



## **Upper Big Hole River Arctic Grayling**

### **Assisted Re-Colonization near Jackson, Montana**



## **Draft Environmental Assessment**

February 2013

**Recolonization of Arctic grayling in the Big Hole River  
Draft Environmental Assessment  
MEPA/NEPA CHECKLIST**

**PART I. PROPOSED ACTION DESCRIPTION**

**1. Type of Proposed State Action:**

Montana Fish, Wildlife & Parks (FWP) proposes to facilitate the recolonization of Arctic grayling into eleven locations in the upper mainstem Big Hole River, Governor Creek, and Warm Springs Creek [Candidate Conservation Agreements with Assurances (CCAA) Management Segments A and B (Figures 1 and 2)]. The method would involve using Remote Site Incubators (RSIs) to hatch Arctic grayling eggs from the Big Hole River conservation broodstock directly into upstream sections of the mainstem Big Hole River and tributaries to expand the current distribution of grayling in the Big Hole River system.

**2. Agency Authority for the Proposed Action:**

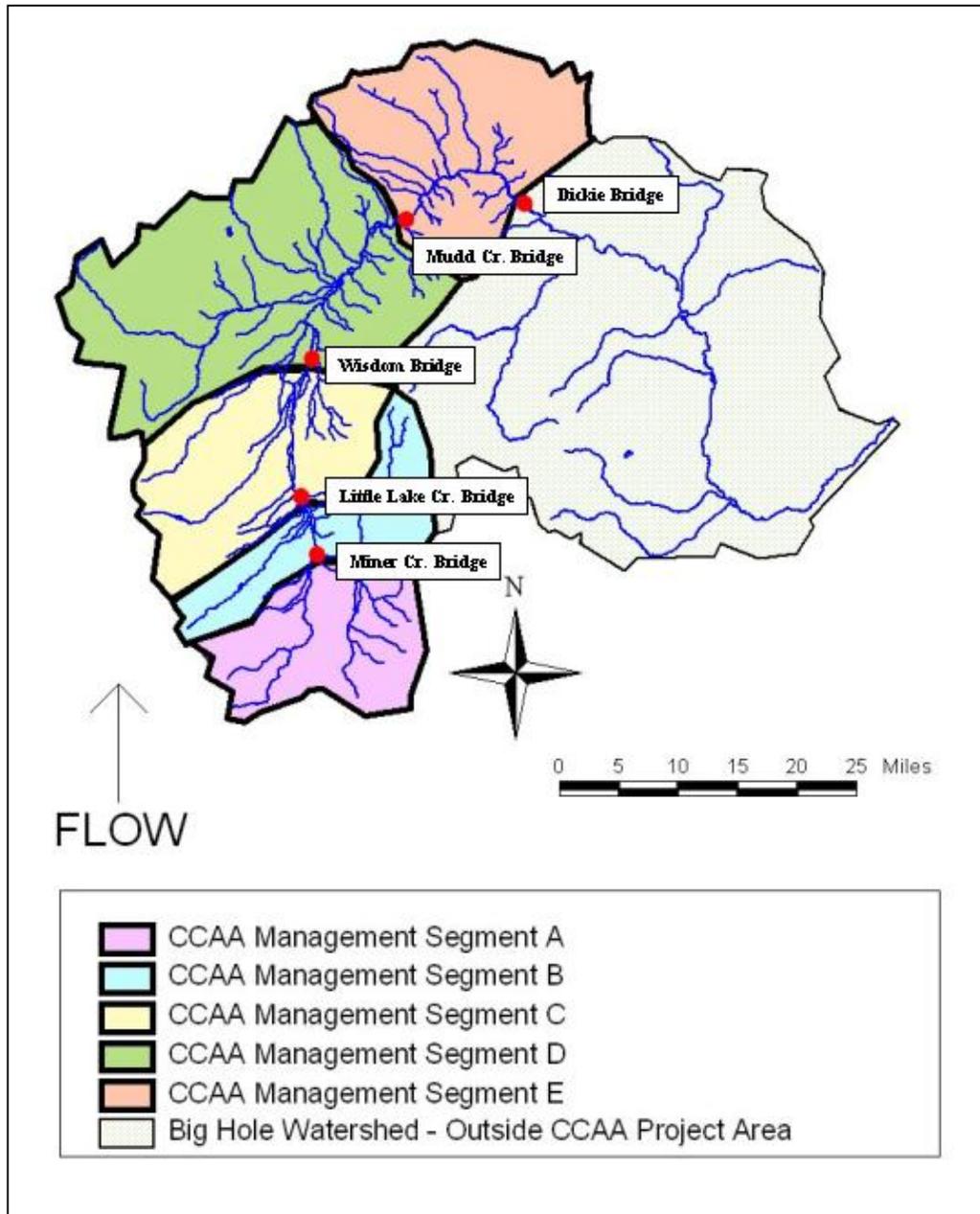
Montana Fish, Wildlife & Parks (FWP) is required by law to implement programs that manage sensitive fish species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list species under 87-5-107 or the federal Endangered Species Act. Section 87-1-201(9)(a), M.C.A.

**3. Anticipated Schedule:**

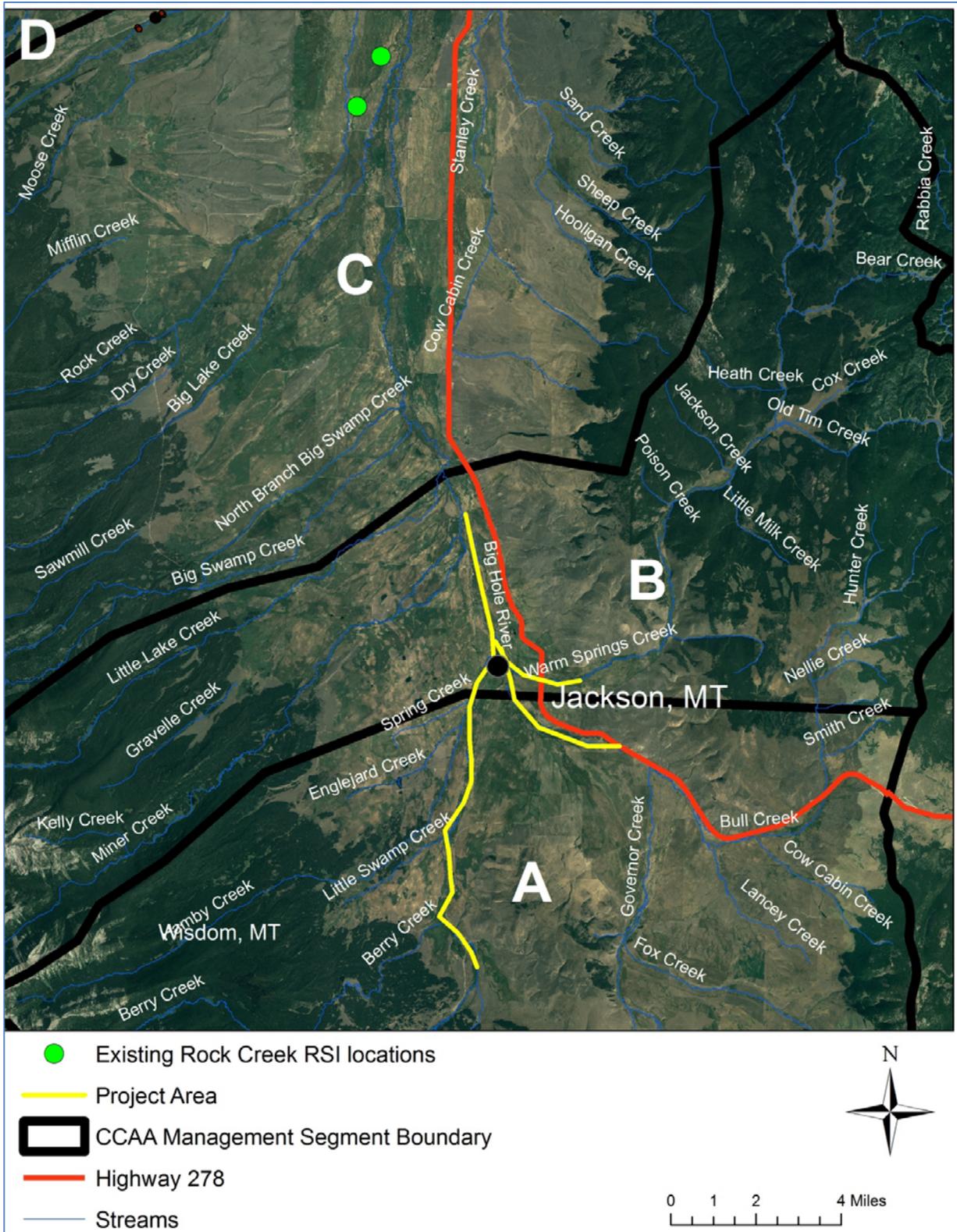
Estimated Commencement Date: May 2013  
Estimated Completion Date: December 2018

**4. Location Affected by Proposed Action:**

The project would occur in the mainstem Big Hole River and two tributaries to the Big Hole River; Warm Springs Creek, and Governor Creek, approximately 4 miles north extending to 8 miles south of the town of Jackson, MT (Figures 1 and 2). The recolonization reach may include up to 14 miles of Big Hole River, 2 miles of Warm Springs Creek, and 5 miles of Governor Creek depending on logistics, site selection, and access through private land.



**Figure 1.** The Big Hole Grayling CCAA Project Area and Management Segments.



**Figure 2.** Location of existing Rock Creek Recolonization sites and locations under consideration.

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

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

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

(a) **Permits:** n/a

**(b) Funding:**

Agency Name: Montana Fish, Wildlife & Parks  
 Funding Amount: Up to \$10,000(U.S. Fish & Wildlife Service State Wildlife Grant Program)

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

Agency Name: United States Fish and Wildlife Service  
 Type of Responsibility: Oversight in CCAA for Arctic grayling.

**8. Narrative summary of the proposed action:**

The proposed action is to reintroduce Arctic grayling to the upper reaches of the Big Hole River and tributaries by introducing eggs collected from the Big Hole River conservation broodstock. Eggs would be introduced by using remote site incubators (RSIs) over a 3- to 5-year period. After the 3- to 5-year time period, efforts would be re-evaluated. RSI's are small, self contained incubators that allow rearing and hatching of eggs directly at the site of introduction. This methodology has proven more effective than the introduction of hatchery-reared fry. Each year, 10-30 RSIs would be used to introduce eggs to the project reach. The effort would be monitored during and for several years post introduction to determine project success.

The upper Big Hole River Basin supports the last native fluvial (river dwelling) Arctic grayling population in the lower 48 States. These fish are classified as a Montana Species of Concern by FWP because of their reduced abundance and diminished distribution in recent decades. The reasons for the decline of Arctic grayling include: habitat degradation, overexploitation, and impacts from non-native species. A variety of impacts have caused Arctic grayling habitat to degrade including stream dewatering, channel modifications, over-grazing, riparian vegetation removal, and irrigation infrastructure modifications.

Historic grayling population data from the mid-1980's show that the Project Area (specifically the Big Hole River and Governor Creek) once supported between 1 and 8 grayling per mile. Declines in grayling numbers reached the point where little to no grayling spawning was occurring in these reaches as documented by spring and fall spawning electrofishing surveys. Based on one of the grayling population goals outlined in the CCAA document, grayling should show increased distribution within 5 years. Surveys over the last 5 years indicate grayling have not recolonized the upper reaches of the Big Hole River and its tributaries, and the CCAA goal of expanded distribution has not been met in the anticipated timeframe. This recolonization effort would be considered a success if post-project evaluation indicate grayling occupy and naturally reproduce in the Project Area.

Fluvial Arctic grayling utilize both mainstem rivers and smaller tributaries for various stages of their life cycle. Tributaries are particularly important for spawning and rearing. In upstream portions of the Big Hole River, however, spawning and rearing can take place in the mainstem river as headwater reaches provide smaller system requirements similar to tributaries. Because of degraded habitat and stream flow conditions, Arctic grayling have not been documented in upper Big Hole River tributaries or mainstem river reaches since 1989.

Conservation activities in recent years have been directed at improving habitat conditions in tributaries and on the mainstem Big Hole River in the upper portion of the basin. These habitat improvement efforts are part of the Candidate Conservation Agreements with Assurances program for the Fluvial Arctic Grayling in the Upper Big Hole River (grayling CCAA). A CCAA is an agreement between the USFWS and any non-federal entity whereby non-federal property owners who voluntarily agree to manage their lands or waters to remove threats to species at risk of becoming threatened or endangered receive assurances against additional regulatory requirements should that species be subsequently listed under the ESA. The conservation goal of the grayling CCAA is to secure and enhance a population of fluvial Arctic grayling within the upper reaches of their historic range in the Big Hole River drainage. To date, 33 landowners and approximately 160,000 acres are enrolled in the grayling CCAA program making it one of the largest CCAA programs in the United States.

Due to increased landowner involvement in the grayling CCAA program, numerous habitat improvement projects have enhanced riparian conditions and reduced fish passage barriers in Segments A and B (hereafter referred to as the Project Area). Project types include: instream flow agreements, barrier removal, and grazing management. Habitat conditions in these reaches have improved since implementation of the CCAA in 2006. Since 2006, approximately 6 miles of riparian fence was installed and 2 miles of stream channel restoration was completed to improve riparian habitat, 5 bridges replaced non-functioning culverts and 3 fish ladders were installed to improve fish passage, 11 irrigation improvement projects and three stockwater systems were installed to increase instream flow, and riparian areas were treated for noxious weeds. Despite the habitat improvements of the Big Hole River and its tributaries in the Project Area, Arctic grayling have not recolonized these reaches as of November, 2012; thus, the purpose of this project is to assist with the recolonization of the Project Area toward the headwaters of the Big Hole River (Figures 1 and 2). Efforts to re-establish Arctic grayling in an historically important spawning tributary in CCAA Management Segment C (Reach C; Rock

Creek) began in 2010 and has been successful at producing Arctic grayling in the system for three years.

To replicate the genetic composition that represents the fluvial form of Montana Arctic grayling for reintroduction efforts, and if needed to augment the Big Hole Arctic grayling population, FWP and partners collected Big Hole Arctic grayling gametes and created a captive conservation brood stock. To establish this brood stock, Arctic grayling were captured and gametes were collected from the Big Hole River population between 1988 and 1992. Recent genetic analyses of the brood stock have concluded that it adequately represents the genetic composition of the native Big Hole River population. Under the proposed action, Arctic grayling gametes from the Big Hole River Arctic grayling brood stock will be used to re-establish grayling in Reaches A and B of the Big Hole River. Gametes are typically collected in mid-May, and fertilized eggs are transported to Yellowstone Trout Hatchery near Big Timber until they develop to the eye-up stage. At this stage, the eggs are transported to the RSIs deployed at the introduction site. Rate of development is dependent on stream temperatures, but typically grayling will develop from the eyed-egg stage to free-swimming fry and move from the RSIs into the stream within 21 days. A fish health assessment is completed prior to transporting any eggs into the hatchery to maintain pathogen-free status.

#### Remote Site Incubator

The RSI is a 5-gallon plastic bucket with an intake and outtake pipe that allows water to continuously flow through the incubator which serves the dual purpose of providing oxygen for eggs and removing any toxins produced. Eggs are placed on top of spawning-sized gravel that is placed in a small basket about half way down in the incubator. As eggs hatch, grayling fry can burrow in to the gravel until they are ready to emerge from the incubator. Fry leave the incubator through the outtake pipe and enter the stream system.

#### Site Selection

RSI site selection is important in order to ensure hatching success. RSIs would be set up in one of two types of site in the Project Area; pin-and-plank diversions or attached to bridge abutments. Pin-and-plank diversions are an ideal setting for RSIs and have been used successfully on Rock Creek to produce grayling fry (Figure 3). Pin-and-plank diversions are essentially a channel-wide dam that backs up stream water sending it down an irrigation ditch. RSIs are placed on the downstream side of the diversion, and the inlet pipes are placed on the upstream side of the diversion allowing water pressure to build and run through the incubators. Locating RSIs here is advantageous because emerging fry are already downstream of the irrigation ditch, the water is usually calm for weak swimming fry, water pressure can be controlled through raising or lowering the planks in the diversion, and access to the diversion is usually good.

Bridge abutments would also be used throughout the Project Area (Figure 4). Bridges provide easy access and a stable platform to place trays of RSIs. Backwater areas created on the downstream side of the bridge provide lower velocity water for emerging fry.



Figure 3. RSI set-up at a pin-and-plank diversion.



Figure 4. Bridge abutment that would hold a tray of RSIs as seen in Figure 5.

### Monitoring

RSIs would be placed at a selected site for approximately 21-days (in June to complete the incubation period at which point the fry would be released into river/creek and the RSI would be removed from the channel. RSIs would be checked daily, and flow would be adjusted based on changing stream/river conditions.



Figure 5. Two trays of RSIs. Trays would be attached to bridge abutments.

Genetic samples would be collected from all adult grayling used from the captive brood stock allowing future studies to determine success and identify progeny produced from the RSIs. Ultimate success of this project is to have RSI-hatched grayling survive in the mainstem or tributary, mature, and return to spawn as adults. If successful, the introduction effort would increase the distribution, abundance, and resiliency of the Big Hole River Arctic grayling population. Introducing Arctic grayling with the use of RSIs would also allow for a better understanding of the dynamic between grayling and non-native fish which may impact grayling through competition and predation. If the grayling reintroductions are successful without addressing non-native fish, it will provide some short-term localized evidence that the effect of non-native fish is not completely prohibitive of a successful grayling reintroduction. If grayling reintroductions are unsuccessful and there is evidence to suggest that non-native fish are the cause, FWP would consider actions to address non-native fish in the Big Hole River. An additional public scoping process will be required prior to any action to address non-native fish.

## **9. Alternatives:**

### **Alternative A: No Action**

If no action is taken, Arctic grayling may or may not naturally colonize the Project Area of the Big Hole River. Despite habitat and flow improvement projects that have taken place in the last 6 years, Arctic grayling have yet to colonize these reaches. Not having Arctic grayling established in the Project Area limits the overall population in the Big Hole River, and specifically lowers the chances of having grayling presence throughout all CCAA Management Segments.

Additionally, FWP is mandated to implement conservation actions that assist in the maintenance or recovery of sensitive species to prevent the need to for listing under the Endangered Species

Act. A No Action alternative to this project would not be consistent with the management requirements.

No secondary impacts are expected to biological, physical, or human environment if the Alternative A were implemented. The status quo would be maintained, and FWP and other CCAA partner agencies would continue with existing Arctic grayling projects within the Big Hole River drainage. No future cumulative impacts are anticipated to the physical and human environment. However, FWP would miss the opportunity to add to its understanding of the potential of grayling recolonization. Grayling expansion into additional portions of their historic range could reduce the potential for the species to be considered for classification by the USFWS as listed threatened or endangered. Listing by the USFWS would establish future management requirements that may affect FWP's management of the species within MT.

### **Alternative B: Alternative Action, stock juvenile or age-1 Arctic grayling into Reach A and B of the Big Hole River**

Under this alternative, stocking of juvenile or age-1 Arctic grayling would be conducted to establish a population of Arctic grayling in the Project Area of the Big Hole River. Past experiences with stocking juvenile Arctic grayling have not had desirable results. Oftentimes the stocked grayling have very low survival rates, emigrate from the stocking location, and may not imprint to receiving water as desired. Based on past experience, Alternative B is less likely to meet the goals and objective of the project than the proposed Action.

No secondary impacts are expected to biological, physical, or human environment if the Alternative B were implemented. Grayling expansion into additional portions of their historic range could reduce the potential for the species to be considered for classification by the US FWS as listed threatened or endangered. Listing by the USFWS would establish future management requirements that may affect FWP's management of the species within Montana.

### **Alternative C: Proposed Action**

The proposed action is to assist Arctic grayling with recolonizing Reaches A and B of the Big Hole River using RSIs. Historic habitat alterations likely resulted in or contributed to the loss of Arctic grayling from this reach, but recent restoration work has rectified many of the issues. If Reaches A and B are successfully recolonized with Arctic grayling and eventually Arctic grayling begin to reproduce naturally in these reaches, the entire Big Hole Arctic grayling population will be enhanced. Since the captive brood stock replicates the Big Hole River Arctic grayling population from the late 1980s and early 1990s, the addition of a spawning Arctic grayling population in Reaches A and B will increase genetic diversity of Arctic grayling in the Big Hole River basin.

**PART II. ENVIRONMENTAL REVIEW**

**A. PHYSICAL ENVIRONMENT**

1. <b><u>LAND RESOURCES</u></b> 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				

The proposed project will have no impacts to land resources (soil, geological features, etc.).

2. <b><u>AIR</u></b> 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:						

The proposed project will have no effect on air quality.

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:		X				

The proposed project will have no effect on existing water resources. The placement of the RSIs would not change water flow patterns or change water quality.

4. <b>VEGETATION</b> 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. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				
g. Other:		X				

The proposed project will have no effect on vegetation.

** 5. <b>FISH/WILDLIFE</b> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?	X					5a
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. ****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				5h
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				
j. Other:		X				

5a. The intent of this project is to increase the abundance of Arctic grayling in the Big Hole River System. Within the Project Area of the Big Hole River, the recolonization of Arctic grayling will mitigate for historic losses of this species from the fish community; therefore, there is no need to mitigate for this positive change in diversity and abundance of game animals.

5h. Arctic grayling have been petitioned for listing under the Endangered Species Act, they are currently a candidate for listing.

**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				
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				
e. Other:		X				

The proposed project will have no effect on the human environment.

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				7c
d. Adverse effects on or relocation of residences?		X				
e. Other:		X				

7a and 7c. The landowners in the vicinity of the Big Hole River Segments A and B recolonization area are enrolled in the Arctic Grayling Candidate Conservation Agreement with Assurances (CCAA); therefore, if Arctic grayling are listed under the Endangered Species act, the affected landowners in this reach of the Big Hole River will not be required to change their operations beyond what has been agreed to under the CCAA site specific plans for each landowner. However, listing of this species may impact future FWP management decisions of this species within Montana.

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

**The proposed project will not create any risk or health hazards.**

<b>9. <u>COMMUNITY IMPACT</u></b>	<b>IMPACT *</b>				<b>Can Impact Be Mitigated *</b>	<b>Comment Index</b>
	<b>Unknown *</b>	<b>None</b>	<b>Minor *</b>	<b>Potentially Significant</b>		
<b>Will the proposed action result in:</b>						
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				

**The proposed project will have no community impact.**

<b>10. PUBLIC SERVICES/TAXES/UTILITIES</b>	<b>IMPACT *</b>				<b>Can Impact Be Mitigated *</b>	<b>Comment Index</b>
	<b>Unknown *</b>	<b>None</b>	<b>Minor *</b>	<b>Potentially Significant</b>		
<b>Will the proposed action result in:</b>						
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				
f. **Define projected maintenance costs.		X				
g. Other:		X				

The proposed project will have no effect on public services, taxes or utilities.

<b>** 11. AESTHETICS/RECREATION</b>	<b>IMPACT *</b>				<b>Can Impact Be Mitigated *</b>	<b>Comment Index</b>
	<b>Unknown *</b>	<b>None</b>	<b>Minor *</b>	<b>Potentially Significant</b>		
<b>Will the proposed action result in:</b>						
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			11b
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)			X			11c
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:		X				

11b. Remote Site Incubators will be placed under bridges or in existing pin and plank diversions out of the direct public view. The aesthetic character of the Big Hole River and the surrounding community could have minor impacts during the approximately three weeks of RSI operation (June 1 through June 21).

11c. Improving the status of Arctic grayling in the Big Hole River basin will improve the quality and quantity of recreational/tourism opportunities and settings, since southwestern Montana is the last place where native Arctic grayling occur in the lower 48 States.

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

The proposed project will have no effect on the cultural or historical resources.

**C. SIGNIFICANCE CRITERIA**

13. <b>SUMMARY EVALUATION OF SIGNIFICANCE</b>  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.		X				

13e. This project is not expected to generate substantial controversy, but comments are expected to be received that will reflect the broad interests of anglers, conservation organizations, and the general public for Arctic grayling.

The proposed project would add to the positive cumulative impacts for the species of previous FWP sponsored Arctic grayling habitat restoration and species management throughout the Big Hole River drainage to improve conditions to deter the need for the native species to be listed by the U.S. Fish and Wildlife Service as threatened or endangered. No cumulative negative impacts to the existing physical or human resources within the project area are anticipated. If the project is successful in the recolonization of grayling in the upper portion of the Big Hole River basin, FWP may consider implementing similar recolonization projects in other Big Hole tributaries in the future thus re-establishing grayling in greater portions of historic range. Any future grayling projects would have individual environmental analysis documents.

## **PART II. ENVIRONMENTAL REVIEW, CONTINUED**

2. 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. PUBLIC PARTICIPATION**

### **1. Public Involvement:**

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>). This level of public involvement is believed adequate for the proposed project.

### **2. Duration of comment period:**

The public comment period for this proposed action is from DATE OF RELEASE, to April 8, 2013. Written comments can be mailed to:

**Emily Cayer**  
**Montana Fish, Wildlife and Parks**  
**730 North Montana Street**  
**Dillon, MT 59725**  
**E-mail: [ecayer@mt.gov](mailto:ecayer@mt.gov)**

## **PART V. EA PREPARATION**

1. **Based on the significance criteria evaluated in the EA, is an EIS required? (YES/NO)?**  
No
2. **If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.** FWP concludes 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 and impact. Therefore, and EIS is not warranted.

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

Lee Nelson, Native Species Coordinator  
PO Box 200701  
Helena, MT 59620  
406-444-3364  
leenelson@mt.gov

**4. List of agencies consulted during the preparation of the EA:**

Montana Fish, Wildlife & Parks—Fisheries, Legal, and Administration and Finance Division

United State Fish and Wildlife Service, Montana State Office