

Environmental Assessment

FishTrap Creek Diversion Improvement Project



*Montana Fish,
Wildlife & Parks*

Environmental Assessment MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

- 1. Type of proposed state action:** Montana Fish, Wildlife & Parks (FWP) is proposing to install a rock grade control, headgate and measuring device on Fishtrap Creek—a tributary to the Big Hole River. The intent of this project is to improve fish passage for Arctic grayling and other native and sport fish species, provide the infrastructure to allow water users better control and management of the irrigation system, and reduce impacts to the channel and stream banks.
- 2. Agency authority for the proposed action:**
FWP is required by law to implement programs that manage sensitive fish species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list species under 87-5-107 or the federal Endangered Species Act. Section 87-1-201(9)(a), M.C.A.
- 3. Anticipated Schedule:**
Estimated Construction Commencement Date: Late October 2010
Estimated Completion Date: November 2010
Current Status of Project Design (% complete): 90% complete
- 4. Location:**
The project site is located on property owned by Ernest and Colleen Bacon (T2N, R13W, Section 30). The Project is located approximately 20 miles north of the community of Wisdom in Deerlodge County (Figure 1).

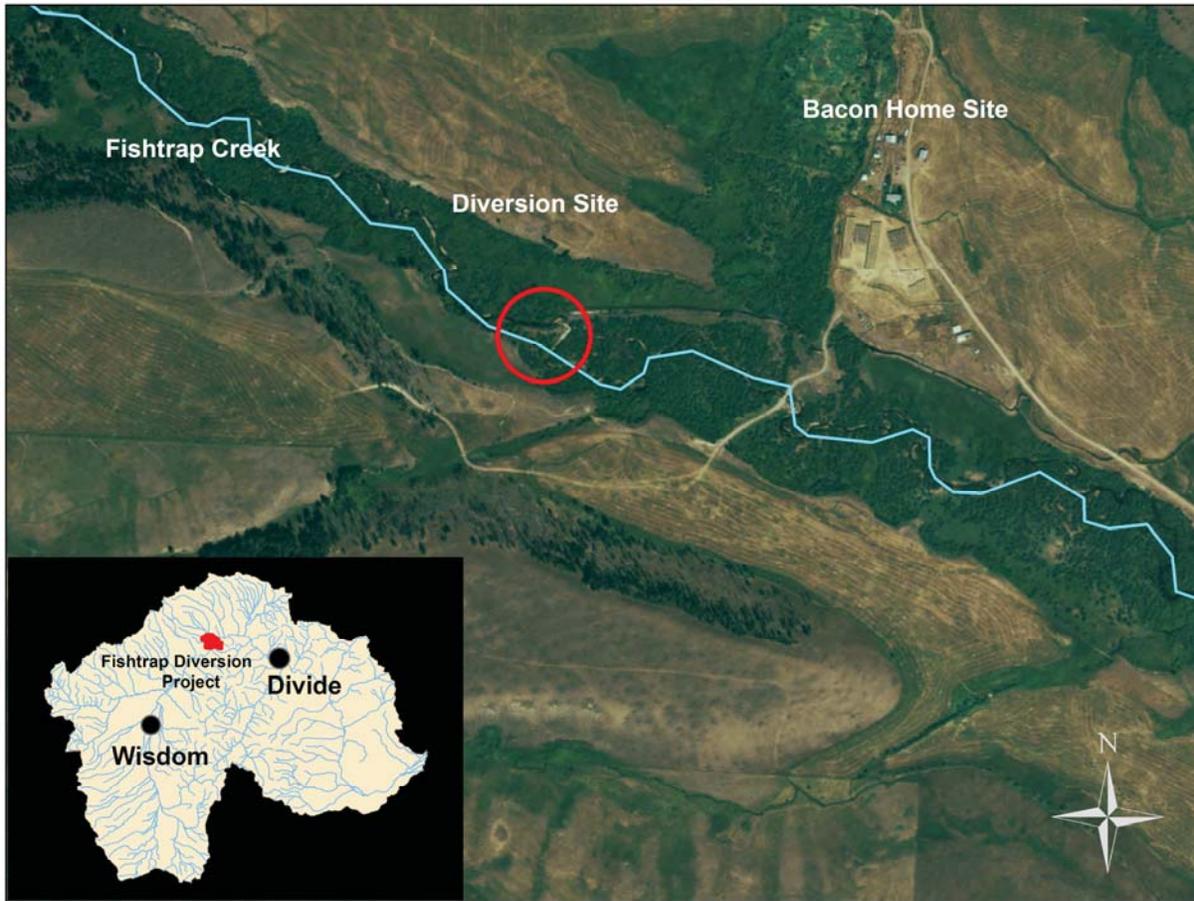


Figure 1. Fishtrap Creek Diversion Improvement Project located north of Wisdom, Montana.

5. Project size:

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	_ 0
Residential	_ 0		
Industrial	_ 0	(e) Productive:	
(existing shop area)		Irrigated cropland	_ 0
(b) Open Space/ Woodlands/Recreation	_ 0	Dry cropland	_ 0
(c) Wetlands/Riparian Areas	_ <1	Forestry	_ 0
		Rangeland	_ 0
		Other	_ 0

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

(a) Permits: permits will be filed at least 2 weeks prior to project start.

<u>Agency Name</u>	<u>Permits</u>
Montana Fish, Wildlife & Parks	SPA 124
U.S. Army Corps of Engineers	Section 404 Permit
Department of Environmental Quality	318 Authorization

(b) Funding:

<u>Agency Name</u>	<u>Funding Amount</u>
Montana Fish, Wildlife & Parks	Approximately \$ 16,000

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
Montana Department of Natural Resources and Conservation	Water Rights

7. Narrative summary of the proposed action:

The upper Big Hole River Basin supports the last fluvial Arctic grayling population in the lower 48 United States. These fish are classified as a “species of special concern” by FWP because of their reduced abundance and diminished distribution.

Adequate instream flows are an essential component throughout the life-cycle of Arctic grayling. Instream flow conservation has been identified as a key conservation element of the Big Hole Arctic Grayling Candidate Conservation Agreement with Assurances Program (CCAA). This program works with private landowners to develop and implement conservation plans on privately owned ranches that address limiting factors and improve habitats for the Big Hole Arctic grayling population. In order to implement instream flow conservation, the water users must have functioning irrigation infrastructure, which includes the ability to measure, and control the amount of water diverted for irrigation.

This project’s objectives are to provide infrastructure that allows the water users to measure and control the amount of flow diverted for irrigation. The ability to measure and control the amount of diverted flow is critical to conservation efforts and allows the participating landowners the opportunity to implement flow conservation plans developed through the CCAA. This project will also improve fish passage by removing gravel berms across the stream channel, which periodically may act as a barrier to fish movement. Rock grade control structures will be constructed that will provide fish passage at all flow levels, minimize disturbance to the stream channel and stream banks and provide water needed for irrigation. This project is part of a much larger effort on Fishtrap Creek to improve habitat for Arctic grayling and numerous other fish and wildlife species. These efforts include installing riparian fence, developing grazing management plans, developing off stream stock watering facilities and improving fish passage by replacing culverts. Improving instream flows is complimentary to channel and riparian restoration and will over time, produce complex, high quality fish habitat. Carrying capacity and overall numbers of Arctic grayling and other native and sportfish species will improve.

8. Alternatives:

Alternative A: No Action

Under this alternative, the irrigation system will remain unchanged. Currently there is no measuring device that allows water users to measure the amount of flow diverted for irrigation. The current headgate does not completely prevent water from entering the irrigation ditch, and the gravel berms needed to divert water for irrigation have to be replaced annually by the landowner which has caused disturbance to the stream channel and stream banks, and can prevent fish passage in low-flow conditions. With the current diversion system, it is difficult to measure the amount of water diverted from Fishtrap Creek and implementing and determining the effectiveness of a flow conservation plan developed through the CCAA Program is problematic.

Alternative B: Proposed Action

The proposed alternative will allow water users the ability to measure and control diverted flows from Fishtrap Creek, improve instream flow conditions, improve fish passage, and reduce impacts to the stream banks and channel. This alternative will provide the infrastructure needed to develop and implement flow conservation plans, and is complementary to numerous restoration projects on Fishtrap Creek to actively restore the overall aquatic and riparian habitats of Fishtrap Creek. Fluvial Arctic grayling, as well as other native and sportfish species will benefit from this project by improving instream flows, providing fish passage, and enhancing instream habitats.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

3. 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 *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Soil instability or changes in geologic substructure?			X		Yes	1a.
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X		Yes	1b.
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			1d.
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				

Comment 1a/b. Soils along the stream margin would be disturbed during the installation of headgate, rock grade control and measuring device. Soils disturbed by construction will be re-seeded with native vegetation.

Comment 1d. Short-term increases in turbidity will occur during project construction. To minimize this dynamic, construction will occur during low-flow periods and the operation of equipment in the stream channel will be minimized to the extent practical. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 124 permit (Stream Protection Act) will be obtained from FWP and a 404 permit will be obtained from the U.S. Army Corps of Engineers. Grade Control structure benefit steam channel by eliminating annual disturbance to stream bed and banks and therefore reduce siltation, deposition and erosion.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

2. <u>AIR</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X		Yes	2a
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				

Comment 2a. The proposed action includes the use of heavy equipment that may temporarily increase emissions and reduce air quality. All equipment will be properly maintained to reduce any short-term changes to the air quality.

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3. <u>WATER</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		Yes	3a.
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				

Comment 3a. Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur at low flows and the operation of equipment in the stream channel will be minimized to the extent practical. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 124 permit (Stream Protection Act) will be obtained from FWP and a 404 permit will be obtained from the U.S. Army Corps of Engineers.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

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4. VEGETATION Will the proposed action result in?	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X		Yes	4a.
b. Alteration of a plant community?			X		Yes	4b.
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		Yes	4e.
f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				

Comment 4a. The project will include ground-disturbing activities that may result in the disturbance of streambank vegetation. Disturbed areas will be reseeded with native seed mixture.

Comment 4b. The project will include ground-disturbing activities that may result in the disturbance of streambank vegetation. Disturbed areas will be reseeded with native seed mixture. The overall diversity of plant species in the area will not be affected.

Comment 4e. The project will include ground-disturbing activities that may result in the establishment of noxious weeds. The potential for this to occur is recognized and will be reduced by cleaning vehicles and equipment entering and leaving the project site. Also, only certified weed-free mixes will be used for reseeded areas. FWP will work with landowner to monitor and address any noxious weed problems should they develop on the project site.

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** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

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**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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				5c.
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				5e.
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. ****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				

5c. This project will improve fish passage, decrease erosion of stream banks and disturbance of the stream channel as well as improve instream flows which will provide benefit to numerous aquatic, avian and terrestrial species.

5e. The preferred alternative will improve fish passage. The existing gravel berms may prevent upstream and downstream movement of fish during low flow conditions. Replacing the berms with a grade control structure will provide fish passage throughout the year.

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** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

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B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Increases in existing noise levels?			X		Yes	6a.
b. Exposure of people to serve 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				

Comment 6a. The proposed action includes the use of heavy equipment that may temporarily increase existing noise levels. All equipment will have properly functioning noise reduction equipment to limit noise levels. The project is located in a remote area and no residences exist within the project boundary.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
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				

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8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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				

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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		No	9c.
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				

Comment 9c. Project may have positive economic impacts by hiring contractor/laborers to complete work. Hiring process will be completed through competitive state contracting process.

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** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

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10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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 use of any energy source?		X				
e. **Define projected revenue sources		X				
f. **Define projected maintenance costs.		X				10f

10f. The landowner agrees to protect and maintain the investment in the project for a minimum of 20 years. This may include routine maintenance, however, it shall not become the landowner's responsibility to repair or replace project improvements should they be damaged, changed or destroyed by natural means. In these circumstances, the state of Montana will assist with repairs if funding is available.

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** 11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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		Yes	11b.
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				

Comment 11b. The proposed action will negatively affect aesthetics during project construction because of ground disturbance and the presence of heavy equipment. These negative effects will be relatively short-term and the heavy equipment on-site will be minimal (a maximum of two excavators working at one time). Proposed action is expected to have long-term positive impacts to aesthetics of stream and riparian corridors after the reseeding of the disturbed areas is completed and vegetation is established. The stabilization of the streambanks is expected to reduce bank erosion and contribution of sediments to Fishtrap Creek.

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12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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				12d.

Comment 12d. FWP does not anticipate the proposed project will have any impacts on cultural or historic resources. The Environmental Assessment will be sent to SHPO for review.

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** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

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SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
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.						13g.

Comment 13g. Federal or State Permits Required: Montana Fish, Wildlife & Parks - SPA 124; U.S. Army Corps of Engineers - Section 404 Permit; Department of Environmental Quality - 318 Authorization.

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- 2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:** None
FWP will be responsible for hiring contractor to complete described work and for oversight of consultant hired to design project.

PART III. NARRATIVE EVALUATION AND COMMENT

Addressed in Part I and Part II.

PART IV. PUBLIC PARTICIPATION

- 1. Public involvement:**

The public will be notified through publication in The Dillon Tribune and The Montana Standard and through contact with the local watershed and sports groups. This EA will also be published on the Montana Fish, Wildlife & Parks web page (<http://fwp.mt.gov/default.html>).

- 2. Comment period:**

The public comment period for this proposed action will begin once the EA is posted to FWP's website and continue through 5:00 pm on October 10, 2010. Written comment can be mailed to:

James Magee
Montana Fish, Wildlife & Parks
730 N. Montana St.
Dillon, MT 59725

Comments can also be sent by email to: mageejames@mt.gov

PART V. EA PREPARATION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)?** No
If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action. We conclude from this review that the proposed activities will have no significant impacts based upon the criteria at ARM 12.2.431 to determine the significance of an impact. Therefore, an EIS is not warranted.

2. Person responsible for preparing the EA:

James Magee – Fisheries Biologist 730 N. Montana St., Dillon, MT 59725
406-683-2675

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

Montana Fish, Wildlife & Parks – Fisheries Division and Legal Bureau
Montana Department of Natural Resources and Conservation