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Montana Fish, Wildlife & Parks

HELENA AREA RESOURCE OFFICE

June 10, 2005

TO: Governor's Office, Mike Volesky, Room 204, State Capitol, P.O. 200801, Helena, MT 59620-0801
Environmental Quality Council, Capitol Building, Room 106, P.O. Box 201704, Helena, MT 59620
Dept. Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901

Montana Fish, Wildlife & Parks:

Director's Office
Parks Division
Fisheries Division
Wildlife Division
Enforcement Division
Lands Section
Design & Construction Bureau
Legal Unit
FWP Commissioners

MT Historical Society, State Historic Preservation Office, P.O. Box 201202, Helena, MT 59620-1202
MT State Parks Association, P.O. Box 699, Billings, MT 59103
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620
James Jensen, Montana Environmental Information Center, P.O. Box 1184, Helena, MT 59624
Janet Ellis, Montana Audubon Council, P.O. Box 595, Helena, MT 59624
George Ochenski, P.O. Box 689, Helena, MT 59624
Jerry DiMarco, P.O. Box 1571, Bozeman, MT 59771
Montana Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Wayne Hurst, P.O. Box 728, Libby, MT 59923
Glen Hockett, 745 Doane Road, Bozeman, MT 59715
Thomas Mendyke, Helena IR, 317 Cruise Ave., Helena, MT 59601
Tom Sathers, Headwaters Fish & Game Assoc., P.O. Box 1941, Bozeman, MT 59771-1941
Broadwater County Commissioners, Broadwater County Courthouse, Townsend, MT 59644
Lewis and Clark County Commissioners, 316 N Park, Helena, MT 59601
Jefferson County Commissioners, Box H, Boulder, MT 59632
Bruce Farling, Montana Trout Unlimited, Box 7186, Missoula, MT 59807
Steve Luebeck, George Grant TU, Box 563, Butte, MT 59703
David Payne, Missouri River TU, 4620 Liberty, Helena, MT 59601
John Wilson, Montana Trout Unlimited, 405 Monroe, Helena, MT 59601
Jack Sautter, Broadwater Stream and Lake Comm., 41 River Road, Townsend, MT 59644
Virgil Binkley, Broadwater Rod and Gun, Box 641, Townsend, MT 59644
Prickly Pear Sportsman's Association, Box 48, East Helena, MT 59635
Tom Gannon, Backcountry Horsemen of Montana, Box 2106, Clancy, MT 59634
James Mahaer, Last Chance Backcountry Horsemen, Box 4008, Helena, MT 59601
Paul Updike, Box 460, Townsend, MT 59644
Dave Brown, Elkhorn Working Group, 4510 Harmony Lane, Helena, MT 59602

Ladies and Gentlemen:

Montana Fish, Wildlife & Parks is proposing to introduce native westslope cutthroat trout to two streams in the Elkhorn Mountains near Helena and Townsend, MT. The upper reaches of the proposed project streams, Crazy Creek and SF of Crow Creek, are currently fishless due to natural barriers. These efforts are part of the larger Elkhorn Mountains Cutthroat Trout Restoration Program, which is intended to increase the distribution of, and decrease the risk of permanent loss of, the seven remaining native westslope cutthroat trout populations in the mountain range. Successful introductions to Crazy Creek and SF of Crow Creek would increase the distribution of cutthroat trout by about 3.0 miles in the mountain range. The introduction efforts are proposed to start in July. Please find the enclosed draft Environmental Assessments for your review.

Comments on the Environmental Assessment will be accepted until 5:00 pm, July 9, 2005 and can be given at the FWP web page (<http://fwp.state.mt.us>), in writing or by email at the addresses below, or at a public open house where questions regarding these projects can be addressed. The open house will be held at the USDA Service Center in Townsend on June 22, 2005, between 6 and 8 pm. Please address written comments or questions to Lee Nelson, Montana Fish, Wildlife & Parks, 415 South Front Street, Townsend, MT 59644, (406) 495-3866, E-mail: leenelson@fs.fed.us.

Thank you for your interest.

Sincerely,

Michael Korn
Helena Area Coordinator

Montana Department of Fish, Wildlife & Parks

1420 E. 6th Ave, Helena, MT 59620

Draft Environmental Assessment

**Introduction of Westslope Cutthroat Trout to Crazy Creek and South Fork of Crow Creek
in the Elkhorn Mountains**

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action:

The proposed action is to introduce native westslope cutthroat trout (WCT) into two currently fishless streams in the Elkhorn Mountains. The project is designed to increase the overall distribution of WCT, a rare species in the upper Missouri River drainage, and to create a genetic reserve for "at risk" populations within the local area.

2. Agency Authority for the Proposed Action

Montana Fish, Wildlife & Parks "...is hereby authorized to perform such acts as may be necessary to the establishment of and conduct of fish restoration and management projects..." under MCA § 87-1-702.

3. Name of Project

Introduction of Westslope Cutthroat Trout to Crazy Creek and South Fork of Crow Creek in the Elkhorn Mountains

4. If Applicable:

Estimated Construction/Commencement Date: July – October 2005

Estimated Completion Date: 2010

Current Status of Project Design (% complete): 100%

5. Location Affected by Proposed Action (county, range and township)

Crazy Creek (T7N, R2W, S26) and SF of Crow Creek (T6N, R2W, S15), Elkhorn Mountains, Jefferson County

6. Project Size: Estimate the number of acres that would be directly affected that are currently:

1. Developed/ residential – 0 acres
2. Industrial – 0 acres
3. Open space – 0 acres
4. Wetland/ riparian – pure WCT would be introduced to about 3.0 miles of stream
5. Floodplain – 0 acres
6. Irrigated cropland – 0 acres
7. Dry cropland – 0 acres
8. Forestry – 0 acres

9. Rangeland – 0 acres

10. Other – 0 acres

7. **Map/site plan:** See figure 1, 2 and 3.

8. **Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.**

The U.S. Forest Service manages lands adjacent to Crazy and SF of Crow creeks. Along with the State, the Forest Service is a cosigner of a Memorandum of Understanding (FWP 1999b) that outlines the agreement between agencies regarding recovery and management of WCT in the Elkhorn Mountains. The Memorandum of Understanding states, "The purpose of the Elkhorn Mountains Cutthroat Trout Restoration Program is to secure existing populations of Missouri River westslope cutthroat trout within the streams flowing within and from the Elkhorn Mountains, and to expand cutthroat trout distribution in suitable barren habitats".

(a) **Permits:** N/A

(b) **Funding:**

<u>Agency Name</u>	<u>Funding Amount</u>
Montana Fish, Wildlife & Parks	This WCT restoration project
National Bring Back the Natives Program	is part of the larger WCT recovery program
Helena National Forest	in the Elkhorn Mountains that annually
Bureau of Land Management	expends \$75,000 – \$90,000. Cost is detailed
Trout Unlimited	on page 11.

(c) **Other Overlapping or Additional Jurisdictional Responsibilities:**

<u>Agency Name</u>	<u>Type of Responsibility</u>
US Forest Service, Helena National Forest	Management of federal lands within the Elkhorn Mountain Range

9. **Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:**

BACKGROUND

Statewide WCT Status: Westslope cutthroat trout have declined in abundance and distribution throughout Montana, and in the Missouri River Basin pure populations are relatively rare (Shepard et al. 2003). In the upper Missouri River Subbasin, an area encompassing the Missouri River drainage from Three Forks to Wolf Creek, MT, it is estimated that native WCT occupy less than 2% of their historic range (< 35 miles of stream). Major factors contributing to this decline include competition with nonnative trout (brook, brown, and rainbow trout) that were first introduced to Montana in the 1890's, hybridization with rainbow and Yellowstone cutthroat trout, habitat changes, over-exploitation, and isolation to small headwater streams. Brook trout displacement of WCT is common where the species range overlap, and along with hybridization it is currently the greatest threat to many remaining pure WCT populations in the Missouri River drainage. The competitive advantage brook trout have over WCT can be attributed to a size advantage their young incur due to timing of reproduction. Brook trout have been linked to the disappearance of WCT from many streams in the Missouri River drainage. Most WCT populations in

the Missouri River drainage are considered to have a low likelihood of long-term persistence (100 years) under current conditions.

Elkhorn Mountains WCT Status: Seven native and three introduced populations of WCT inhabit streams in the Elkhorn Mountains (Figure 1). In total, these populations occupy about 16 miles of stream, whereas nonnative trout (brook, rainbow, brown, and hybrid cutthroat trout) occupy about 112 miles of stream. In addition to competition with nonnative trout, threats to remaining Elkhorn WCT populations include small population sizes (about 60 to 400 in most populations) and restricted distribution (0.1 to 5 miles) within each stream. Overall, current WCT distribution and abundance (3,000 – 5,000 total WCT) in the Elkhorn Mountains is much reduced than what would be expected without nonnative competition and habitat changes (e.g., historic placer mining). The likelihood of WCT continuing to persist in the mountain range is considered low unless restoration activities secure and increase the number and distribution of remaining populations. To date, WCT restoration efforts in the Elkhorn Mountains have included reducing or eliminating nonnative trout competition in Dutchman, McClellan, Muskrat, Staubach and South Fork of Warm Springs creeks by removing brook trout with electrofishing and constructing barriers to prevent their reinvasions. The range of WCT in the mountain range has also been increased through the introduction of eggs or live fish from native local populations into previously fishless reaches of Eureka, Little Tizer, Muskrat, and Whitehorse creeks.

Elkhorn Mountains WCT Restoration Program: In 1999 the State of Montana, along with several federal agencies and non-government organizations, signed a Memorandum of Understanding (MOU) and Conservation Agreement for WCT (FWP 1999c) to provide direction in conserving WCT populations throughout their historic range in Montana. In addition, FWP, the U.S. Forest Service, and the Bureau of Land Management signed an MOU (FWP 1999b) to manage existing populations within the Elkhorn Mountains, and are cooperatively implementing the Elkhorn Mountains Cutthroat Trout Restoration Program (FWP 1999a). The goal of both agreements is to ensure the continued persistence of WCT in the Missouri River Basin and the Elkhorn Mountains by securing and expanding remaining pure WCT populations. Expansion of populations would occur by introduction of WCT into streams where nonnative trout were first removed, or into streams that were previously fishless. The streams identified for WCT introductions in this assessment, Crazy Creek and SF of Crow creeks, were not identified for such actions in the initial Elkhorn Mountains Westslope Cutthroat Trout Restoration Program EA. These streams, however, have become priority recovery streams as evaluations since the initial programmatic assessment suggest secure and quality fishless habitats that should support viable WCT populations. Success of this proposed action would increase the current distribution of WCT in the Elkhorn Mountains by about 3.0 stream miles, and would provide genetic reserves for locally adapted WCT populations. Accordingly, this project will help achieve the goal and objectives listed in the conservation agreements for restoration of WCT both statewide and in the Elkhorn Mountains.

PROPOSED ACTION

The proposed action is to expand the distribution of WCT in the Elkhorn Mountains by placing eggs and/or live fish into two streams that have fishless reaches due to natural barriers (Crazy and SF of Crow Creek; Figure 1). Because reaches in these streams are isolated from nonnative trout, and because they are currently fishless, they provide good opportunities for introducing WCT as conservation projects. Similar size streams in the upper Missouri River drainage have maintained self-sustaining WCT populations for decades. The project would involve introducing fertilized eggs or fish from local donor WCT populations that have adapted to habitat conditions in the upper Missouri River drainage; by this means, the introduced populations will have a better chance for long-term persistence, and will perpetuate locally adapted genetic characteristics. Fish would be

introduced to the project streams over several years through on-site incubation of fertilized eggs or transfer of live fish from the donor populations. Specific introduction methods and donor populations are discussed in Appendix 1 and 2.

Project streams – Crazy Creek is a second order tributary to Crow Creek in the Elkhorn Mountains (T7N, R2W, S26; Figure 1 and 2). The stream is fishless due to a waterfall 0.25 miles upstream from its mouth. Base flow is 2 – 3 CFS, and the average stream width is 8 to 10 feet. About 1.8 miles of the currently fishless stream reach is deemed suitable WCT habitat, which includes sections with high quality pool habitats, low gradient, and abundant cover. High elevation (6000 – 7200 ft) and dense overhead cover suggest moderately cold water temperatures and associated low biotic productivity in the stream. While difficult to predict success of WCT introductions, it is possible that the currently fishless reach of Crazy Creek could support 400 to 800 WCT; however, low productivity would suggest relatively lower fish densities than are seen in lower elevation Elkhorn streams.

The SF of Crow Creek is a second order tributary to Crow Creek in the Elkhorn Mountains (T6N, R2W, S15; Figure 1 and 3). The upper reaches of the stream are fishless due to several cascades; although not substantial in terms of barriers, these cascades have apparently been effective at preventing brook trout invasions for several decades. Base flow is 2 – 3 CFS, and the average stream width is 6 to 8 feet. About 1.2 miles of the currently fishless stream reach is deemed suitable WCT habitat, which includes some of the best remaining fishless habitat in the Elkhorns. Like most headwater streams (6600 – 7000 ft elevation), low biotic productivity will limit fish abundance; however, overall good habitat conditions with areas of low gradient meadow type habitats indicate 400 or more WCT could be supported in the fishless reach.

10. List of agencies consulted during preparation of the EA:

- Montana Fish, Wildlife & Parks, Townsend, Bozeman, Great Falls, and Helena
- U.S.D.A. Forest Service, Helena and Townsend
- University of Montana, Wild Trout and Salmon Genetics Laboratory – Missoula

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. **Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:						

2. <u>AIR</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. **Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		X				
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a)		X				
f. Other:						

3. <u>WATER</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ***For P-R/D-J, will the project affect a designated floodplain? (Also see 3c)		X				
m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a)		X				
n. Other:						

4. VEGETATION	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				
g. Other:						

** 5. FISH/WILDLIFE	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?			X		No	5b
c. Changes in the diversity or abundance of nongame species?			X		No	5c
d. Introduction of new species into an area?			X		No	5d, 5 c, 5b
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				5c
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		X				
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)			X		No	5b, 5d
j. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

Comment 5b. The proposed project would increase the abundance and range of pure WCT, a rare and unique resource with limited distribution in the Missouri River drainage and Elkhorn Mountains. This is a minor impact because no displacement of other game fish is expected, and the distribution of a game fish (WCT) in the Elkhorns would increase. In the long-term, an overall increase in angling opportunities is expected with this project. Westslope cutthroat trout are currently protected by catch-and-release regulations in streams in the Elkhorn Mountains, but restoration efforts like the proposed action are intended to increase overall WCT abundance to allow future harvest of the species in this and other streams.

Comment 5c: The proposed action will introduce WCT into a stream that is currently barren of fish. A potential impact of any fish introduction into a fishless stream is on resident aquatic invertebrates and amphibians. To address aquatic invertebrate concerns, invertebrates will be collected and identified from Crazy and SF of Crow creeks prior to introduction of any fish or eggs. Dr. Dan Gustafson (Montana State University) will analyze the collections to determine the presence of any unusual, sensitive, threatened or endangered species. In previous WCT introduction projects in the Elkhorn Mountains, Dr. Gustafson's collections from fishless streams found: 1) no threatened or endangered invertebrate species, 2) species found are common and widespread in the Rocky Mountains, and 3) all species collected occur at other sites where fish are present. Based on the invertebrate communities, his conclusion was that there is no reason why fish transfers should not take place. It is unlikely that any threatened or endangered invertebrate species will be identified in Crazy or SF of Crow creeks; however, with identification of such species the project would be re-evaluated through an additional Environmental Assessment.

The introduction of WCT into fishless streams in the Elkhorn Mountains is unlikely to impact native amphibians. Amphibians sensitive to fish introductions generally breed in lakes or ponds, and would not be affected by the proposed introductions. The only stream breeding species common to the area, the Columbia spotted frog, has co-evolved and coexists elsewhere with native WCT. Furthermore, slow water areas (e.g., beaver ponds and old side-channels) that are preferred by amphibians, are also uncommon in both streams. Electrofishing surveys were conducted in 2004, however, to determine if unexpected species like the Pacific giant salamander and tailed frog were present in Crazy or SF of Crow creeks – none were observed.

Comment 5d: This project would introduce WCT into streams that are currently barren of fish. While WCT are native to the Elkhorn Mountain Range, it is unlikely they occupied either Crazy Creek or the upper reaches of the SF of Crow Creek. Also see comment 5c.

A potential impact of transferring fish between streams and using a hatchery for egg rearing is the introduction of fish pathogens to Crazy Creek and the SF of Crow Creek. To address this concern fish samples will be collected from all WCT donor populations prior to introductions. These disease samples will be tested for the presence of bacterial kidney disease, enteric redmouth, whirling disease, furunculosis, infectious hematopoietic necrosis virus, infectious pancreatic necrosis virus, and viral hemorrhagic septicemia. Donor fish populations that test positive for significant pathogens would not be used for the introduction effort. Finally, the potential of disease being transferred from hatchery to the wild will be reduced by isolating eggs in the hatchery, and by treating eggs with formalin and iodine (external disinfectants) during incubation and prior to placement in on-site, streamside incubators.

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Increases in existing noise levels?			X			6a
b. Exposure of people to severe or nuisance noise levels?			X			6a
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:						

Comment 6a. A helicopter will be used to transfer fish into Crazy Creek. Increased noise levels will occur for a very short time (< 2hr), 1 to 3 times each year.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				7a
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

Comment 7a. Introduction of WCT is not expected to have any impacts on current land activities in areas adjacent to the streams in the Helena National Forest. The Elkhorn Mountains are currently designated as the "Elkhorns Wildlife Management Unit", which establishes land management guidelines that maintain or enhance wildlife habitats. Forest Service riparian guidelines for Crazy and SF of Crow creeks are the same regardless of the presence of fish. With these current guidelines, habitat conditions are suitable for WCT in both Crazy and SF of Crow creeks, and no additional restrictions on land management activities, including to the South Crow Cattle and Horse Grazing Allotment (six permits), are necessary with the introduction of fish so long as current riparian guidelines are observed.

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		X				
e. Other:						

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased used of any energy source?		X				
e. **Define projected revenue sources			X			10e
f. **Define projected maintenance costs.			X			10f
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

Comment 10e. The proposed project is part of the ongoing Elkhorn Mountains Westslope Cutthroat Trout Restoration Program (FWP 1999a). The Elkhorns Program annually expends \$75,000 to \$90,000 and is jointly funded by Montana Fish, Wildlife & Parks, the U.S. Forest Service (National Fish and Wildlife Foundation and Helena National Forest), the Bureau of Land Management, and Montana Trout Unlimited. Specific costs associated with the proposed project are difficult to predict because of variable weather conditions and because the availability of spawning WCT will change from year to year. However, based on similar introduction efforts in the Elkhorn Mountains labor allocated to each project would be 10 to 30 man-days per year (\$2,000 - \$6,000) until self-sustaining populations are established (3 - 5 years).

Comment 10f. Maintenance costs would be minimal with successful establishment of a self-sustaining WCT populations after the 3 - 5 year period of introductions.

** 11. <u>AESTHETICS/RECREATION</u>	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)		X				
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		X				
e. Other:						

12. <u>CULTURAL/HISTORICAL RESOURCES</u>	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e)		X				
g. ****For P-R/D-J, list any federal or state permits required.						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

PART II. ENVIRONMENTAL REVIEW, CONTINUED

2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

One alternative was considered during the preparation of this EA

- 1) No Action Alternative

The predicted consequences of the "No Action" alternative are:

- About 3.0 miles of suitable fish habitat would remain fishless.
- The likelihood of losing unique WCT genetic characteristics would remain high with the long-term probability that the donor WCT populations will ultimately go extinct without work in other candidate streams.
- Conservation goals for WCT in the Elkhorn Mountains would be more difficult to achieve.
- No costs associated with introduction efforts.

- 2) Preferred Alternative: Introduction of pure WCT to Whitehorse Creek (proposed action)

The predicted consequences of the Preferred Alternative were detailed and discussed in Part I and Part II.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None

PART III. NARRATIVE EVALUATION AND COMMENT

Addressed in Part I and Part II.

PART IV. EA CONCLUSION SECTION

1. Based on the significance criteria evaluated in this EA, is an EIS required (YES/NO)? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

No. An EIS is not required under the Montana Environmental Policy Act (MEPA) because the project lacks significant impacts to the physical or human environment. Therefore, the impacts are appropriately addressed through an Environmental Assessment. The primary

impact associated with the project is increased abundance and distribution of WCT in the Elkhorn Mountains, which is the intended consequence of the action.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The public will be notified through local newspapers and papers with statewide distribution, and through contact with local sports groups. This EA will also be published on the MFWP web page (<http://fwp.state.mt.us>). The EA was mailed to local landowners and individuals and organizations that previously indicated interest in WCT projects. Public comments can be given at the FWP web page, in writing or by email at the addresses below, or at a public open house where questions regarding these projects can be addressed. The open house will be held at the USDA Service Center in Townsend on June 22, 2005, between 6 and 8 pm.

Please address any comments or questions to: Lee Nelson, Montana Fish, Wildlife & Parks, 415 South Front Street, Townsend, MT 59644, (406) 495-3866. Comments on the EA will be accepted until 5:00 pm, July 9, 2005. This level of public involvement is believed adequate for the proposed project.

3. Duration of comment period.

The public comment period for this proposal is from June 10, 2005, to July 9, 2005. Written comment can be mailed to:

Lee Nelson
Montana Fish, Wildlife & Parks
415 South Front Street
Townsend, MT 59644
E-mail: leenelson@fs.fed.us

4. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Lee Nelson
Fisheries Biologist
Montana Fish, Wildlife & Parks
415 South Front Street
Townsend, MT 59644
Phone: 406-495-3866
E-mail: leenelson@fs.fed.us

References

- FWP. 1999a. Environmental Assessment: Elkhorn Mountains Westslope Cutthroat Trout Restoration Program, Mountain Range Programmatic Assessment. Prepared by Ron Spoon and Jodie Canfield, Montana Fish, Wildlife and Parks, Region 3, Bozeman, Montana.
- FWP. 1999b. Memorandum of Understanding and Conservation Agreement for the Westslope Cutthroat Trout Restoration Program in the Elkhorn Mountains. Montana Fish, Wildlife and Parks, Helena, Montana.
- FWP. 1999c. Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana. Montana Fish, Wildlife and Parks, Helena, Montana.
- Shepard, B. B., B.E. May and W. Urie. 2003. Status of Westslope Cutthroat Trout in the United States: 2002. Montana Fish, Wildlife and Parks for the Westslope Cutthroat Trout Interagency Conservation Team, Helena, Montana.

Appendix 1. Proposed WCT Introduction Methodology

Two methods are being considered for introduction of WCT into Crazy and SF Crow creeks, these include the transfer of fertilized eggs and the transfer of live fish. Both methods have been used to establish WCT populations in fishless waters. The benefits of using fertilized eggs are that a large number of fish (eggs) can be introduced during a short period of time, there is a lower chance of spreading disease, and potentially, eggs that hatch in a stream may be more likely "imprinted" to that stream than a fish that was hatched elsewhere. Disadvantages of using fertilized eggs include high labor costs involved with collecting adult fish for spawning and care of fertilized eggs until they hatch, and introducing enough individuals over a short period of time to create a strong genetic base to the new population. The method has been successfully used in two on-going introduction projects (Eureka and Little Tizer creeks) in the Elkhorn Mountains. Eyed egg introductions would be the primary method used in the proposed SF of Crow Creek introduction unless stream temperatures are found to be too cold for incubators, in which case, live fish transfers may be included into the effort. Using only eggs, we anticipate it will take 3 to 5 years to introduce enough gametes to establish a genetically sound population in the SF of Crow Creek.

The introduction of live fish has been successful at establishing a WCT population in a fishless reaches of Muskrat and Whitehorse creeks in the Elkhorn Mountains. Benefits of transferring live fish include establishing a self-sustaining population over a relatively short period of time, and reduced labor costs as compared to collection and introduction of eggs. Disadvantages of using live fish include potential negative impacts on the donor population if a significant percentage of the population is moved, establishing a population comprised of a high percentage of siblings, and the potential of transferring disease (see page 8 for discussion on disease transfer). Because Crazy Creek is very remote, which makes maintenance of egg incubators

difficult, our efforts in this stream will focus on establishing a WCT population with live fish. We anticipate it will take 3 to 5 years of introducing live fish to establish a genetically viable WCT population in Crazy Creek; however, duration of the project will be highly dependent on the number of fish we are able to transfer from the donor population (s), and how well fish survive in Crazy Creek.

Timeframe and specific strategies for egg introductions:

1. *Collect eggs from donor WCT populations.* Gametes will be collected during June and July 2005, and successive years, from female and male WCT in donor streams. Fish will be captured by electrofishing or trapping at known spawning locations. When possible, females from one stream may be fertilized with males from other streams to help increase genetic variation. Prior to being returned live to the stream, donor fish will be marked with an adipose fin-clip so they are not used as donors in following years. To lessen the chance that egg-takes will adversely affect the donor populations, only 5 – 15 females will be collected each year from donor populations for egg-take purposes.
2. *Egg incubation – Sun Ranch Fish Hatchery.* Fertilized eggs will be immediately moved to the Sun Ranch Fish Hatchery (near Ennis, MT) for about 3 weeks of incubation. This private hatchery was built in 2002 specifically for WCT restoration projects. The use of the hatchery is an attempt to reduce egg mortality that may occur with on-site stream incubation. At the hatchery, eggs from each mating will be kept separate until the viability of the eggs is known. This method will help us determine the relative contribution of each female and male to the new population. Prior to bringing eggs back into the wild they will be disinfected with formalin and iodine, which are external disinfectants to minimize possible disease transfer. Eggs will be incubated in the hatchery until about 1 week pre-hatch.
3. *On-site egg incubation/fry rearing.* One week pre-hatch, eggs will be moved to streamside incubators in the receiving stream. Streamside incubators consist of a 5-gallon plastic bucket, plastic pipes to provide water flow to the bucket, and artificial substrate to provide shelter for eggs and fry. Incubators will be checked 1 or 2 times each week to monitor water flow, remove dead eggs, and to monitor egg and fry development. Fry will disperse voluntarily from the incubators after about 2 to 4 weeks of additional development.

Timeframe and specific strategies for live fish introductions:

Sub-adult WCT (including young-of-the-year) would be collected from donor populations by trapping and/or electrofishing summer to late fall. Efforts would be made to capture fish throughout the distribution of WCT in each donor stream – this should reduce the incidence of transferring closely related fish. Total fish moved from year to year would be variable and based on annual abundance of young fish from each donor population, and total number of donor populations utilized. Likely, 50 to 300 fish would be moved from each donor populations each

year for 3 to 5 years. Collected fish would be transported to recipient streams in coolers with an ample oxygen supply, and in the case of Crazy Creek a helicopter may be used to move fish to the remote stream.

Appendix 2. Proposed WCT Donor Populations

The foremost goal of these introduction projects is to preserve characteristics of locally adapted WCT populations. To meet this goal, we will only introduce eggs or fish from pure WCT populations from the upper Missouri River basin. Four WCT populations are currently being considered as donor sources for the proposed introductions, these include Duck and Ray creeks in the Big Belt Mountains, and Hall, Muskrat and Prickly Pear creeks – all in the Elkhorn Mountains (Figure 1). The initial introduction goal in Crazy Creek will be to establish the WCT population with live fish from Duck Creek only. Transfer of live fish from Duck Creek would be part of a recovery effort in that streams which includes brook trout removals and the on transfer (to Crazy Creek) of WCT that are believed to perish as the stream dries in late summer. The initial introduction effort in SF of Crow Creek will be to use eyed eggs from Muskrat Creek. These eggs may be fertilized with males from other streams in Upper Missouri River subbasin. Unexpected events (e.g., presence of disease, genetics issues, or reduced population abundance) could prevent collection of an adequate number of eggs or fish from Duck Creek or Muskrat Creek, at which point other genetically pure WCT populations in the upper Missouri River drainage would be used for the introduction efforts.

Any WCT population that is used as a donor source will first be evaluated for genetic purity and presence of pathogens. A minimum of 50 genetic samples and a similar number of health samples from different fish have been or will be analyzed for each of the likely donor streams. Only fish or eggs from pure populations, and populations that do not test positive for important pathogens (see discussion of disease on page 8), will be used for the introduction efforts.

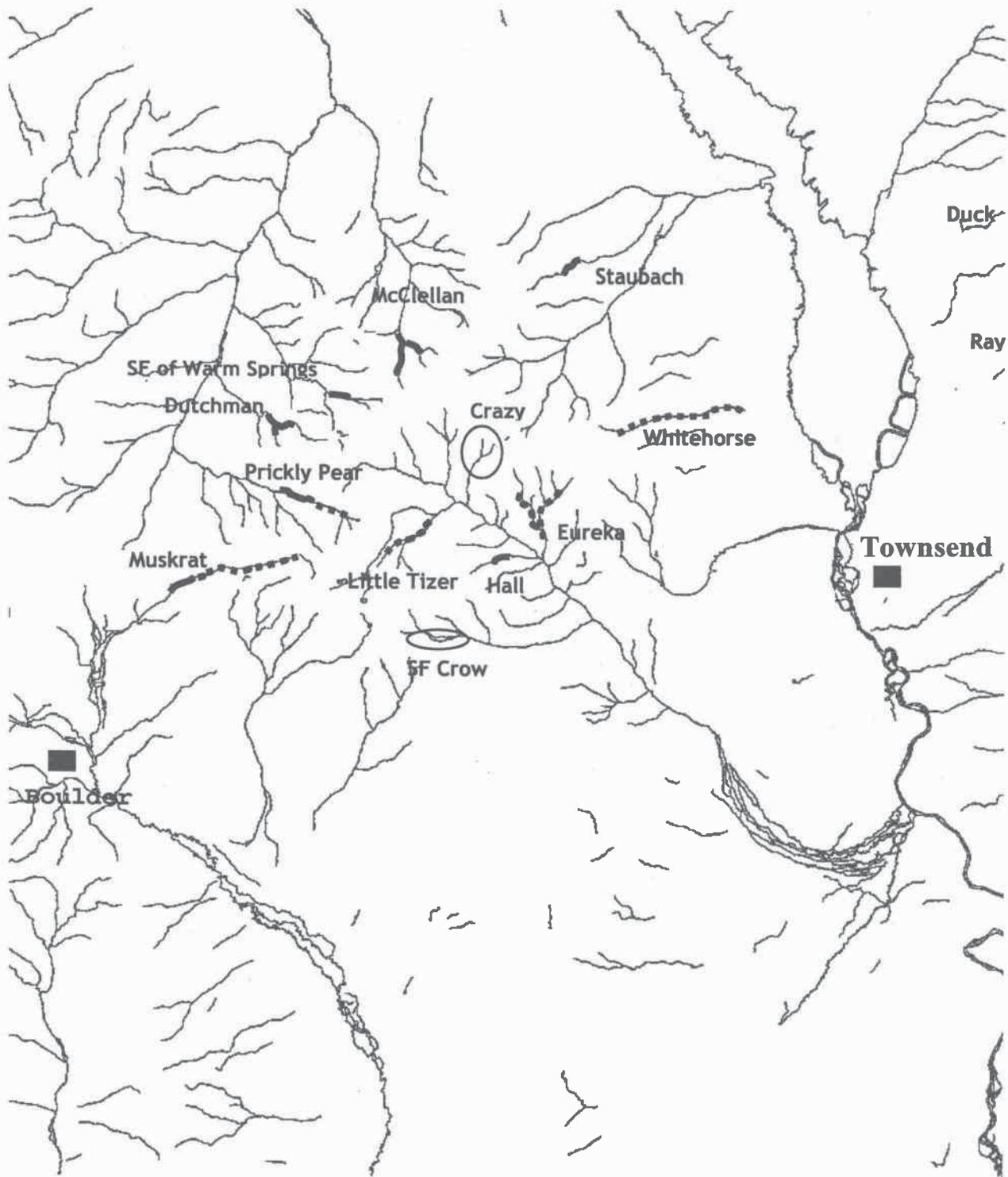


Figure 1. Approximate location of native westslope cutthroat trout populations in the Elkhorn Mountains at the initiation of the recovery program (heavy black lines), populations that have been introduced during restoration efforts (dotted lines), and potential WCT introduction areas (ovals).

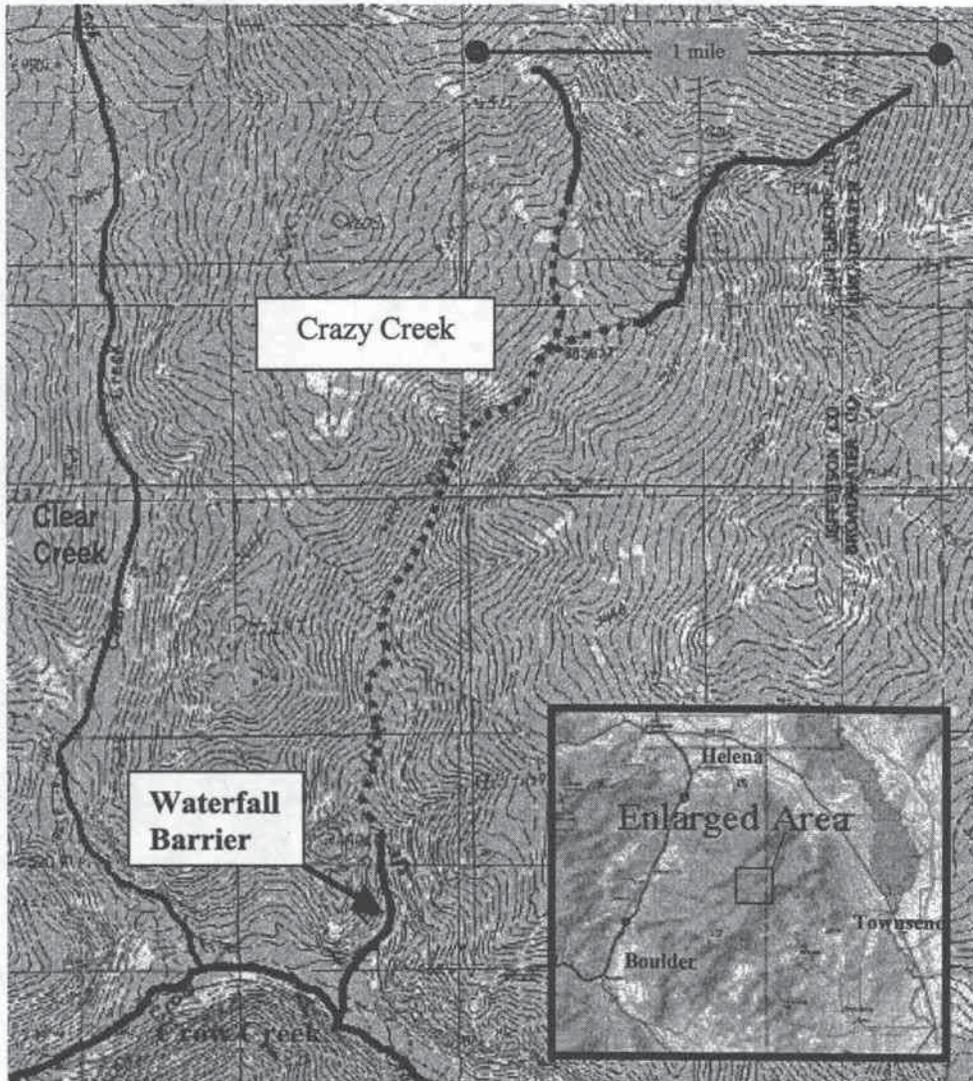


Figure 2. Map of Crazy Creek, including location of migratory barrier, and currently fishless, but suitable WCT habitat (dotted line).

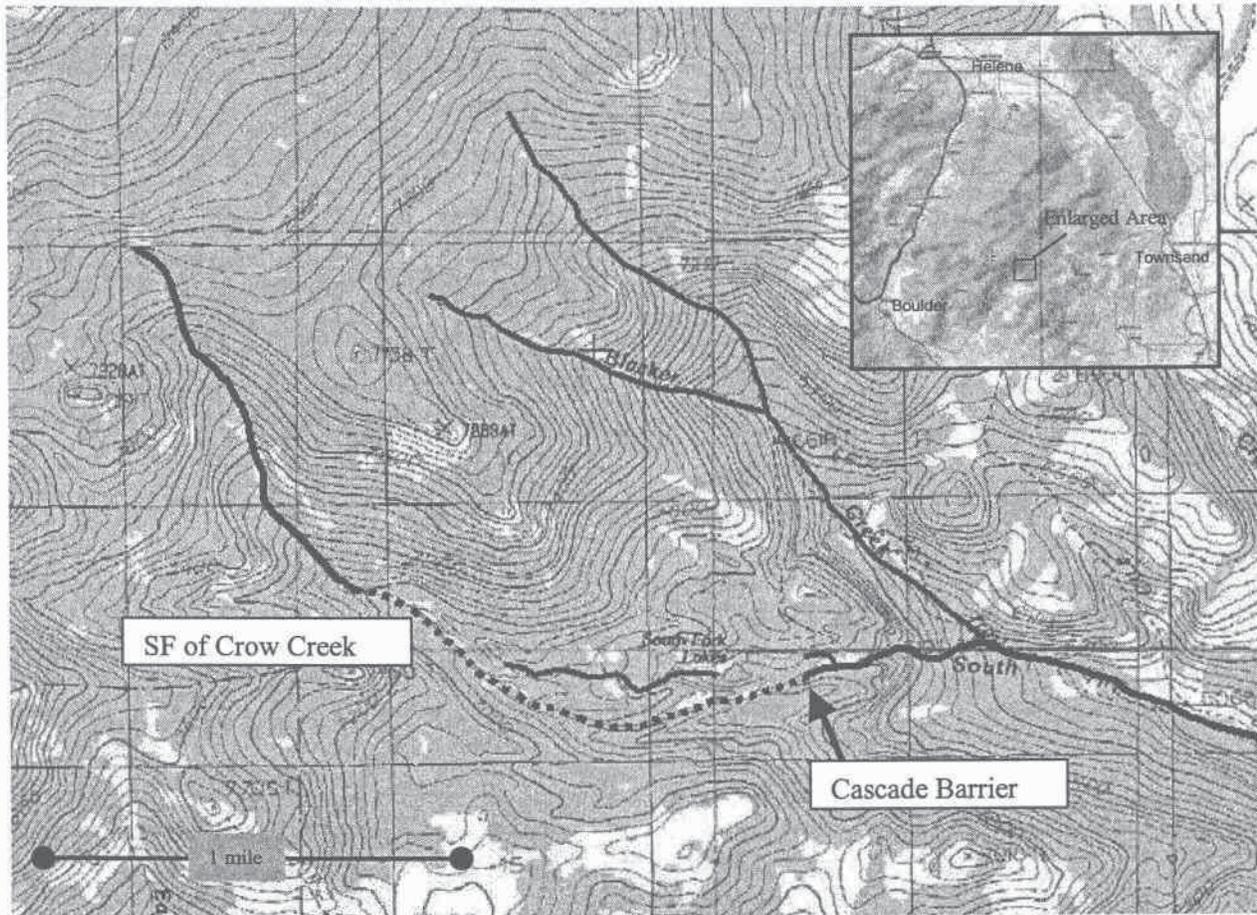


Figure 3. Map of SF of Crow Creek, including location of migratory barrier, and currently fishless, but suitable WCT habitat (dotted line).