

# DANAHER CREEK WESTSLOPE CUTTHROAT TROUT BROODSTOCK PROJECT

## DRAFT ENVIRONMENTAL ASSESSMENT MEPA/NEPA CHECKLIST

**MISSION.** Montana Fish, Wildlife & Parks, through its employees and citizen commission, provides for the stewardship of the fish, wildlife, parks and recreational resources of Montana, while contributing to the quality of life for present and future generations

All Montanans have the right to live in a clean and healthful environment. This brief environmental analysis is intended to provide an evaluation of the likely impacts to the human environment from proposed actions of the project cited below. This analysis will help Montana Fish, Wildlife & Parks to fulfill its oversight obligations and satisfy rules and regulations of both the Montana Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA). The project sponsor has a responsibility to ensure that all impacts have been addressed. Some effects may be negative; others may be positive. Please provide a discussion for each section. If no impacts are likely, be sure to discuss the reasoning that led to your determination.

### PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed action:

Development	_____
Renovation	_____
Maintenance	_____
Land Acquisition	_____
Equipment Acquisition	_____
Other (Describe)	<u>  X  </u>

Montana Fish, Wildlife & Parks proposes to remove approximately 300 juvenile westslope cutthroat trout (WCT, *Oncorhynchus clarkii lewisi*) from Danaher Creek and adjacent tributaries in the Bob Marshall Wilderness using electrofishing and angling equipment. These fish would be transported by packstock out of the wilderness and, if feasible, would be used to establish a within-drainage broodstock for restoration efforts associated with the South Fork Flathead Drainage Westslope Cutthroat Trout Conservation Program. The most important factor in establishing a broodstock is to use enough individuals to found the population such that the genetic diversity within the source population is reliably incorporated into the brood. To achieve this objective, we hope to collect enough juvenile westslope cutthroat trout so that a minimum of 25 adult breeding pairs survive and contribute gametes to the brood. Genetic testing will be used to ensure that the established broodstock adequately comprises the genetic variation contained within the donor population. If the rearing of the fish proves unsuccessful (for example, not enough

fish survive to maturity or there is not sufficient genetic variation), the remaining fish would be transferred to a cutthroat-trout-only kids' fishing pond.

2. Project sponsor:

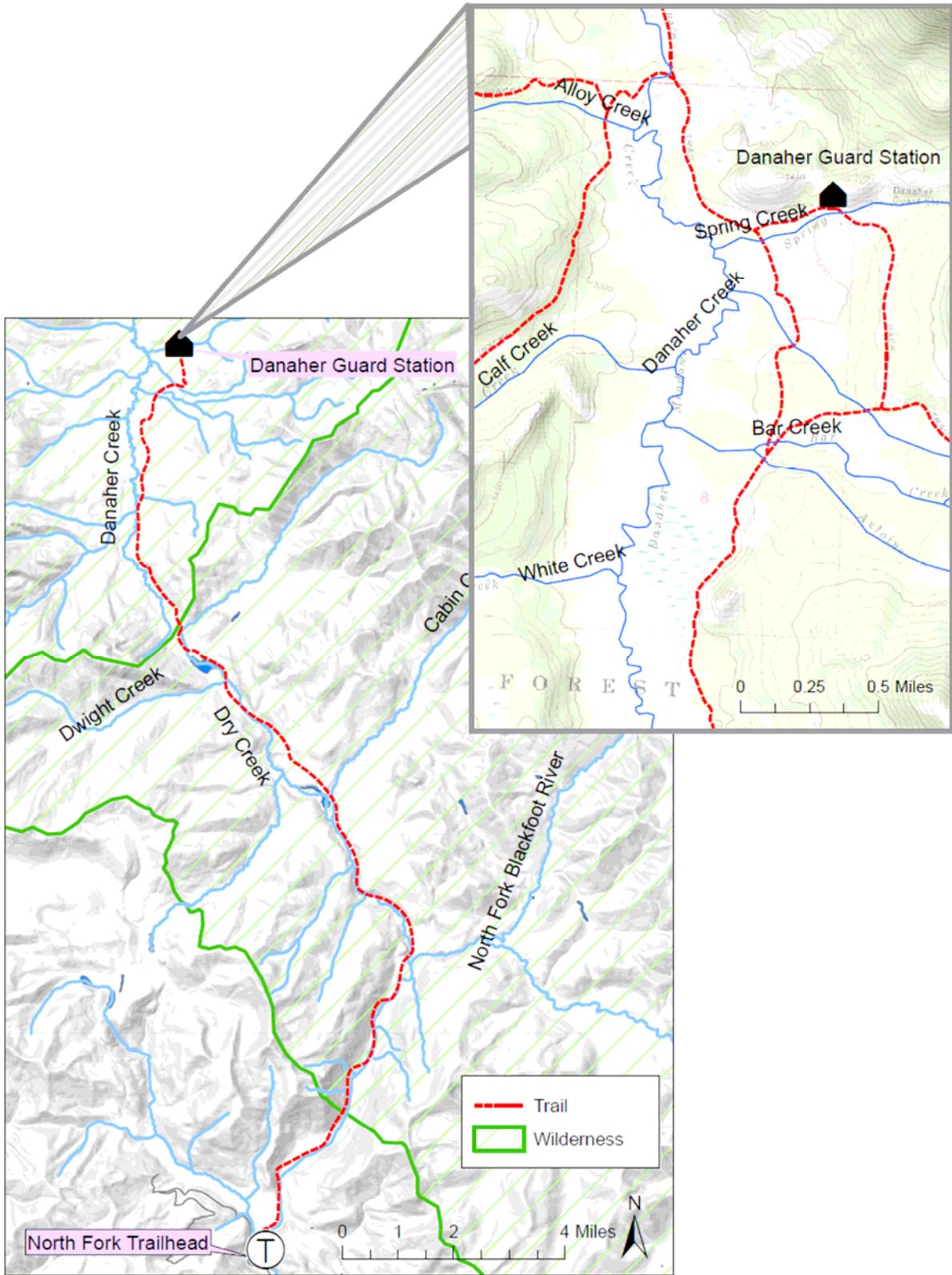
Montana Fish, Wildlife & Parks  
490 North Meridian Road  
Kalispell, MT 59901  
mboyer@mt.gov

3. Anticipated time line:

Estimated commencement date: July 13, 2009  
Estimated completion date: July 17, 2009  
Current status of project design (% complete): 90%

4. Location affected by proposed action:

Lewis & Clark and Powell Counties, Range 11W, Township 18N and 19N (see map next page)



Danaher Creek WCT Broodstock Project  
 Draft 5/29/09

5. Project size - estimate the numbers of acres that would be directly affected that are currently: N/A

(a) Developed:  
residential..... \_\_ acres  
industrial ..... \_\_ acres

(b) Open Space/Woodlands/  
Recreation..... \_\_ acres

(c) Wetlands/Riparian  
Areas ..... \_\_ acres

(d) Floodplain ..... \_\_ acres

(e) Productive:  
irrigated cropland..... \_\_ acres  
dry cropland ..... \_\_ acres  
forestry ..... \_\_ acres  
rangeland..... \_\_ acres  
other..... \_\_ acres

6. Narrative summary of the proposed action:

The South Fork Flathead River drainage in Montana is considered a stronghold for WCT (Liknes and Graham 1988, Deeds et al. 1999); however, hybridization with nonnative rainbow trout (*Oncorhynchus mykiss*) and Yellowstone cutthroat trout (*O. bouvieri*) threaten the persistence of this population (Allendorf and Leary 1988, Hitt et al. 2003, Boyer et al. 2008). In 2007, Montana Fish, Wildlife & Parks (MFWP) began implementation of the South Fork Flathead Drainage WCT Conservation Program to facilitate restoring pure WCT populations in headwater lakes by removing nonnative and hybrid trout using piscicides and restocking with pure WCT.

Genetic data from throughout the native range of WCT indicate that substantial genetic differences exist among populations of this species. The population genetic structure of a species is the result of both random events and natural selection for traits that confer a fitness advantage for individuals in particular environments. Conservation of genetic variation is crucial for long-term persistence of a species and, in the case of WCT, requires ensuring the continued existence of many populations throughout its range. Since substantial genetic differences exist among WCT populations in the South Fork drainage, introduction of WCT from a single brood source will likely homogenize genetic variation and may disrupt important local adaptations within populations. From a conservation genetics perspective, the ideal approach would be to use within-drainage stocks for restoration efforts. During the public scoping process for the Environmental Impact Statement (MFWP 2005), the development and use of within-drainage stocks of WCT was

identified as a desirable management action to conserve unique and, presumably, locally adapted WCT populations in the South Fork Flathead drainage. Furthermore, the Memorandum of Understanding and Conservation Agreement for westslope cutthroat trout in Montana recommends that locally adapted, genetically pure populations be maintained (MFWP 1999a).

Montana's captive M012 WCT broodstock is currently the only certified WCT source for restoration. The M012 WCT brood was created from a series of South Fork Flathead donor sources for broad genetic variability and is managed under the guidance of the University of Montana Wild Trout and Salmon Genetics Lab. To minimize the possibility of homogenizing genetic variation in wild populations, it is preferable to develop within-drainage stocks, if possible. In an effort to conserve genetic variation among WCT populations, MFWP developed the Sekokini Springs Isolation Facility to raise wild WCT and attempt to create short-term within-drainage broodstocks. Danaher Creek, located in the Bob Marshall Wilderness at the headwaters of the South Fork Flathead River, is considered one potential donor source for replication. Danaher Creek contains genetically pure WCT that have significant genetic differences from the existing M012 state broodstock (R. Leary letter to B. Shepard, Montana Cooperative Fishery Research Unit dated May 16, 2002).

Approximately 300 juvenile WCT would be collected from Danaher Creek and neighboring tributaries using a backpack electrofisher and angling gear. To avoid substantially reducing local fish densities, no more than 25 percent of the juvenile population in a given reach would be collected for donor stock replication. The exact timing of collection would be based on snowmelt and trail conditions, but is planned to occur the week of July 13. Capture of juveniles would take place when spawning adults are absent from the stream, thus avoiding immediate risk to the spawning population.

Approximately four mules would be needed to transport WCT using a specially designed transport system. The packstock fish transport system would use oxygenation and cooling to improve survival during transportation from Danaher Creek to the North Fork of the Blackfoot River trailhead, a distance of approximately 24 miles. Fish would be transported by hatchery truck to the Sekokini Springs Isolation Facility near Blankenship, Montana, for genetic and disease testing and rearing.

7. Alternatives to the proposed action:

**No-Action Alternative:** MFWP would not collect juvenile WCT from Danaher Creek. There would be no impacts to fish populations in Danaher Creek or to wilderness trails associated with this alternative. This alternative would not allow for the establishment of an alternate source of WCT from the Danaher Creek drainage for the South Fork Flathead Drainage WCT Conservation Project and, therefore, not maintain genetic diversity in remaining wild WCT stocks.

**Helicopter Use Alternative:** MFWP would collect WCT from Danaher Creek using the same method as described in the proposed action. The fish would then be flown out from

the Danaher guard station using a helicopter and transported directly to Sekokini Springs. This alternative would have less impact to wilderness trails and greatly reduce travel time, thereby reducing stress on the collected fish. However, mechanized helicopter use may conflict with traditional wilderness values. Unless the preferred alternative proves to have unacceptable survival levels for WCT, the helicopter use alternative will not be considered further.

**Alternate Donor Source Alternative:** MFWP would collect WCT from an alternative source of genetically pure and disease-free WCT. At this time potential donor sources may include Little Salmon Creek, White River, Spotted Bear River, or Doctor Lake. In the past, these populations have tested genetically pure; however, it is not known how logistically feasible it would be to collect an adequate number of juvenile WCT from these drainages. In the future, MFWP plans to gather data from these and other drainages to assess their suitability as donor sources. There are several streams that drain to Hungry Horse Reservoir that contain relatively high densities of genetically pure WCT. However, these populations have been or are planned to be donor sources for infusion into the M012 broodstock of WCT. Since genetic variation within these populations would be represented in the M012, development of a broodstock from any of these populations would not conserve the maximum amount of WCT genetic variation found among populations within the South Fork Flathead River drainage. Consequently, this alternative is not being pursued further at this time.

8. Listing of each local, state, or federal agency that has overlapping or additional jurisdiction:

<b>(a) Permits</b>		
Agency Name:	Permit: None required	Date Filed:

<b>(b) Funding</b>	
Agency Name: Bonneville Power Administration	Funding Amount: \$66,000

<b>(c) Other Overlapping or Additional Jurisdictional Responsibilities</b>	
Agency Name: United States Forest Service - Flathead National Forest	Type of Responsibility: Landowner

9. List of agencies consulted during preparation of this environmental checklist:  
United States Forest Service - Flathead National Forest

10. Name of preparer(s) of this environmental checklist:  
Kris Tempel, MFWP Fisheries Technician, Kalispell, MT  
Matt Boyer, MFWP Fisheries Biologist, Kalispell, MT
  
11. Date submitted:  
May 29, 2009

## PART II. ENVIRONMENTAL REVIEW CHECKLIST

The analysis of the physical and human environments discussed on the following pages is limited to the Proposed Action. The reason for this is because based on the description of Alternative A: No Action, FWP would not pursue the collection of juvenile WCT from Danaher Creek for genetic testing and, potentially, restoration efforts at another location of the South Fork Flathead drainage for the benefit of the species. If the No-Action alternative were implemented, there would be no changes to the physical or human environment, and existing conditions at Danaher Creek would remain undisturbed.

### PHYSICAL ENVIRONMENT

1. LAND RESOURCES 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		X				

All packstock and personnel would travel on established trails and be housed at an established Forest Service work site during project implementation. No impacts to soils or geologic features are expected as a result of this project.

2. AIR 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. Any discharge that will conflict with federal or state air quality regs?		X				
f. Other		X				

This project would not use any mechanized equipment and will not produce any emissions or objectionable odors. Only packstock and battery-operated equipment would be used to carry out the project objectives. There would be no conflict with federal or state air quality regulations.

3. WATER  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. Effects to a designated floodplain?		X				
m. Any discharge that will affect federal or state water quality regulations?		X				
n. Other:		X				

Personnel would need to wade in the streams to collect the desired fish, but this would not create disturbance to streambed substrate, and stream water quality will not be affected by this project. There would be no effects to groundwater sources.

4. VEGETATION  Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
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. Effects to wetlands or prime and unique farmland?		X				
g. Other:		X				

Personnel and packstock would travel on established trails, would stay in the Forest Service guard station at Danaher Creek, and would not adversely affect native vegetation. Feed for the animals would already be at the site and is required to be certified weed free. There would be no effects to any plant communities or wetlands as a result of this project.

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				
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
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				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest, or other human activity)?			X			
h. Adverse effects to threatened/endangered species or their habitat?		X				
i. Introduction or exportation of any species not presently or historically occurring in the affected location?		X				
j. Other:		X				

This project would not affect any critical fish or wildlife habitat. The diversity and abundance of WCT and other fish populations would not be affected by this project since only 25 percent of the juvenile WCT from a given reach would be removed using either single-pass electrofishing or angling. This number of fish is considered to fall within the normal natural variation in annual abundance. Bull trout, a species listed as threatened under the Endangered Species Act, do occur in Danaher Creek, but where the sampling would take place, their occurrence is considered incidental (T. Weaver, MFWP, written communication). Effects to any juvenile bull trout, sculpins, or whitefish that are handled are expected to be negligible since mortality from modern electrofishing equipment is uncommon. Montana FWP records indicate that from 2006 through 2008, a total of 2,387 juvenile bull trout were handled while conducting two-pass electrofishing depletion estimates. Of this number, only 7 (0.3%) died during handling (T. Weaver, MFWP, written communication). Bull trout mortality associated with this project is expected to be negligible since single-pass electrofishing will be used. No species that are not currently or historically present would be introduced as a result of this project.

## HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS  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				
b. Exposure of people to severe or nuisance noise levels?		X				
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:		X				

No mechanical equipment or other noise generating equipment would be used to carry out this project; consequently, there would be no electrical effects or increase in noise levels. The backpack shockers would be powered by batteries, and electrical activity would cease when they are turned off. Montana FWP electrofishing guidelines would be followed.

7. LAND USE	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. A conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. A conflict with any existing land use, the presence of which would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on, or relocation of, residences?		X				
e. Compliance with existing land policies for land use, transportation, and open space?		X				
f. Increased traffic hazards, traffic volume, or speed limits or effects on existing transportation facilities or patterns of movement of people and goods?		X				
g. Other:		X				

This project would conform to traditional wilderness uses as specified in the MFWP and USFS Cooperative Agreement for Fish, Wildlife, and Habitat Management on National Forest Wilderness Lands in Montana and would not interfere or conflict with existing land use policies.

8. RISK/HEALTH HAZARDS	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
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. Effects on existing emergency response or emergency evacuation plan or create need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. Disturbance to any sites with known or potential deposits of hazardous materials?		X				
e. The use of any chemical toxicants?		X				
f. Other:		X				

There would be no impacts to human health or increased human risk associated with this project because no chemicals, pesticides, or mechanized equipment would be used.

9. COMMUNITY IMPACT	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
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:		X				

No community impacts are expected as a result of this project because all work will take place in a wilderness setting or at a remote trailhead location. It is possible that commercial outfitters may be using the trailhead and/or trails at the same time that this project takes place, but because of the few number of animals and personnel involved, adverse impacts would not be expected.

10. PUBLIC SERVICES/TAXES/UTILITIES	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. 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 so, specify:		X				
b. Effects on the local or state tax base and revenues?		X				
c. 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. Increased used of any energy source?		X				
e. Other.		X				
Additional information requested:						
f. Define projected revenue sources.	Bonneville Power Administration Hungry Horse Mitigation Program					
g. Define projected maintenance costs.	There are no maintenance costs associated with this project.					

This project would not affect public services, taxes, or utilities. Funding for this work would be provided by BPA and administered through MFWP budgets.

11. AESTHETICS/RECREATION  Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
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. Adverse effects to any designated or proposed wild or scenic rivers, trails, or wilderness areas?		X				
e. Other:		X				

All travel associated with this project would take place on established trails. All personnel and stock would be based at the Danaher guard station where public use is not permitted. No public campgrounds would be occupied as a result of this project and all work would take place within Danaher Creek over a relatively short period of time.

12. CULTURAL/HISTORICAL RESOURCES	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 changes that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. Adverse effects to historic or cultural resources?		X				
e. Other:		X				

There are no historically significant sites or cultural resources within the project area or along the travel route, so there would be no impacts to these resources.

13. SUMMARY EVALUATION OF SIGNIFICANCE	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources, which 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. Have organized opposition or generate substantial public controversy?		X				
Additional information requested:						
g. List any federal or state permits required.	None required					

This project would be relatively small in scope, with little to no environmental and human impacts, and would not have cumulatively considerable impacts or pose any hazardous conditions. It would not conflict with any existing state or federal laws or set precedents for future actions that would be significant. As such, this project would not be expected to generate significant controversy or public debate.

### PART III. ENVIRONMENTAL CHECKLIST CONCLUSION SECTION

1. Discuss the cumulative and secondary effects of this project as a whole.

Depending upon the number of fish collected in each age class and their survival to maturity at Sekokini Springs, additional juvenile fish collection in the Danaher Creek drainage may be necessary to augment the broodstock in subsequent years. If additional fish collections were necessary, electrofishing would occur in multiple locations within the drainage to avoid adverse effects on the donor source and would not occur more than once a year in a given drainage to avoid effects to the resource and on local recreation.

2. Based on the significance criteria evaluated in this environmental checklist (Part II), is an EIS required?

YES \_\_\_\_\_

NO   X  

If an EIS is not required, explain why the current checklist level of review is appropriate.

The current checklist addresses all concerns for this project, and there are no unmitigated impacts associated with the proposed action. This level of review is sufficient for the scope of this project.

3. Public involvement for this project.

Legal ads will be printed in the *Daily Inter Lake*, *Whitefish Pilot*, *The Missoulian*, and *Hungry Horse News*. Copies of the draft will be available at Region 1 Headquarters in Kalispell; the Flathead County Libraries in Kalispell, Whitefish, and Columbia Falls; and on the FWP web site (<http://fwp.mt.gov>) under Public Notices.

4. Public comment period:

The public comment period will extend for 30 days, from May 29 through June 29, 2009. Written comments will be accepted until 5:00 p.m., Monday, June 29, 2009, and can be mailed to:

Danaher Creek Broodstock Project  
Montana Fish, Wildlife & Parks  
Region 1 Headquarters  
490 N. Meridian Road  
Kalispell, MT 59901

Or e-mail comments to: [mboyer@mt.gov](mailto:mboyer@mt.gov)

## LITERATURE CITED

- Allendorf, F. W., and R. F. Leary. 1988. Conservation and distribution of genetic variation in a polytypic species: the cutthroat trout. *Conservation Biology* 2:170-184.
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- Hitt, N. P., C. A. Frissell, C. C. Muhlfeld, and F. W. Allendorf. 2003. Spread of hybridization between native westslope cutthroat trout, *Oncorhynchus clarkii lewisi*, and nonnative rainbow trout, *Oncorhynchus mykiss*. *Canadian Journal of Fisheries and Aquatic Sciences* 60:1440-1451.
- Liknes, G. A., and P. J. Graham. 1988. Westslope cutthroat trout in Montana: life history, status, and management. *American Fisheries Society Symposium* 4:53-60.
- MFWP. 1999a. Memorandum of Understanding and Conservation Agreement for westslope cutthroat trout conservation in Montana. Montana Department of Fish, Wildlife & Parks, Helena.
- MFWP. 2005. Final Environmental Impact Statement for South Fork Flathead Watershed Westslope Cutthroat Trout Conservation Program. Montana Department of Fish, Wildlife & Parks, Kalispell.

## GLOSSARY OF TERMS

**Affected Environment** – The aspects of the human environment that may change as a result of an agency action.

**Alternative** – A different approach to achieve the same objective or result as the proposed action.

**Categorical Exclusion** – A level of environmental review for agency action that does not individually, collectively, or cumulatively cause significant impacts to the human environment, as determined by rulemaking or programmatic review, and for which an EA or EIS is not required.

**Cumulative Impacts** – Impacts to the human environment that, individually, may be minor for a specific project, but, when considered in relation to other actions, may result in significant impacts.

**Direct Impacts** – Primary impacts that have a direct cause and effect relationship with a specific action, i.e., they occur at the same time and place as the action that causes the impact.

**Environmental Assessment (EA)** – The appropriate level of environmental review for actions that either do not significantly affect the human environment or for which the agency is uncertain whether an Environmental Impact Statement (EIS) is required.

**Environmental Assessment Checklist** – An EA checklist is a standard form of an EA, developed by an agency for actions that generally produce minimal impacts.

**Environmental Impact Statement (EIS)** – A comprehensive evaluation of the impacts to the human environment that likely would result from an agency action or reasonable alternatives to that action. An EIS also serves a public disclosure of agency decision-making. Typically, an EIS is prepared in two steps. The Draft EIS is a preliminary, detailed written statement that facilitates public review and comment. The Final EIS is a completed, written statement that includes a summary of major conclusions and supporting information from the Draft EIS, responses to substantive comments received on the Draft EIS, a list of all comments on the Draft EIS and any revisions made to the Draft EIS, and an explanation of the agency's reasons for its decision.

**Environmental Review** – An evaluation, prepared in compliance with the provisions of MEPA and the MEPA Model Rules, of the impacts to the human environment that may result as a consequence of an agency action.

**Human Environment** – Those attributes, including but not limited to biological, physical, social, economic, cultural, and aesthetic factors, that interrelate to form the environment.

**Long-Term Impact** – An impact, which lasts well beyond the period of the initial project.

**Mitigated Environmental Assessment** – The appropriate level of environmental review for actions that normally would require an EIS, except that the state agency can impose designs, enforceable controls, or stipulations to reduce the otherwise significant impacts to below the level of significance. A mitigated EA must demonstrate that: (1) all impacts have been identified; (2) all impacts can be mitigated below the level of significance; and (3) no significant impact is likely to occur.

**Mitigation** – An enforceable measure(s), designed to reduce or prevent undesirable effects or impacts of the proposed action.

**National Environmental Policy Act (NEPA)** – The federal counterpart of MEPA that applies only to federal actions.

**No-Action Alternative** – An alternative, required by the MEPA Model Rules for purposes of analysis, that describes the agency action that would result in the least change to the human environment.

**Public Participation** – The process by which an agency includes interested and affected individuals, organizations, and agencies in decision making.

**Record of Decision** – Concise public notice that announces the agency’s decision, explains the reason for that decision, and describes any special conditions related to implementation of the decision.

**Scoping** – The process, including public participation, that an agency uses to define the scope of the environmental review.

**Secondary Impacts** – Impacts to the human environment that are indirectly related to the agency action, i.e., they are induced by a direct impact and occur at a later time or distance from the triggering action.

**Short-Term Impact** – An impact directly associated with a project that is of relatively short duration.

**Significance** – The process of determining whether the impacts of a proposed action are serious enough to warrant the preparation of an EIS. An impact may be adverse, beneficial, or both. If none of the adverse impacts are significant, an EIS is not required.

**Supplemental Review** – A modification of a previous environmental review document (EA or EIS) based on changes in the proposed action, the discovery of new information, or the need for additional evaluation.

**Tiering** – Preparing an environmental review by focusing specifically on narrow scope of issues because the broader scope of issues was adequately addressed in previous environmental review document(s) that may be incorporated by reference.