

DEPARTMENT OF FISH, WILDLIFE AND PARKS
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ENVIRONMENTAL ASSESSMENT

Project Title Bad Canyon Creek Barrier Repairs

Division/Bureau Fisheries/Management

Program Fisheries

Description of Project/Preferred Alternative: Yellowstone cutthroat trout are native to Bad Canyon Creek (a tributary to the Stillwater River), but their numbers were extremely low due to competition and predation from non-native brown trout. Through a cooperative agreement between Montana Fish Wildlife and Parks (FWP), the Custer National Forest and the Bureau of Land Management, a partial fish barrier located on Bureau of Land Management administered land (T3S, R16E, S6) was enhanced in 1996 to prevent upstream migration of non-native brown trout. This barrier isolated approximately 3 miles of stream habitat upstream of the barrier. Shortly thereafter, mechanical removal efforts were initiated in an attempt to remove brown trout. Two years of electrofishing revealed that mechanical removal of brown trout was not feasible and that cutthroat numbers were very low upstream. In 2002, the stream was poisoned with rotenone to remove all brown trout upstream of the barrier. Twenty-one cutthroats were removed from the stream and held in a fishless tributary during the poisoning then subsequently released into the stream. The poisoning was successful and 100% of the brown trout upstream of the barrier were removed. LeHardy Rapids Yellowstone cutthroat trout were restocked into the stream to supplement the 21 wild fish saved prior to poisoning.

In 2002 prior to poisoning the stream, the barrier waterfall started to erode around the right side of the channel. A temporary fix was applied to the eroding area to prevent further immediate erosion and possible upstream fish passage. The patch has held since 2002, but a more permanent fix is needed to ensure that erosion around the barrier does not occur in the future. Because of the remoteness of the stream and barrier falls, all work done at the site will have to be by hand or using equipment that can be packed in on horses or flown in with a helicopter. FWP in cooperation with the Custer National Forest and the Bureau of Land Management are proposing a project to ensure the long-term integrity of the barrier. This work would include the filling of a void in the rock on the downstream, left side of the barrier where materials have eroded out and cementing these materials in. Upstream of the barrier on the right bank erosion is occurring for a distance of approximately 15 ft and this area would be stabilized using native stone riprap. This material will be collected using rock blasted from the cliff face above. Existing soil and vegetation will be salvaged as much as possible and used to reclaim the site following construction. All grouted areas will be covered with native material so that no foreign material is exposed.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			1
2. Water quality, quantity & distribution			X			2
3. Geology & soil quality, stability & moisture			X			3
4. Vegetation cover, quantity & quality				X		
5. Aesthetics			X			4
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		

1. There will be some minor and temporary disturbance to aquatic and terrestrial habitats. Approximately 15 ft of stream bank will be stabilized using rock. No vegetation will be removed. Small portion of the cliff face above the falls will be blasted to provide materials for the project. Because of the small scope of the stream work, the effects on aquatic habitats will be very minimal.
2. Turbidity will likely temporarily increase as a result of instream work. However, these impacts should be minimal because work will be performed at low flow conditions and the amount of stream bed that will be disturbed is relatively small. Further, all work will be done using hand tools. No machinery will be used. Bad Canyon Creek supports a restored population on Yellowstone cutthroat trout upstream of the barrier and mixed population of Yellowstone cutthroat and brown trout downstream of the barrier. Spawning fish will be protected from the potential turbidity caused from the project by completing the project prior to the brown trout spawning and after the cutthroat fry have emerged from the gravels.
3. Geology will be affected through the use of explosives to provide materials for the project. Because of the remote nature of the project, it would be very difficult to import materials for bank stabilization at the site. The barrier was constructed using native material from the same cliff face. Only approximately 1 cubic yard of material will be needed to stabilize the bank, so the impact to the geology of the canyon and its aesthetics should be minimal.

4. The aesthetics of the site will be changed due to the project. Using all native material and resodding disturbed areas can mitigate these impacts. Further, all grouted areas will have only native materials exposed on the surface to create a natural look.

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities				X		
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		4

Alternative 1: No action

If no action is taken the longevity and security of the barrier waterfall will be in question. If the falls continue to deteriorate and eventually fail, brown trout will once again have access to the upper three miles of the stream and will likely lead to the extermination of the cutthroat population through competition and predation.

Alternative 2.

Another alternative to the proposed action would be to construct a new barrier falls that would be more secure into the future. Concrete falls are more durable and reliable than those constructed of native materials and would likely require less maintenance. Given the remote location of this falls and its inaccessibility to heavy equipment, such a barrier would be very costly and logistically difficult to construct. Further, a concrete barrier in a pristine area would detract from the aesthetics of the area. The current barrier falls constructed of native material does not appear artificial and still is protecting the cutthroat population upstream.

Other groups or agencies contacted or which may have overlapping jurisdiction Army Corps of Engineers

Individuals or groups contributing to this EA: Montana Department of Fish Wildlife and Parks

Recommendation concerning preparation of EIS: No EIS required

EA prepared by : James Olsen

Date: September 8, 2005

APPENDIX A
PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

The 54th Legislature enacted the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The intent of the legislation is to establish an orderly and consistent process by which state agencies evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency actions pertaining to land or water management or to some other environmental matter that, if adopted and enforced without compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agency to assess the impact of a proposed agency action on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency action has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act. For the purposes of this EA, the questions on the following checklist refer to the following required stipulation(s):

(List any mitigation/stipulations required, or note "None".)

None.

**DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS
UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?**

YES	NO	
_____	<u> X </u>	1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
_____	<u> X </u>	2. Does the action result in either a permanent or indefinite physical occupation of private property?
_____	<u> X </u>	3. Does the action deprive the owner of all economically viable uses of the property?
_____	<u> X </u>	4. Does the action deny a fundamental attribute of ownership?
_____	<u> X </u>	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is NO , skip questions 5a

and 5b and continue with question 6.]

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| _____ | <u> X </u> | 5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests? |
| _____ | <u> X </u> | 5b. Is the government requirement roughly proportional to the impact of the proposed use of the property? |
| _____ | <u> X </u> | 6. Does the action have a severe impact on the value of the property? |
| _____ | <u> X </u> | 7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is NO , do not answer questions 7a-7c.] |
| _____ | <u> X </u> | 7a. Is the impact of government action direct, peculiar, and significant? |
| _____ | <u> X </u> | 7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded? |
| _____ | <u> X </u> | 7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question? |

Taking or damaging implications exist if **YES** is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with Section 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.