotenone can persist for up to five months. Higher water temperatures will degrade the rotenone faster. These high mountain lakes do not get warm even in the summer so it should be assumed that it takes longer for the rotenone to break down in these lakes. (Hinson 2000)

34.7 o The DEIS fails to disclose that potassium permanganate can leave fish vulnerable to bacterial and fungal infections. This is a serious effect to downstream native fish populations. (Hinson 2000)

WILDERNESS

34.8 o Deploying poison in a wilderness area is inconsistent with the Act's legal mandate to preserve wilderness areas in a condition that is "untrammeled" by man. Although National Forest Service regional foresters are given the authority to approve the application of pesticides in wilderness areas, this should be reserved for emergencies that threaten human health or the environment. Other, non-toxic methods have not been tried. Given the health and environmental effects of using these toxicants, they certainly should not be used in a wilderness area.

34.9 o Use of helicopters, planes and motor boats in the wilderness area violates the Wilderness Act. The Wilderness Act specifically prohibits the use of motor vehicles unless their use is the minimum necessary for protecting the wilderness resource. Wilderness is "...an area where the earth and its community of life are untrammeled by man...retaining its primeval character and influence...protected and managed so as to preserve its natural conditions." This proposal is not consistent with those values nor are we aware of exceptions to the Wilderness Act to conduct this type of project.

34.10 o Restocking lakes that were naturally fishless in the wilderness violates the Wilderness Act. This project does not restore the wilderness character of the lakes or westslope cutthroat trout. The wilderness character of these lakes is that they did not contain fish. If the fish are removed from these wilderness lakes they should not be restocked with any fish, that would be restoration. Restoration is the act of putting something back into a prior position, place or condition, the prior condition of these lakes is that they were fishless. Restocking these naturally fishless lakes with westslope cutthroat trout is not restoration of this species because they never naturally occupied this habitat.

MONITORING

34.11 o The DEIS must have a comprehensive monitoring plan to determine success or failure of the project prior to implementing treatment to all lakes so success or failure could be determined and the project halted or modified. It appears that this project will proceed on many lakes in one season with no provision for evaluating environmental effects or success or failure.

MACROINVERTEBRATES

34.12 o While the petition acknowledges that antimycin will have an initial adverse impact on stream macroinvertebrates, it assumes that the macroinvertebrate community will eventually return to its pretreatment status. But several studies have found that while macroinvertebrate communities frequently return, they may be altered from their original composition. And many unanswered questions remain regarding the long-term effect of antimycin on macroinvertebrates.

34.13 According to a NM Department of Game and Fish study in 2001 by fisheries biologist Steven Sanders, "the use of antimycin for fish eradication is extensive in the USA, but its affects on benthic populations are not well known".

8/20/2004

34.14 In an Aquatic Macroinvertebrate Survey of Animas, Seco and South Palomas Creeks [in New Mexico], the author states that "a few macroinvertebrate taxa that are particularly sensitive to antimycin and have poor recuperative powers may suffer long-term impacts from the (antimycin) treatment". This would be especially true for organisms with longer reproductive cycles. And there may uniquely adapted macroinvertebrate species that do not return at all. The author also notes that based on the sparse macroinvertebrate community in these streams they are only "marginal trout streams". (McCampbell, 2002)

AMPHIBIANS

34.15 o It is well recognized that there has been a disturbing global decline in amphibian populations in recent years and many scientists suspect that exposures to toxic chemicals are a significant cause. Several studies have linked pesticide exposure to adverse effects in frogs. As mentioned above, one study found that frogs exposed to as little as .1ppb of the herbicide atrazine developed male and female sex organs. Another study found that frogs exposed to either atrazine or a pyrethroid insecticide, esfenvalerate, were more susceptible to infection by a parasitic worm that caused limb deformities. The pesticides appeared to depress the frogs' immune systems even at the low concentrations used, which were within EPA drinking water standards for humans. The authors concluded that "these negative impacts may help explain pathogen-mediated amphibian declines in many regions."

34.16 In another study, frogs given trace amounts of DDT experienced a near total collapse in their immune systems, which was identical to their exposure to cyclophosphamide. The latter is a drug given to humans to suppress their immune systems so they do not reject organ transplants. The researchers found that as little as 75 ppb DDT caused frogs' immune systems to malfunction.

34.17 To avoid causing harm the environment must be kept as free of pollutants as possible since, as noted above, amphibian immune and endocrine systems are very fragile and can be adversely impacted by even extremely low levels of toxic chemicals. Thus, even if poisons such as antimycin/Fintrol do not kill amphibians immediately, they may still harm them by making them more vulnerable to serious diseases, due to immune suppression, or cause them to have developmental abnormalities or reduced fertility via endocrine disruption. (McCampbell, 2002)

TOXICANT EFFECTS

34.18 o Impacts to wildlife, bull trout, amphibians, macroinvertebrates and humans from deploying these chemicals were glossed over or ignored in the EIS. Following are concerns we have with the chemicals that are being proposed for use:

34.19 FINTROL/ANTIMYCIN: The registration of Fintrol by the U.S. Environmental Protection Agency does not mean it is safe to use. The U.S. EPA admits that all registered pesticides pose some risk. The range of potential adverse effects of deploying Fintrol is unknown. It was registered in the 1970's when the EPA required little data prior to registering a pesticide product. Fintrol is now undergoing the re-registration process and there is still an extensive lack of data regarding this product. The potential wildlife and environmental impacts of deploying Fintrol are also unknown because no one has ever done comprehensive post-deployment assessments. California will not register Fintrol in that state because data is missing in at least 22 standard toxicology tests. The New Mexico Department of Health has not approved the use of Fintrol in fish restoration projects. Also, the New Mexico Game and Fish Commission on August 18, 2004 cancelled all use of fish poisons in the state without prior approval.

34.20 Fintrol concentrate carries the highest acute toxicity rating given by the U.S. Environmental Protection Agency (EPA), Toxicity Category I. The label contains the warning "DANGER POISON" next to a skull and crossbones. Under "hazards to humans and domestic animals" it says this product is "FATAL IF SWALLOWED" and "MAY BE FATAL IF ABSORBED THROUGH THE SKIN". (McCampbell,

2002)

34-21 The Hazards Information section of the Material Safety Data Sheet states that routes of entry for antimycin A include the skin, inhalation, and ingestion. The ingestion hazard rating is "highly toxic". Antimycin A is also noted to be an eye, skin and respiratory irritant. Target organs include eyes, skin, respiratory tract, cardiovascular system, nervous system, kidneys, and possibly fetus. Inhalation of vapors or aerosol can irritate the eyes, nose, and respiratory tract. Direct contact with skin or eyes can produce severe irritation. And systemic intake can produce a decrease in blood pressure, nausea, light headedness, dizziness, excitement, incoordination, weakness, loss of coordinated speech and drowsiness. Medical conditions said to be aggravated by antimycin A exposure are pre-existing eye, skin, respiratory, kidney, nervous system or cardiovascular ailments.

34-22 A University of California at Santa Cruz Laboratory Standard Operating Procedure guide on antimycin A states that this material is considered a Particularly Hazardous Substance by the CAL OSHA Lab Standard. It also says that antimycin A is "highly toxic" and "may be fatal if swallowed, absorbed through skin, or inhaled". It notes that "respiratory distress, impaired reflexes, incoordination, and terminal symptoms consistent with CNS (central nervous system) depression have been reported in experimental animals poisoned by the oral or parenteral route."

34-23 ToxNet Hazardous Substance Databank Information on antimycin A, which includes data from PoisonDex, states that respiratory distress, incoordination, impaired reflexes, and CNS (central nervous system) depression have occurred in animals. It further notes that *the minimum lethal human exposure level is unknown.*

34-24 Besides its extreme acute toxicity, ToxNet also states that antimycin A is an experimental MUTAGEN. The NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) also includes "mutation data" on antimycin A. And there are 36 references regarding antimycin on the ToxNet Environmental Mutagen Information Center (EMIC) web page. At least one study describes antimycin-induced DNA fragmentation and strand breaks. (McCampbell, 2002)

34-25 DIETHYL PHTHALATE: The EPA considers diethyl phthalate to be an endocrine disruptor. Endocrine disruptors mimic natural hormones and have an adverse effect on the structure or functioning of the endocrine system, which includes the pituitary, hypothalamus, thyroid, adrenals, pancreas, thymus, ovaries, and testes. Compounds which are toxic to the endocrine system can cause health effects ranging from hypothyroidism and diabetes to infertility, low sperm count, birth defects, and testicular, breast, and prostate cancer.

34-26 There is growing scientific concern about the health impacts of human exposure to endocrine disrupting chemicals, in large part because of their widespread presence in the environment and because their adverse effects can often be caused by extremely minute quantities, at levels not previously considered to be in the toxic range.

For example, a recent study found that frogs exposed during larval development to as little as .1 part per billion (ppb) of the herbicide atrazine developed male and female sex organs. The authors concluded that "this widespread compound and other environmental endocrine disruptors may be a factor in global amphibian declines".

34-27 Diethyl phthalate is a priority pollutant under the Clean Water Act. It is also listed as a hazardous constituent under the Resource Conservation and Recovery Act and as a hazardous substance under Superfund. The EPA may be considering the removal of diethyl phthalate from all pesticide products.

8/20/2004

34.28 According to a National Toxicology Program fact sheet, diethyl phthalate is toxic by ingestion and inhalation and poisonous by the intravenous route. It is an irritant of the skin, eyes, mucous membranes and upper respiratory tract. It is a narcotic in high concentrations. It is also listed as an experimental teratogen, which means it can cause birth defects in developing fetuses, and it can cause other experimental reproductive effects. Studies have shown, for example, abnormal development of male fetuses in rats exposed to this chemical.

34.29 The New Jersey Department of Health and Senior Services Hazardous Substance Fact Sheet notes numerous toxic effects of diethyl phthalate. Exposure to vapors can irritate the nose and throat. Contact can irritate the eyes and skin, and repeated exposure may damage the nervous system. It also notes that chronic (long-term) health effects can occur at some time after exposure to diethyl phthalate even if the exposure levels were not high enough to make someone immediately sick. It also warns that there is evidence that diethyl phthalate is a teratogen in animals and that until further testing is done, this chemical should be treated as a possible teratogen in humans. And while those working directly with diethyl phthalate are at higher risk than the general public, the fact sheet states that people in the community may be exposed to diethyl phthalate in contaminated water and air and that children and people who are already ill would be at the most risk of developing health problems from it.

34.30 Diethyl phthalate is moderately persistent in the environment and has moderate acute and chronic toxicity to aquatic life. According to one source, the concentration of diethyl phthalate found in fish tissues is expected to be somewhat higher than the average concentration found in the water from which the fish was taken.

34.31 Finally, one can not be sure that the diethyl phthalate in the Fintrol product is not contaminated with other phthalates, such as diethyl-hexyl phthalate (DEHP), which is listed as a chemical known to the state of California to cause cancer (California's Proposition 65 list, June 22, 2001). (McCampbell, 2002)

34.32 NONOXYL-9: According to Philip Dickey in his publication "Troubling bubbles", nonoxyl 9 is an alkylphenol ethoxylate that can disrupt the endocrine systems of fish, birds, and mammals. For example, nonylphenol, a breakdown product of nonylphenol ethoxylate, can cause a reduction in testicular size in rainbow trout and cause male trout to produce an egg-yolk protein that is normally only produced by females. Rats administered nonoxynol-9 in one study produced a statistically significant, dose-related number of fetuses with both extra ribs and slightly dilated pelvic components.

34.33 Nonylphenol ethoxylate is also noted for its slow incomplete biodegradation. It tends to persist in the environment and bioconcentrate. Many times the breakdown products are more toxic to aquatic life than the original chemical. There is evidence for synergism between nonylphenolic metabolites, indicating that the adverse effects from a mixture of compounds may be greater than the sum of the effects from the individual compounds. Nonylphenolic compounds have been detected in groundwater. Alkylphenol ethoxylates have been banned in many countries in Europe. And it is the recommendation of the author that the use of alkylphenol ethoxylates as inert ingredients in pesticide formulations applied to aquatic environments be discontinued. (McCampbell, 2002)

34.34 ACETONE: Acetone is a volatile neurotoxic solvent, which can cause central nervous system depression. It constitutes more than 50% of the Fintrol product. (McCampbell, 2002)

34.35 Clearly, the safety of Fintrol and antimycin has not been established. At the very least, the possible effects of Fintrol on the human environment are highly uncertain and involve unique and unknown risks.

34.36 POTASSIUM PERMANGANATE: Potassium permanganate is a hazardous caustic alkali. Targets organs include the respiratory and central nervous system, blood, and kidneys. If swallowed, it can

cause nausea, vomiting, gastrointestinal irritation and burns to the mouth and throat. It may also cause severe irritation or burns to the eye and skin. Prolonged inhalation of potassium permanganate can cause manganism from a toxic build up of manganese in one's body. According to one Material Safety Data Sheet, potassium permanganate has also been reported to cause reproductive toxicity in laboratory animals and states that the ecological effects of this product have not been evaluated.

34.37 Potassium permanganate can be directly toxic to fish, even at deployment concentrations of 1 part per million. It can also kill phytoplankton and macrophytes that fish use for food.

34.38 Although potassium permanganate will help neutralize the antimycin A it comes in contact with, it does have its limitations. According to the authors of "Limitations on Potassium Permanganate Detoxification of Antimycin" , potassium permanganate rapidly detoxifies antimycin to a toxicity level equivalent to about 4% of the original concentration. From there on, the detoxification is quite slow. They conclude that the use of antimycin-potassium permanganate systems in fish control would probably entail undue risk in most situations involving antimycin-sensitive fish, soft water and a need for rapid detoxification. There will also inevitably be some uneven mixing of potassium permanganate with antimycin A as well as other factors that retard their chemically reacting with each other.

34.39 It is overly optimistic to think that potassium permanganate will totally neutralize antimycin A or that deploying another toxic chemical will return the stream to its former non-polluted condition. It also ignores the fact that potassium permanganate will have little or no effect on the levels of acetone and nonoxyl-9 present. (McCampbell, 2002)

34.40 ROTENONE: Rotenone is a broad spectrum mitochondrial poison similar to antimycin. It is used to induce Parkinson-like illnesses in lab animals and is more persistent in the environment than antimycin.

34.41 Rotenone products are often formulated with toxic solvents such as trichloroethylene, xylene, trimethylbenzene, naphthalene, 1-m-naphthalene, 2-m-naphthalene, toluene and the liver poison piperonyl butoxide (PBO). Piperonyl butoxide is a possible human carcinogen according to the EPA and naphthalene and trichloroethylene are known to the state of California to cause cancer. (Dr. Ann McCampbell pers. comm.)

We expect these comments and the ones we submitted for scoping on this project be thoroughly considered prior to making a decision.

LITERATURE CITED

34.42 Montana Bull Trout Scientific Group, Assessment of methods for removal or suppression of introduced fish to aid in bull trout recovery, March, 1996.

34.43 Dustin Hinson, Rotenone Characterization and Toxicity in Aquatic Systems, University of Idaho, Principles of Environmental Toxicity, November, 2000.

34.44 Ann McCampbell, MD, Technical Testimony at the Hearing on New Mexico Game and Fish Department's Petition to Deploy A Piscicide in Animas Creek Watershed before the Water Quality Control Commission, August 14, 2002.

Sincerely,

Arlene Montgomery

8/20/2004

Program Director

--

Arlene Montgomery
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8/20/2004

SFFW-035

From: George Nickas [gnickas@wildernesswatch.org]
Sent: Friday, August 20, 2004 5:51 PM
To: BPA Public Involvement
Cc: gnickas@wildernesswatch.org
Subject: Comments on Bob Marshall Wilderness lakes poisoning project

To whom it may concern:

Attached are Wilderness Watch's comments on the South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program Draft EIS. They are also being sent today on letterhead by US mail.

--

George Nickas
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August 20, 2004

Communications
Bonneville Power Administration – DM-7
P.O. Box 11428
Portland, OR 97293-4428

VIA E-MAIL TO: comment@bpa.gov

Please accept the following comments from Wilderness Watch on the South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program Draft EIS. Our comments are generally limited to those actions that will occur in the Bob Marshall Wilderness.

35.1 Wilderness Watch supports the restoration of native westslope cutthroat trout populations in the Flathead River drainage where that species originally existed. At the same time we believe that fishery programs must be administered in a manner that gives equal consideration to the entire aquatic ecosystem and that respects the resource of Wilderness. For those reasons we have a number of concerns with the proposed project and can not support it in its current form.

Our primary concerns with the project center on its damage to the wilderness character of the Bob Marshall Wilderness. Specifically, we are concerned with the proposal to restock with fish what are naturally fishless lakes, the use of motorized equipment and vehicles, and the use of poisons (fish toxicants).

35.2 At the outset we would point out that every alternative in the DEIS proposes to stock these naturally fishless lakes. This violates NEPA's requirements to provide a reasonable range of alternatives. Whether to stock these lakes with fish in the future has been a major public and agency issue since the outset of this project. Failing to provide alternative ways to address this issue is a major failure of the process to date.

35.3 Further, the DEIS is wrong to conclude that the decision to stock these lakes lies solely with the Montana Dept. of Fish, Wildlife and Parks (MDFWP). In fact, Congress has charged the USDA Forest Service with administering the Flathead National Forest and the Bob Marshall Wilderness. It has also been well established by the US Supreme Court that federal agencies retain the authority for administering federal lands and the wildlife that reside thereon. The federal government generally allows the states to regulate hunting, fishing and trapping on public lands; the Wilderness Act did not change that. But the Wilderness Act did mandate that the Forest Service ensure that the area be administered so as to preserve its wilderness character. This mandate applies to both public uses and the actions of the agency(s). Whether or not to restock these lakes must take into account the fact that several of the lakes are within a federally designated Wilderness. The DEIS should have taken into account the federal government's role in determining whether or not stocking is appropriate.

35.4 Restocking these lakes violates a principle tenet of the Wilderness Act: that these areas will be untrammeled by humans, retain their primeval character and influence, and be administered so as to preserve their natural conditions. Nothing could be more trammeling or unnatural than to fill naturally fishless lakes with fish. If the fish are removed from these lakes then the lakes should remain fishless and allowed to follow their natural evolutionary path.

35.5 The DEIS fails to consider the damage to the aquatic ecosystem from restocking these lakes with fish. The scientific literature is filled with studies that show fish stocking reduces the abundance of amphibians in stocked lakes. Recent studies in the Northern Rockies have shown that fish stocking also influences the distribution and abundance of amphibians in entire mountain basins including those lakes which are not stocked and remain fishless (see Pillion and Peterson. Ecosystems (2001) 4:322-333). These studies show that the impacts do not end with stocking, but instead continue to effect the area (and in all likelihood get worse) as long as fish remain. The DEIS is silent on these impacts which will occur under every alternative that restocks the lakes with fish.

35.6 Likewise, the DEIS failed to consider the damage to the rest of the aquatic biota from stocking these lakes. While "lip-service" is given to the effects of poisons on these species, there is no analysis of the effects of stocking fish on these biota. Again, the literature is replete with evidence of the negative effects of fish stocking in these systems, but that information doesn't make it into the DEIS. The DEIS does acknowledge that restocking is a "connected" action (p. 2-26), however it fails to disclose the environmental effects of those actions.

35.7 Further, the DEIS fails to evaluate the cumulative effects of fish stocking by MDFWP throughout the S. Fork Flathead drainage.

35.8 The Wilderness Act prohibits the use of motorized equipment and mechanical transport "except as necessary to meet minimum requirements for the administration of the area for the *purpose of this Act.*" (emphasis added). The purpose of the Act is to preserve the Wilderness. This project which is designed to establish a westslope cutthroat trout fishery in naturally fishless lakes fails to meet that test. Further, the MDFWP does not administer the Bob Marshall Wilderness and thus MDFWP's activities, unless authorized by the Forest Service as part of the federal agency's mandate to protect the Wilderness, do not fall within the administrative exception in the law.

35.9

35.10 The only justification given for using helicopters to access George and Lick lakes is that these lakes aren't accessed by system trails. That doesn't mean they are inaccessible by foot or with packstock (horses, donkeys or llamas). Both are within one mile of system trails that could be used to bring materials to within a mile of lakes. There's nothing in the DEIS that suggests materials couldn't be hauled the last mile with horses, mules or donkeys, or by backpacks or llamas to lessen the impact on vegetation and soils. The DEIS should be revised to address the possible use of other non-motorized means for delivering materials, supplies and personnel to George and Lick lakes.

35.11 Similarly, every scenario assumes that a motorboat must be used, whether its for gill netting, trap netting, spreading poisons or other uses. It appears to more a matter of

convenience than need. The DEIS should be revised to address using non-motorized watercraft on lakes in the Wilderness.

35.12 The use of poisons also runs counter to the idea of Wilderness. All Wildernesses have been modified to some degree by human impacts prior to designation, and some of those changes are ubiquitous and ongoing (i.e. human-caused global warming). Yet the choice society makes when designating an area as *Wilderness* is that from that point forth we will no longer try to "play God." The Wilderness must be allowed to operate freely in the future with intentional human manipulation. MDFWP should stop doing harm by continuing to stock these lakes with alien predators. There may be rare occasions where toxicants are appropriate in Wilderness to save a species that might otherwise be lost forever. But this project is geared toward expanding the range of cutthroat trout into lakes where it did not naturally exist. The use of poisons are not justified in this context.

35.13 We are also concerned with the limited information on the impact of poisons on non-target aquatic species. The diversity, abundance and population trends for these species in the Bob Marshall Wilderness are not well known, nor is the effects from retenone or other poisons.

35.14 Before embarking on a project of this magnitude in a designated Wilderness, BPA the Forest Service and MDFWP should implement a long-term inventory and monitoring study so that irreparable harm is avoided.

35.15 The DEIS fails to explain why, after nearly a century of stocking non-indigenous trout in the Flathead drainage the remaining hybrids pose a substantial risk to the remaining westslope cutthroats. Obviously there is something acting to keep the populations isolated from one another, or to inhibit hybridization. How have these populations managed to remain "pure" and why won't that continue if MDFWP no longer stocks the drainage with non-native species.

35.16 We want to note that it is doubtful the project will meet the DEIS purpose of preserving "genetically pure" cutthroat trout in the South Fork Flathead drainage. Genetically pure trout are defined as those that are 100 percent pure through the testing of species-specific proteins. Many of the westslope cutthroat in areas of the South Fork drainage that won't be treated are not 100 percent pure. Many of the areas where the range of introgressed trout and bull trout overlap can not be treated. Moreover, because the poisons are not expected to be 100 percent effective, any remaining hybrids will impart their genes into the genetically pure stock that is supposed to be planted in the lakes. Genes go both ways, and the plan to restock these lakes is as likely to result in less than 100 percent pure fish downstream as is not restocking the lakes.

35.17 35.18 If a decision is made that it is necessary to remove the exotic species (fish) from these lakes in order to preserve the wilderness character of the Bob Marshall Wilderness, then we would suggest that the Wilderness lakes remain fishless after the removal. The concern that the lakes will be illegally stocked could be largely ameliorated by closing the lakes to fishing. Leaving the lakes in their natural condition would not only respect the wilderness values of the area, it would also provide an outstanding opportunity to study the effects of fish removal on the natural aquatic ecosystem and to compare those

35.17

effects to lakes outside Wilderness where stocking is likely to occur. This kind of scientific inquiry is one of the public purposes of Wilderness and one of the greatest benefits that it can provide to people of present and future generations.

Sincerely,

George Nickas
Executive Director

SFFW-036

RE: South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program

To Whom It May Concern:

36.1 I have again reviewed the proposed action listed above and feel that chemical treatment of these waters should not occur until Montana Department of Fish Wildlife and Parks (MDFWP) thoroughly reviews and considers all the available data regarding current levels of hybridization within these systems. As I stated in my previous letter many of the lakes they are proposing to chemically treat do not require such a drastic and unnecessary action. For example, upper Three Eagles Lake is over 99% pure westslope, and it cannot be said with certainty that it is not pure westslope. Based on this information how can the chemical treatment of this lake be justified? The answer is that it cannot be justified. There is also lack of justification for the chemical

36.2 treatment of Black Lake and Pilgrim Lake. Recent genetic data obtained from a 1999 collection of fish from Black Lake and a 2001 collection from Pilgrim Lake indicated that both of these lakes now harbor populations of trout that are also at least 99% pure westslope cutthroat trout. Why is there a need to chemically treat these populations? What is to be gained? Without an absolute guarantee of a100% kill of the current populations within these lakes there is nothing to be gained and even with a 100% kill the overall cost of the treatment, both environmentally and economically, far outweigh any gains that might be realized from such an action.

36.3 In addition to the examples above where there is absolutely no need for chemical removal, there also appears to have been large decreases in the level of non-native genes present in many of the other lakes proposed for chemical treatment. For example, in the initial genetic surveys conducted on Lena, Necklace, Pyramid and Sunburst Lake no westslope cutthroat trout genes were present. However, in the most recent genetic surveys conducted on these waters for MDFWP's, Lena and the Necklace Lakes contained over 60% westslope cutthroat trout genes, Sunburst Lake contained 82% westslope cutthroat trout genes, and Pyramid Lake contained 97% westslope genes. How can MDFWP pretend that the genetic swamping of these lakes is not effective when the only mechanism for change in these lakes has been the introduction of pure westslope cutthroat trout from their broodstock? In fact, based on this data, there is also little justification for the proposed chemical removal of fish from Pyramid Lake.

36.4 Similar changes in the genetic composition of other lakes on the chopping block have also been observed, i.e. Lower Big Hawk and Blackfoot Lakes. The level of non-native genes in these systems has been reduced by 40% and 50% respectively through the introduction of westslope from MDFWP's broodstock. In fact in almost every case where the swamp out technique has been implemented there has been a decrease in the overall percentage of non-native genes present. This technique has proven to be highly effective and it should be restarted, not discarded, as is currently being done.

36.5 MDFWP's also indicates that they will chemically remove fish downstream of many of the lakes that are proposed for chemical treatment. In most cases, however, they lack sufficient genetic data to determine the necessity and extent of this action, and in some cases they are proposing chemical treatment when their own data indicates that it is not warranted. For example, MDWFP's is proposing to chemically treat 3.7 miles of Lick Creek even though no hybridization was detected in a sample of westslope cutthroat trout collected for genetic analysis in 2000. As

the stewards of our resources it is irresponsible for MWFP's to disregard available information or to proceed with the chemical treatment of these streams without sufficient data to justify their actions.

36.6

As I stated in my initial June 23rd letter, these examples indicate the need for MDFWP's to carefully evaluate and justify the need for chemical treatment of each of the 21 lakes and downstream reaches they are proposing to poison. They must not be allowed to continue to ignore or disregard their own genetic data indicating that the chemical removal of fish from many of these waters is unwarranted.

36.7

As I previously commented, the very first action to be taken prior to any chemical removal of fish from any these systems is to genetically retest the populations, using both allozyme and nuclear DNA techniques to determine the current genetic composition of each lake and downstream reach. Most of these lakes were repeatedly stocked with hatchery fish from the states westslope cutthroat trout broodstock after they were first genetically characterized in the mid 1980's and early 1990's, and before any chemical treatment of these waters is conducted the effectiveness of the genetic swamping needs to be thoroughly evaluated. Based on the genetic information presented above, the assertion that this method of removal of non-native genes doesn't work is not supported. In fact, in the lakes discussed above this method has significantly reduced the percentage of non-native trout genes present.

The benefits to genetically retesting each lake and downstream reach proposed for chemical treatment should also not be overlooked. First, it will determine which lakes and streams may still require chemical removal of hybrid trout, and also assist in the prioritization of lakes and streams to be treated based on their current genetic composition. Second, it will save money by reducing the number of lakes and streams that need to be treated. Third, it will lower disturbance, leave a smaller footprint, and maintain fishing opportunities that would otherwise be temporarily lost from some lakes. Fourth, it would provide hard scientific data on the effectiveness of genetic swamping for many different systems allowing MDFWP's to fully evaluate its potential as a management tool. Finally, and perhaps most importantly, it will provide baseline data on the current genetic composition of the lakes and streams that are ultimately poisoned so MDFWP's can evaluate the effectiveness of chemical removal on each population poisoned.

While the opinions I have stated above are solely my own, the scientific data I used to reach them is available to both MDFWP's and Bonneville Power Administration personnel. I request of you both that you do not ignore this information, to do so would be both irresponsible and unethical.

Sincerely,

George K. Sage
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