



# Montana Fish, Wildlife & Parks

## Decision Notice: **Staubach Creek** Westslope Cutthroat Trout Recovery Project July 31, 2000

### **Proposal**

The proposed action is intended to help secure and expand an existing population of genetically pure westslope cutthroat trout (WCT) in Staubach Creek. This project is part of a comprehensive restoration program for WCT populations in the Elkhorn Mountains (adopted 1999), as well as a statewide restoration program outlined in the Westslope Cutthroat Trout Conservation Agreement, adopted May 1999. The proposed action consists of three phases to be implemented during the years 2000 through 2005:

Phase 1: Increase isolation of WCT from colonizing brook trout and rainbow trout by installing a culvert barrier that will prevent upstream migration of fish (July 2000).

Phase 2: Remove competitive influence of non-native brook trout by conducting physical removal (via electrofishing) and relocation of brook trout and WCT in a 2.2 mile reach of Staubach Creek upstream of the barrier located at the Clark/Hahn property boundary; (August 2000; September 2001).

Phase 3: Evaluate the success of the project by monitoring WCT response to removal of brook trout, and monitoring the effectiveness of the barriers (2001 through 2005). Pending landowner(s) consent and results of future monitoring to determine effectiveness of electrofishing removal, DFWP may apply to DEQ for a permit to use a fish toxicant (antimycin) to remove the remaining brook trout in the 2.2-mile reach of Staubach Creek.

### **Environmental Policy Act Processes**

Montana Fish, Wildlife & Parks (FWP) is required to assess potential impacts of the proposal to the human and physical environment. In compliance with requirements of the Montana Environmental Policy Act (MEPA), an Environmental Assessment (EA) was completed by FWP, in conjunction with cooperating agencies, and released for public comment in December 1999. There are no ground disturbing actions proposed on forest system lands which would require the U.S. Forest Service (FS) to

*broodwater*

complete an analysis under the National Environmental Policy Act (NEPA).

Public comments on the Staubach project were taken for 37 days (December 22, 1999 to January 28, 2000). Two public meetings were held on January 12 and 13 in Helena and Townsend, respectively. The EA was mailed to 42 individuals/groups on FWP's MEPA mailing list, and to approximately 150 citizens and groups interested specifically in WCT projects in the Elkhorns. In addition, 919 postcards were sent to a list of citizens who had signed a petition during the summer of 1999 opposing the use of chemicals in streams. The postcards included information how to get a copy of the EA and an invitation to the public meetings. News releases and Legal Notices, which announced the availability of the EA and information about the public meetings, were published in the *Helena Independent Record* and the *Townsend Star*. Finally, posters announcing the public meetings were placed in many businesses in the Townsend community.

Issues raised during the public comment period on the EA are addressed in the comment section of this Decision Notice. Based on public comments received during the MEPA process, this Decision Notice includes modifications to the Draft EA.

### **Summary of Issues Addressed in the Environmental Assessment**

The EA lists the issues in detail. These include:

- Extinction risks of a native species (cutthroat trout)
- Costs of restoration
- Effects of antimycin on non-target species and humans
- Effects of WCT restoration on invertebrates and amphibian species
- Recreational fishing opportunity
- Effects on livestock permittees or other Elkhorn users
- Sources of genetically pure WCT including hatcheries
- Effectiveness and impacts of non-native fish removal methods
- Effects of barriers and long term effectiveness of barriers
- Advantages/disadvantages of implementing recovery on private vs. public land
- Implications relating to listing under the Endangered Species Act
- Habitat suitability in Staubach Creek
- Respectful treatment of non-native brook trout
- Regulations imposed on the public due to cutthroat trout recovery
- Landowner(s) tolerance of increased activity on private land during project implementation

## **Summary of Public Comment on the EA**

The public submitted a total of 39 written comments regarding this proposal. Twenty-six (26) comments supported the proposal, 11 comments were opposed, and 2 comments were neutral. In addition, oral comments were recorded at two public meetings held in Helena and Townsend. A total of 37 individuals attended the meeting in Helena and 31 attended the Townsend public meeting. Nine (9) oral comments supported the proposal, 14 opposed the proposal, and 7 comments suggested modifications to the project.

The comments are summarized below. Supportive comments have no response. The response to other comments follows the comment in italicized print.

### **Written Comments on the Proposal:**

Comments in support of the proposal:

#### **GENERAL:**

1. I support the project (Alternative 2 in the EA) (16 comments).
2. This project dovetails with recommendations adapted last fall in the State of Montana's WCT Conservation Agreement and Memorandum of Understanding
3. This is a well thought out plan to restore WCT to part of its native range in the Elkhorn Mountains; the Elkhorn Mountains is a logical place to start restoring WCT
4. WCT should be given a chance to survive without competition
5. The restoration of viable populations of WCT requires protecting the few populations that remain, as well as restoring new populations
6. WCT are native to the upper Missouri, and the taxonomic questions regarding this subspecies were long ago resolved by the American Fisheries Society
7. It is commendable to make an effort regarding the restoration of a native species
8. I would like to see the range of the WCT expanded and protected

9. The Elkhorn WCT project is a grand plan, based on sound science

### **ANGLING**

10. The project provides a long-range benefit to anglers as WCT tend to reach a more desirable size
11. Restoration is taking place in streams which are mostly small brooks which receive very little fishing pressure; the larger streams which are commonly fished will not be impacted (2 comments)
12. As an avid "crick" fisherman, I have no qualms about spending money for this program
13. Fishing is not really the issue

### **RISKS AND TREATMENT OF NON-NATIVE FISH ARE ACCEPTABLE**

14. Our review of the legal requirements indicated that FWP has fulfilled in good faith all its requirements under MEPA and the Montana Water Quality Act
15. The project has good safeguards
16. Great effort is being taken to mitigate any adverse effects of this project
17. Very few brookies will actually be killed (2 comments)
18. Electroshocking will not eliminate all the brook trout and this will only delay the demise of the WCT
19. Some of the opposition's rhetoric seems to have more to do with a hostility towards government than in doing right by fish
20. The need to eliminate non-native fish in this creek is appropriate
21. The WCT deserve to be returned, the rainbows and brookies are introduced and not endangered in their home range

### **ENDANGERED SPECIES ACT**

22. I am in favor of the project as we need to save our native species and avoid the land use restrictions that listing would bring in

23. This action would be welcome if such efforts result in an outcome that prevents the westslope from being placed on the endangered species list (2 comments)
24. I favor maintaining control of the resource by Montana; if the feds get involved, they will never let control return to the state

### **USE OF ANTIMYCIN**

25. Even though we are concerned when toxicants are proposed and when fishery management requires killing fish, we can unequivocally support this project and the overall plan for the Elkhorns
26. The use of antimycin is not new; the lack of any adverse impacts to water quality and humans should be emphasized
27. The use of the toxicant is scientifically safe and is the best alternative
28. You have convinced me that antimycin is safe; if this proves successful, then it could be done in other small creeks in the Elkhorns
29. In the concentrations and amounts proposed, the risk of antimycin to humans and terrestrial life forms is practically nonexistent; the amount of antimycin being used at Staubach Creek when compared to the amount of (more toxic) rotenone used at Lake Davis is like comparing a thimbleful of water to the amount found in an Olympic-sized swimming pool
30. I trust that MFWP knows the impacts of antimycin
31. We support the use of antimycin because it is the most cost-effective method available and has the highest degree of success
32. I would be honored to stand beside you at the lower end of the antimycin treatment of Staubach Creek, and as the critics look on, scoop up a glassful of that "poisoned" water, give you a toast, and drink it
33. This fish toxicant has been subject to hyperbole and gross misrepresentation; there is no other technically or economically

feasible alternative, and I fully support the use of antimycin in conjunction with barrier placement

34. The best reason to use antimycin is its rapid breakdown in the environment rendering it neutral in very short order, and that it will be administered under tight control by a highly trained professional staff

**Comments opposing the proposal: (Response to comment in italics)**

1. Not enough thought has gone into the long-term effects of this plan.

*This project was developed from the comprehensive Elkhorn Mountain WCT Restoration Program completed in April 1999. That comprehensive EA examined the long-term effects of not acting, doing the bare minimum, and taking a broader approach to conserving WCT in the Elkhorn Mountains. Interest in restoring WCT in the Elkhorn Mountains began in 1980 when the first major survey of WCT was conducted. As a result of this inventory, we documented that one population of WCT (South Fork Warm Springs Creek) has disappeared in the past 20 years, and population declines have been documented in other streams, including Staubach Creek. The Forest Service and FWP have continued to monitor fish populations in the Elkhorns since 1980 and have jointly constructed a large body of information regarding WCT and non-native fisheries. There has been considerable inventory and research on WCT populations in the Elkhorns in the past 20 years, but very little action has been taken to address concerns with potential extinction of WCT until recently. If no action is taken, it is probable that WCT will become extinct in the Elkhorn Mountains. The long-term effects of antimycin have been studied in this context. Literature (cited in the EA) shows that effects on non-target species are minimal or do not exist when appropriate safety measures and low concentrations of antimycin are applied. In addition, as part of the mandatory permitting process, and prior to antimycin applications, the Department of Environmental Quality must conduct its own EA's to assess the use of antimycin in proposed DFWP restoration projects.*

2. Most of the time, when man interferes with nature, it ends up worse than it started. There is too much fooling around with Mother Nature and we will all be paying the price for it in the future.

*WCT are native to this area and their presence is documented as far back as 1805 when Lewis and Clark traversed Montana. Non-native fish were brought into the Elkhorns in the early 1900's in an attempt to enhance sport fisheries in the state, and have contributed to a steady*

*decline in WCT. We think we can have both native and non-native fish species in various stream reaches in the Elkhorn Mountains, and achieving this balance will require human intervention through management of some fish species.*

3. I'm not convinced this is not a political ploy instead of trying to save the WCT.

*This proposal is centered on securing an existing WCT population that is currently declining and has a high extinction risk. We are also concerned about keeping management of WCT local by restoring populations to a point that "listing", as a threatened species is not necessary.*

4. I'm opposed to this project because it is a waste of money and another way to keep people out of the National Forests.

*This project is concerned with recovering a dwindling population of WCT in an area dedicated to fish and wildlife. A majority of this project is on private land and there are no restrictions to public access associated with this project.*

5. The Staubach Project is mostly on private land with no access to the public; if we are to spend the public moneys on a worthwhile project, lets do it where it will do the public some good and some control can be exercised.

*Staubach Creek is high priority location to initiate WCT recovery because of the ongoing population decline observed in recent years and the immediate action required to remedy this decline. This population represents one of only six remaining populations of genetically pure WCT in the Elkhorn Mountains, and the need to secure this genetic resource is independent of land ownership. A restored Staubach Creek population may be used in the future to reestablish WCT populations on public lands nearby in the Elkhorn Mountains.*

6. Would prefer this project was more on public land; seems like it will lead to a loss of landowner's ability to manage/control their property.

*This declining population represents one of only six remaining populations of WCT in the Elkhorns and the land ownership was relatively unimportant in the initial determination that this stream was a high priority for WCT recovery. The project is a cooperative and proactive effort between private landowners, FWP, and the Forest Service. Its purpose is to address population and habitat issues through*

*formal and/or informal agreements regarding WCT restoration activities on their lands.*

7. Even if the poison is safe for all but its targeted victims, it is still too risky. I think there is a better way than using antimycin.

*The risks and benefits of using antimycin have been evaluated in the EA. Should a toxicant ultimately be used, the Department of Environmental Quality must do their own assessment of the effects of using the toxicant in conjunction with processing the permit applications from FWP. Other potential methods were reviewed such as electrofishing removal, angling, and dewatering. However, those methods have been shown to be suitable only for suppression of fish abundance and are not capable of removing 100 % of the non-native fish. Consequently, alternative removal methods require ongoing removal activities that are labor intensive, expensive, and relatively ineffective.*

8. The practice of eradicating one species in favor of another is wrong and should be discouraged in fish and wildlife management; I don't agree with choosing one species over another.

*Non-native fish in the Elkhorns will not be eradicated. In fact, even if the 10-year program to restore WCT in the Elkhorn Mountains is completely successful, non-native fish will still occupy more habitats in the Elkhorn Mountains (78 miles) than WCT (69 miles). Should fish toxicant be used as many non-native fish as possible will be physically removed alive and relocated in downstream habitats prior to treatment. If this project is successful, future generations will have the opportunity to choose between WCT and non-native trout, but if WCT continue to decline and disappear from streams in the Elkhorns, future generations will not have the opportunity to choose.*

9. I am against the use of toxicant to remove a breed of trout that has proved to be a survivor; to me it is survival of the fittest and brook trout appear to be the stronger of the two.

*Although brook trout are not native to Montana, they certainly provide valuable sport fishing opportunities in many areas of the State, including the Elkhorns. Brook trout will continue to occupy the majority of waters within the Elkhorns. In some stream reaches, it is necessary to remove non-native trout to maintain viable WCT populations in the Elkhorns.*

**Comments neutral to the proposal: (Response to comment are in Italics)**

1. Why isn't the Department using hatchery facilities to increase the number of WCT in the streams in Montana?

*There are streams where the use of hatchery-reared fish may be an acceptable restoration tool for WCT. It is widely agreed by professionals working on WCT recovery in Montana that under no circumstances shall hatchery fish be placed in streams where an existing WCT population is residing.*

*Stocking hatchery fish on top of existing WCT populations has potential to negatively affect the population and may compromise the unique genetic resource that has developed in fish particularly adapted to the stream over thousands of years. The genetics of WCT in the Elkhorn Mountains are uniquely suited to the environments found there. Each of the remaining 6 WCT populations in the Elkhorns is a valuable genetic resource. Statewide, the policy is to conserve wild stocks of fish where they exist. Stocking hatchery fish on top of the native fish in Staubach Creek is not an option. In streams that are targeted for WCT projects where there are currently no fish or only non-native fish, the use of existing cutthroat from nearby or adjacent streams in the Elkhorns is the preferred method of maintaining and expanding the existing genetic resource. Use of hatchery-reared wild fish will be evaluated on a case-by-case basis. The use of suitable hatchery fish is also very costly -- a minimum of \$0.80 per fish.*

2. I think beaver should be restored in Crystal Creek to enhance WCT.

*Beaver ponds do provide good fish habitat in some instances. However, beaver ponds make it extremely difficult to effectively remove fish, using either electrofishing or a toxicant. Therefore, it is important to remove non-native fish from Crystal Creek (or other streams with similar situations) and to have a thriving WCT population before considering reintroducing beavers into this system.*

3. Display the overall costs of the project (physical vs. chemical).

*We estimate that electrofishing removal costs \$1,500 per mile of stream treated (15 man-days x \$100 per man-day). Therefore, it would hypothetically cost \$3,300 to remove brook trout annually in the 2.2-mile reach of Staubach Creek. Over 10-years this would amount to about a \$33,000 expenditure and would not completely eliminate brook trout*

*from that portion of the stream. The cost of chemically removing fish (2 consecutive years) is a maximum of approximately \$8,000 for the chemical and a maximum of \$10,000 for manpower to operate drip stations for 4 treatment days for a total of \$18,000. No other removal will be needed after the second year of chemical treatment.*

4. There should be an extensive survey of the extant biota of any and all streams prior to the application of any biocide; must recognize the impact of a biocide on lower level organisms.

*The effect of antimycin on other life forms is summarized in the comprehensive Elkhorn WCT Restoration EA on pages 17-18 and in the Staubach Creek EA on pages 17-18. Because antimycin works by interfering with oxygen uptake by the gills, only certain species of aquatic insects, in addition to its intended toxicity on fish, will be affected. These insects are known to recover quickly from drift and adult terrestrial life stages. Amphibians are not affected by the low concentration of antimycin that will be used. An invertebrate specialist will conduct a pre and post treatment evaluation of invertebrate life at three locations in Staubach Creek to document status of aquatic insects in relation to this project.*

5. Take more public comment regarding safety of chemical use and water quality.

*In addition to the public comments received during this EA process, there will be a formal public comment period following the release of DEQ's EA on the permit applications for Staubach Creek. Although this is addressed in the Staubach EA, DEQ will also review the potential effects of antimycin on human health.*

6. Along with project, provide for better protection of streamside habitat.

*As identified in the Staubach EA, competition with brook trout is likely the limiting factor for the WCT population. Habitat quality is sufficient to support the WCT population without significant modifications of the streambed and streamside areas. If WCT fail to recover after removing brook trout competition, additional habitat improvements may be needed. On National Forest system lands in the Elkhorns, the focus in management is on providing good quality upland and streamside habitats for fish and wildlife. Riparian areas with relatively healthy vegetation associated with a functional floodplain will likely result in stream habitat that is capable of supporting WCT. Livestock disturbance and past disturbance from a road and logging activity are*

*evident in localized areas and these situations will be addressed on a case-by-case basis.*

7. We are not entirely sold on pursuing this effort on our own deeded ground in Turman Creek.

*The East Fork of Dry Creek is a potential restoration site as in the overall restoration program for WCT in the Elkhorn Mountains. Turman Creek, which includes both private and forest lands, is a tributary of East Fork Dry Creek. At present, this system is occupied exclusively by brook trout. During 2000, we will be collecting data on habitat features and suitability for WCT restoration in this drainage. Private landowners will be an important part of this evaluation.*

8. I don't think there is enough water to keep fish alive in Staubach Creek.

*Staubach Creek, within the proposed project area, is a perennial (ever-flowing) stream that has supported year-round water and a fishery in the past. Downstream of the project area, the stream is intermittent and not suitable for supporting fish. Acknowledging that the stream is very small, the stream has sustained self-supporting WCT and brook trout populations.*

9. Make sure to comply with the Clean Environment Act; keep safety in order.

*The mitigation measures and safety precautions for use of antimycin are detailed in the EA on pages 14-16. The department must comply with all state and federal water quality rules and statutes in this and other projects.*

10. Please provide a buffer zone below the treatment area along with a monitoring system.

*Prior to receiving this comment there were no plans to move brook trout downstream from the area immediately below the detoxification station. This comment has resulted in a change in our planned procedure and fish immediately below the barrier will be relocated approximately ¼ mile downstream to provide additional protection for brook trout immediately below the project. In addition, water testing of potassium permanganate (KMNO4) concentrations will also be incorporated into the procedure to attempt to detect any KMNO4 that may remain in excess of that required to neutralize antimycin. If residual KMNO4 is found, the delivery rate at the detoxification station will be adjusted.*

11. Give the same care and respect to brook trout during treatment as you do WCT.

*All brook trout removed with electrofishing equipment will be released downstream of our constructed barriers. A very small number of both brook trout and cutthroat trout will not be removed due to limitations of electrofishing efficiency and these fish will be killed during the proposed antimycin treatment.*

12. Please address the dilution and oxidation of potassium permanganate (KMNO<sub>4</sub>) (e.g. How many stream feet will it take for dilution?)

*It is not known how many feet of stream it will take before KMNO<sub>4</sub> is no longer detectable in the stream. Testing of KMNO<sub>4</sub> will now be incorporated into the protocol to be able to answer this question in the future. It is known, however, that the concentration of KMNO<sub>4</sub> downstream of the detoxification station will be very low, and that the remaining KMNO<sub>4</sub> will diminish rapidly.*

*Potassium permanganate will be applied in Staubach Creek to neutralize antimycin below the target reach. The exact concentration of potassium permanganate needed will be determined through on-site brook trout bioassays and water chemistry experiments just prior to the antimycin treatment - a necessary process to duplicate similar water conditions. In addition to antimycin, water and sediment will naturally "use-up" or degrade potassium permanganate. Our pre-treatment experiments will allow us to determine the rate that the stream will naturally degrade potassium permanganate thereby allowing us to introduce only the amount of potassium permanganate needed to neutralize the antimycin. This approach will minimize any downstream movement of potassium permanganate. Organic matter and oxygen in the stream will rapidly reduce any excess potassium permanganate. The optimal concentration potassium permanganate is expected to be 1 to 4 parts per million, similar to the concentration (4 parts per million) used by the City of Helena water treatment plant to neutralize chlorine.*

13. Have all possible sources for funding to manually remove fish been examined?

*We anticipate having a limited and set amount of funding for the Elkhorn WCT effort. We can use that money to hire people to electrofish a few streams, or we can use a combination of electrofishing and*

*toxicants to treat more streams and have a better chance of recovering WCT for the long-term. We have compared the overall cost of removing non-native fish with electrofishing to removing non-native fish with the fish toxicant antimycin. It is more expensive in the short-term to use toxicants, but even more important to consider is that manual removal is a never-ending work project. The most economical and efficient way to permanently remove brook trout is to use a toxicant.*

14. Have all the detrimental problems with antimycin been examined (e.g. spillage)?

*The safety precautions and mitigation measures are outlined in the EA on page 11. In summary these measures include 1. A pre-treatment bioassay to determine the lowest effective concentration; 2. The chemical will be applied precisely at about 20 drip stations; 3. A detoxification station will be used at the bottom of the project; 4. Well-trained and equipped personnel will administer the chemical; 5. Only the amount of antimycin or potassium permanganate that is needed for immediate use will be held near the stream; 6. Prior to use of chemicals, coordination with local landowners and permittees will minimize exposure of humans or livestock to the chemicals; 7. Sentinel fish (brook trout in live cages) will be located throughout and below the project area to monitor toxicity; and 8. If needed, the stream can be diverted into irrigation canals downstream of the project to contain water in the event of a spill. In addition, the isolated location of the project area and the small size of the stream make it very unlikely that any chemical will travel to a location that would put human or livestock at risk.*

15. Wherever possible use road removal as an alternative to culvert replacement.

*A travel management plan was completed for the Elkhorn Mountains in 1995. This has been followed by road reclamation in areas where roads are no longer desired. Most of the road crossings are essential system roads and removal is not an option. In addition, most of the targeted WCT streams in the Elkhorns have natural barriers (e.g. waterfalls).*

16. I am concerned about the potential for "bucket biology" and the possibility that someone will transplant brook trout back into Staubach Creek.

*Illegal introductions are always possible. Public education and awareness is critical in promoting an understanding of the importance of projects like this, and the importance of recovering our state fish. We*

*will periodically monitor this stream to determine if brook trout reappear. The relatively limited access to Staubach Creek is a positive factor as it relates to the potential for illegal introductions.*

**Verbal Comments (not including those who submitted similar written comments)**

**HELENA**

1. These kinds of projects will make it more costly to manage fish; I favor using a hatchery fish to restock WCT

*Native species restoration does add cost to the overall fisheries program in the State of Montana. However, these costs will likely be higher in the future if action is delayed. It is our policy not to stock hatchery fish in streams like Staubach Creek where existing populations of WCT are present because hatchery fish will compete with the existing population, and will interbreed with genetically pure fish that have adapted to survive in the local environment. In addition, the high cost (approximately \$0.80 per fish) of sustaining hatchery plants must be maintained annually unless competing brook trout are removed*

2. I would like to see the cost/benefit analysis; would like to see a list of ingredients of antimycin and potassium permanganate; wasn't White's Gulch a success with only physical removal?

*Cost comparisons for using electrofishing vs. antimycin in the 2.2-mile reach of Staubach Creek reveal that it would cost approximately \$33,000 to fund the manpower to remove brook trout each year for 10 years. The cost of antimycin and manpower to use the fish toxicant for two consecutive years would be a maximum of \$18,000 and there would be no need for additional removals after the second year.*

*The label of **Fintrol** (the brand name for antimycin) that lists the ingredients is included at the end of this decision notice.*

*White's Gulch involved physical removal of brook trout via electrofishing and WCT populations increased dramatically from approximately 120 WCT to well over 1000 WCT. Therefore, the project is generally regarded as a successful cutthroat trout restoration project. Brook trout removal, however, must be conducted annually because 100% of the fish cannot be removed during extensive efforts to sample the stream and this ongoing demand for labor is not feasible to continue in the long term.*

3. Use of antimycin will not stand up in court given the ruling of the Supreme Court on "clean and healthful" environment.

*Potential legal action and its implications is beyond the scope of this environmental analysis.*

4. I would like to see you monitor Staubach Creek before you use antimycin in other streams in the Elkhorns.

*In the last 20 years, the DFWP and the USFS have used electrofishing on four occasions to monitor the distribution and density of trout in Staubach Creek. These surveys have documented the declining trend in the number and distribution of WCT. This spring we have used an underwater video camera and redd surveys to identify the occurrence and location of WCT spawning. Starting this summer, we will initiate more detailed studies of fish, amphibian and invertebrate populations above, within, and below the project reach. We will design annual surveys that will allow us to monitor long-term trends of WCT and brook trout populations as they respond to different treatments.*

*Extensive monitoring is built in to all proposals planned in the Elkhorns over the next 10 years. It is very important to initiate several concurrent projects to evaluate the relative success of various techniques in different streams in order for us to evaluate the program. Therefore, it is important to proceed with additional projects prior to completing the evaluation at Staubach Creek.*

5. Support local control of WCT rather than feds if it is listed.

*An important feature of this and other Elkhorn WCT efforts is for FWP to take adequate steps that would retain the management of WCT with the state. The work done on behalf of WCT populations in the Elkhorns as well as other sites across Montana and the west was a major contributing factor in the Fish and Wildlife Service not listing WCT as endangered at this time. We have more flexibility to manage WCT if they are not listed under the Endangered Species Act. If WCT are listed in the future, DFWP and USFS will work with the US Fish and Wildlife Service to attempt to continue the restoration program outlined for the Elkhorn Mountains in 1999.*

6. Don't use hatchery fish – they are not good to eat.

*Our intention is to restore WCT in the Elkhorns using the existing genetically pure populations that are well adapted to the conditions found in the Elkhorn Mountain streams.*

7. Restoring WCT is not playing God – bringing brook trout here in the first place was playing God.

*Humans indeed did bring brook trout into the streams in the Elkhorn Mountains. This project will help stabilize the WCT population in Staubach Creek with a minimal impact on downstream brook trout and brook trout in streams not targeted for WCT.*

8. I support this project. I would like to see that my kids have an opportunity to catch a native WCT. *(No response)*

9. The restoration of native fish is to be applauded; the human species has always “played God” and chosen one species over another.

*This project is not really about choosing one species over another; we are hoping to recover WCT to sustainable levels in the Elkhorn Mountains and also maintain a high quality non-native fishery in many streams, both in the Elkhorns and Statewide.*

10. I object to the use of poison.

*Antimycin is an antibiotic that is effective on preventing the uptake of oxygen through gills. It is very specific in killing fish (and some aquatic invertebrates) and has no effects on other species in the concentrations proposed at Staubach Creek (8 to 10 ppb). Our analysis shows that other means of removing non-native trout are ineffective and very expensive.*

## **TOWNSEND**

11. If the State of Montana has jurisdiction over all fish and wildlife, why are you going through this process?

*State law requires any agency proposing an action which has the potential to affect the human or natural environment to follow a process defined in the Montana Environmental Policy Act (MEPA). This process is designed to ensure that a thorough analysis of the effects of the proposed activity, as well as alternatives to the proposal have received complete consideration and the public has had an opportunity to comment on the proposed action.*

12. This project will be good economically for Broadwater County.

*Restoration of a native species in the Elkhorn Mountains could have some minor economic spin-offs for the County. At the very least, an additional biologist and crew will be living and working out of Townsend.*

13. Look at an alternative other than chemical removal. We have been told that lots of chemicals were safe that later turned out to be hazardous.

*The EA considered other methods that ultimately were shown not to be cost effective or provide as high a likelihood of success. In most streams, including Staubach Creek, mechanical removal of all non-native trout is less effective and more expensive than the use of antimycin over the long-term. With appropriate precautions, and when applied in proposed concentrations, the application of antimycin has a proven record of effectiveness with very low risk to non-gill breathing animals.*

14. I oppose the use of the fish toxicant; it is unfair that FWP is held to a lesser standard than industry.

*FWP must comply with all the same standards and laws as any other individual, industry or agency. Thus, actions such as pursuing a permit and having the project reviewed by DEQ are mandatory, even for a sister state agency.*

15. The EA states that "0" acres are affected; this is a grave error.

*The EA states that "0" acres of upland type habitats are affected and that 0.5 acres wetland/riparian and floodplain areas are affected.*

16. It is insane not to consider the outcome of the Cherry Creek project before proceeding with Staubach Creek.

*We will consider any new information regarding the use of antimycin anytime in this project. Cherry Creek is a considerably different project, especially from the standpoint of scope, because it is many times larger than Staubach Creek relative to stream size and length of project area.*

17. More scientific research is needed to understand why hatchery WCT cannot be used to recover this species.

*A substantial body of research regarding the use of hatchery fish already exists and it supports maintaining the genetic integrity from drainage to drainage, if at all possible. There are some situations where hatchery-reared WCT may be used to recover the species. Hatchery-reared WCT should never be stocked where an existing WCT population is still present. Because there are well adapted, genetically pure WCT still existing in the Elkhorns, the program is geared toward replicating those fish into additional adjacent sites.*

18. This project will not affect whether WCT are listed or not.

*By itself, this project will not affect "listing". However, cumulatively, many Staubach-type projects are the only way to reduce or eliminate the threats that warrant consideration for listing. In their recent decision to not list WCT, the US Fish and Wildlife Service acknowledged the efforts underway by states to restore this species as a significant reason for their decision.*

19. You knew WCT were in trouble a long time ago and you failed to act. What makes you think you can recover them now? There is no guarantee that this project will succeed and is a waste of money.

*Although the agencies may be accused of doing too little too late, restoration efforts like the Elkhorns are the only way to reduce or eliminate the threats that warrant consideration of WCT as an endangered species. Simply put, there are no guarantees. Evidence from several streams suggests that given a chance to occupy a stream without brook trout, WCT populations increase dramatically. That kind of population increase suggests those WCT populations can be enhanced without the protections afforded by the Endangered Species Act.*

20. This is another example of turning the Elkhorns into a study area for biologists and in keeping the public out. Local people do fish these little creeks.

*There will be no additional public restrictions as a result of restoring WCT in the Elkhorn Mountains. Brook trout will still be the dominant fish species in most of the creeks in the Elkhorn Mountains. In Staubach Creek, brook trout will be available downstream of the barrier.*

21. My hat is off to the private landowners who are cooperating in this project. I fear that "listing" will result in "listing" of private lands as well and am concerned because I own land downstream of the project.

*Landowners downstream of the proposed project may voluntarily take part in efforts to expand this project downstream for a limited distance in the future. Habitat suitability downstream of the Pole Creek road, however, is not sufficient to support a viable WCT fishery due to limited surface water discharge. Currently, there is a very marginal brook trout fishery downstream of the road crossing with fish densities being very low. Downstream of highway 287, Staubach Creek receives groundwater inputs and irrigation return flow during the summer months, which improves habitat quality for fish. However, this area is not suitable for restoring or expanding the WCT population because non-native fish resident to Beaver Creek and Canyon Ferry Reservoir have periodic access to this stream reach. If changes in local land use are needed to improve habitat conditions for WCT, these will be negotiated and documented in a*

*voluntary conservation agreement among the local landowners, DFWP, and the US Fish and Wildlife Service. Some landowners in the Elkhorns and elsewhere in Montana, however, prefer to participate in such projects informally. Therefore, each potential project will be approached on a case by case basis.*

22. The agencies need to make the public an equal partner in this project. Only then will it work.

*We agree that the public is an important part of the success of WCT restoration in the Elkhorn Mountains. It is for that reason that extensive public comment has been solicited in this project. Modifications were ultimately made as a result of public comments and recommendations.*

23. Poison in the water will affect other animals.

*At the concentrations proposed (8 to 10 PPB) antimycin will only affect gill-breathing organisms. Apart from its intended effect on fish, it may also affect some species of aquatic invertebrates. When applied with proper safety precautions, there is no evidence that antimycin used at the proposed concentrations will adversely affect other animals.*

24. Consider the importance of genetic diversity in the project decision.

*Maintaining the existing populations of genetically pure WCT in the Elkhorns is an important component of the comprehensive restoration program from the standpoint of maintaining the intrinsic value of a sensitive species, maintaining a genetic resource that has persisted for thousands of years, and to eventually have fishable populations of our state fish.*

25. The agencies are losing their credibility because of the excessive regulations on the public.

*There are no additional regulations on the public resulting from the Staubach Creek project.*

## **Decision**

Based on the Environmental Assessment, public comment, and the declining status of genetically pure westslope cutthroat trout in Staubach Creek, it is my decision to proceed with a restoration project to attempt to secure the existing population of cutthroat trout in this stream located in the Elkhorn Mountains near Winston Montana. In the interim period following public comment and department evaluation and response to the project, landowner concerns have developed regarding the Staubach Creek project. Increased public scrutiny of this project has resulted in some participating landowners becoming concerned about having a controversial project take place on their private holdings. In light of those concerns, the proposed action in Alternative 2 will be modified for implementation starting immediately.

The proposed action presented in the Environmental Assessment included three major project components: 1) Installation of a fish passage barrier; 2) Removal and relocation of brook trout downstream of the barrier using electrofishing; and 3) Removal of the remaining population of brook trout using a fish toxicant (antimycin). The proposed action will be modified to include the following restoration activities:

Phase 1: Increase isolation of WCT from colonizing brook trout and rainbow trout by installing a culvert barrier that will prevent upstream migration of fish (August 2000).

Phase 2: Remove competitive influence of non-native brook trout by conducting physical removal (by electrofishing) and relocation of brook trout and WCT in a 2.2 mile reach of Staubach Creek upstream of the barrier located at the Clark/Hahn property boundary; (August 2000; September 2001).

Phase 3: Evaluate the success of the project by monitoring WCT response to removal of brook trout, and monitoring the effectiveness of the barriers (2001 through 2005). Pending landowner consent and results of future monitoring to determine effectiveness of electrofishing removal, DFWP may apply to DEQ for a permit to use a fish toxicant (antimycin) to remove the remaining brook trout in the 2.2-mile reach of Staubach Creek.

The department will immediately initiate the components of the project that do not involve the use of toxicants such as culvert barrier installation and electrofishing removal which are slated for completion by late summer. Potential use of the fish toxicant will be deferred for at

least one year and only until all affected private landowners are in concurrence. This modification of the proposed action includes installing a fish passage barrier and the removal and downstream transport of eastern brook trout in a 2.2-mile reach of Staubach Creek. It is anticipated that this action will result in the removal of approximately 50 to 80% of the existing brook trout population from the project area. Monitoring of the brook trout status and ongoing discussions with associated landowners will be used to determine the need for future removal of brook trout either by electrofishing or by use of a fish toxicant. If electrofishing is determined to be 100% successful in removing brook trout, there will be no need to apply for a permit from DEQ to use antimycin. Effectiveness of electrofishing efforts during August 2000 will be monitored during spring 2001 to determine the future method of removal. In addition, landowner perspective of the 2000 restoration efforts will be reassessed to determine if use of electrofishing, antimycin or other activities will be most appropriate during or after 2001.

Modifications to the proposed project are a result of comments received from the general public, other agencies, landowner concerns, and additional internal review of the proposed action. One of the most significant concerns expressed during the public review of the Environmental Assessment related to the use of antimycin and the potential for risks to humans, plants and animals in the vicinity of the project area. In anticipation of these concerns, the project proposal included several provisions to ensure that the use of a fish toxicant was safe and would have no adverse effects on non-target species. Antimycin was selected over the use of less expensive rotenone because it is particularly well suited for conditions and circumstances on Staubach Creek. Neither toxicant maintains long-term toxicity and both are considered safe to use in situations like Staubach Creek. In addition, the downstream boundary of the project area was located at the Hahn/Clark property boundary rather than at the county road crossing to further isolate the project area from any human activity or dwellings.

In consultation with Montana Department of Environmental Quality (DEQ), DFWP planned a two-step process to evaluate the important issue surrounding the use of a fish toxicant. First, DFWP would conduct its own assessment of the impacts and risks associated with applying antimycin. Secondly, DEQ would conduct an independent analysis of the safety of using the fish toxicant antimycin as part of the mandatory permitting process. Based on another DEQ analysis conducted for a restoration project on Cherry Creek, where similar concentrations of antimycin (8-10 parts per billion) were evaluated in 1999, it is likely that similar conclusions concerning antimycin's safety will be reached for Staubach Creek. DEQ's analysis for Cherry Creek concluded, "...there

would be no effect on human health even if the chemicals (in this case, both antimycin and rotenone were considered) were not detoxified, did not break down, and people drank the "contaminated" water continuously for their entire lives." At Staubach Creek, significantly less toxicant would be needed due to the small size and flow of the stream during treatment (3 cubic feet per second) and the short, 2.2 mile recovery area. Depending on stream flow at the time of treatment, only one to two gallons of antimycin would be applied at Staubach Creek. This would be accomplished through the use of approximately 20 drip stations operating over an eight-hour period.

If electrofishing removal proves ineffective and only with landowner concurrence, the department would proceed to the final phase of the project to restore WCT in Staubach Creek which would include the use of antimycin. This would constitute a modification of the originally proposed action. Should the project move into the use of toxicants, the following additional measures, identified and developed as a result of the EA process, will serve to reduce any potential risks relating to the use of toxicants at Staubach Creek:

1. Brook trout will be relocated at least 400 yards downstream of the barrier and the detoxification station to provide added measure of protection to brook trout during the application of toxicants.
2. The number of bioassay cages downstream of the project area will be increased from one to two for increased monitoring of residual toxicity downstream of the project area.
3. Rather than treat the entire 2.2-mile reach in a single day, toxicant would be applied over a two-day period. This will aid in maintaining better control over drip station operations.
4. Monitoring will take place downstream to identify and measure residual levels of potassium permanganate (KMNO<sub>4</sub>) concentrations below the detoxification station.
5. As a precautionary measure previously described in the EA, livestock will be kept away from stream during and for a period of 2 days after treatments.
6. Suggestions were made in the course of public comment to assist the relocation and removal effort by utilizing sport angling, particularly in the form of a "Kid's Fishing Day." By virtue of its size and brushy nature, Staubach Creek does not lend itself to such an activity. However, with interest in the project being high, the public would be

invited to assist with the relocation efforts during electrofishing. This would include helping transport fish above and below barriers and other activities associated with the project. The primary limitation of the number of people participating in or observing the removal and transport operation will be based on minimizing impacts on the private access routes.

7. In order to minimize impacts (such as erosion and weed infestation) of increased human activity and vehicle traffic on private ground during project implementation, efforts will be made to reduce the number of vehicles accessing the project site by carpooling and using an alternative access point (road 491). In addition, the culvert barrier installation at the existing ford crossing may increase unwanted vehicle access on private land. At the landowner's request, a pipe gate will be installed at the culvert barrier to manage access. Additionally, annual visits by FWP employees will be made to determine and control any weed infestations near the culvert barrier and other sites within the project area.

Based on the assessment of impacts addressed in the environmental assessment we find the modified proposal will not have a significant impact on the human or physical environment. Therefore, no environmental impact statement will be prepared.



July 31, 2000

Michael Korn  
Helena Area Coordinator

**ATTACHEMENT 1**

**FINROL (ANTIMYCIN A) LABELS**

**RESTRICTED USE PESTICIDE**

Due to Aquatic Toxicity & Need for Highly Specialized Applicator training. For retail sale to, and use only by, Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicators' Certification.

# FINTROL®

## CONCENTRATE (ANTIMYCIN A) FISH TOXICANT KIT

(contains Fintrol Concentrate and Fintrol Diluent)

This can contains 1 bottle of FINTROL-Concentrate and 1 bottle of Fintrol-Diluent.

FINTROL CONCENTRATE (8 fl. Oz.)			FINTROL DILUENT (8 fl. Oz.)		
Active Ingredients			Inert Ingredients		
Antimycin A	23%	w/w	Diethyl Phthalate		
Inert Ingredients			(surfactant)	30.5%	w/w
Soy lipids	15%		Nonoxyl-9 (detergent)	16.7%	
Acetone	62%		Acetone	52.8%	
	100%	w/w		100.0%	w/w

AQUABIOTICS CORP. P.O. BOX 10576. Bainbridge Island, WA 98110  
E.P.A. Reg. No 39096-2 E.P.A. Est. No 39096-WA-01

**DANGER**  **POISON**

**Keep out of reach of children**

See side panel for other Precautionary Statements.

### DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.  
See "USE DIRECTIONS LEAFLET" for "Fintrol (Antimycin A) Fish Toxicant Kit"

**FINTRON CONCENTRATE**  
**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**

**DANGER:** Fatal if swallowed. May be fatal if absorbed through skin. Causes substantial but temporary eye injury. Causes skin irritation. Do not breath spray mist. Do not get in eyes, on skin or on clothing. Wear protective goggles. Wear chemical gloves. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

**Environmental Hazards**  
**This product is very highly toxic to fish**  
**Physical or Chemical Hazards**

**Extremely Flammable:** Keep away from fire, sparks and heated surfaces.

**FIRST AID: IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**Storage:** Store only in original containers, in a dry place inaccessible to children and pets. Fintrol Concentrate will thicken if stored at temperatures below 65 F. Before use store overnight above 70 F. Fintrol Concentrate is stable for a minimum of 3 years when stored in unopened original glass bottles.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal:** Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

**FINTROL DILUENT  
PRECAUTIONARY STATEMENTS  
Hazards to Humans and Domestic Animals**

**CAUTION:** Harmful if swallowed. Harmful if inhaled. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin and clothing. Do not breath spray mist. Do not get in eyes, on skin or on clothing. Wear protective goggles. Wear chemical gloves. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

**Physical or Chemical Hazards**

**EXTREMELY FLAMMABLE: KEEP AWAY FROM FIRE, SPARKS AND HEATED SURFACES.**

**FIRST AID**

**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

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**Container Disposal:** Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.



OBSERVE LABEL  
DIRECTIONS

# FINTROL-® CONCENTRATE

(antimycin A) (solution 20%)

### PRECAUTIONARY STATEMENTS

Hazards to Humans and  
Domestic Animals

**DANGER:** Fatal if swallowed. May be fatal if absorbed through skin. Causes substantial but temporary eye injury. Causes skin irritation. Do not breathe spray mist. Do not get in eyes, on skin or on clothing. Wear protective goggles. Wear chemical gloves. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

**Environmental Hazards**  
This product is very highly toxic to fish.

**STORAGE AND DISPOSAL**  
Do not contaminate water, food or feed by storage or disposal. SEE OUTER CAN LABEL FOR PROPER STORAGE, PESTICIDE DISPOSAL AND CONTAINER DISPOSAL

EPA Reg. No. 39096-2  
EPA Est. No. 39096-WA-01

### Fintrol Concentrate for use with Fintrol (Antimycin) Fish Toxicant Kit

Ingredients	(w/w%)
Active Ingredients	
Antimycin A	23%
Inert Ingredients	
Soy lipids	15%
Acetone	62%
	100%

## DANGER



## POISON

### KEEP OUT OF REACH OF CHILDREN

Aquabiotics Corp.  
PO Box 10576  
Bainbridge Island, WA

**Physical or Chemical Hazards:**  
**Extremely Flammable:** Keep away from fire, sparks and heated surfaces.

**FIRST AID IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**DIRECTIONS FOR USE**  
It is a violation of federal law to use this product in a manner inconsistent with its labeling. See "USE DIRECTIONS LEAFLET" for "FINTROL (Antimycin A) Fish Toxicant Kit".

TAKE TIME



OBSERVE LABEL  
DIRECTIONS

## FINTROL DILUENT

FOR USE WITH

### PRECAUTIONARY STATEMENTS

Hazards to Humans &  
Domestic Animals

**CAUTION:** Harmful if swallowed. Harmful if inhaled. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin and clothing. Do not breathe spray mist. Do not get in eyes, on skin or on clothing. Wear protective goggles. Wear chemical gloves. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

**Physical or Chemical Hazards:**  
**Extremely Flammable:** Keep away from fire, sparks and heated surfaces.  
**First Aid:** See Outer Can Label

EPA Reg. No. 39096-2  
EPA Est. No. 39096-WA-01

## FINTROL® (Antimycin) Fish Toxicant Kit

Ingredients	(w/w%)
Inert Ingredients	
Diethyl Phthalate (surfactant)	30.5%
Nonoxyl-9 (detergent)	16.7%
Acetone	52.8%
	100%

### CAUTION

Keep out of reach of children

### DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. See "USE DIRECTIONS LEAFLET" for FINTROL (Antimycin A) Fish Toxicant Kit.

**STORAGE AND DISPOSAL**  
Do not contaminate water, food or feed by storage or disposal. SEE OUTER CAN LABEL FOR PROPER STORAGE, PESTICIDE DISPOSAL AND CONTAINER DISPOSAL.

AQUABIOTICS CORP.  
P.O. Box 10576  
Bainbridge Island, WA 98110