

Environmental Assessment for the Conservation of Native Westslope Cutthroat Trout in Carpenter Creek by Construction of a Concrete Fish Barrier

Draft Environmental Assessment



11 January 2022

Montana Fish, Wildlife & Parks

Region 4 Office

4600 Giant Springs Rd

Great Falls, MT 59405



**MONTANA FISH,
WILDLIFE & PARKS**

Executive Summary

Westslope cutthroat trout (WCT) have undergone substantial reductions in distribution and abundance throughout their native range. Genetically unaltered WCT presently occupy 6.2% of their historic habitat within the Belt Creek watershed (Moser 2011). Carpenter Creek is one of ten streams within the Belt Creek watershed that still supports an unaltered WCT population; however, the population is only comprised of an estimated 591 fish which are confined to the upper 1.5 miles of stream. Historic mining within the Carpenter Creek drainage has resulted in the lower 3.2 miles of stream contaminated by effluent from at least 21 abandoned mines. This chemical barrier has prevented the upstream movement of nonnative trout from Belt Creek. In 2001, the Environmental Protection Agency (USEPA) placed the Carpenter-Snow Creek Mining District on the National Priorities List (Superfund designation). As clean-up activities have progressed and water quality has improved, nonnative trout have begun moving into lower Carpenter Creek from Belt Creek. Through a combination of competition and hybridization, the establishment of nonnative trout in Carpenter Creek will eventually lead to the extirpation of this unprotected population of native WCT. Protecting the population of nonhybridized WCT in Carpenter Creek would secure an invaluable component of the Belt Creek watershed's natural heritage for future generations to enjoy. Moreover, conservation of native WCT brings a range of benefits to local communities and is required under state and federal law.

WCT in the Belt Creek watershed face multiple threats including reduced distribution and abundance, stream and riparian habitat conditions, and spatial isolation; however, the single largest threat to the long-term persistence of WCT is the presence of nonnative trout. Since the late 1800's, numerous nonnative fish species have been introduced throughout the Belt Creek watershed, and nonnative brook, brown, rainbow, and hybrid trout have become the dominant species in most streams historically occupied by WCT. Brook and brown trout displace WCT through competition or predation. Rainbow and Yellowstone cutthroat trout readily hybridize with WCT which results in populations entirely comprised of hybrid individuals (hybrid swarm) or mixed populations of hybrid and genetically unaltered fish. Currently, the strongest remaining WCT populations are those isolated from nonnative species by natural or manmade barriers. Populations not protected by barriers have reduced distribution and densities or are irreversibly hybridized. The likelihood of long-term persistence of WCT populations not protected by barriers is low.

Construction of a concrete fish barrier in Carpenter Creek would secure the nonhybridized WCT population by preventing the upstream movement of nonnative trout. As the mine clean-up activities continue, an additional 1.7 miles of habitat would be available in Carpenter Creek for WCT (Sih-mem Creek to barrier site) as well as 4.8 miles of tributary habitat (Snow, Lucy, Mackay, and Burg Creeks). This would potentially bring the total number of unaltered WCT in the drainage to >2,500 fish which would greatly increase the population's probability of long-term persistence.

Environmental Assessments (EA) are a requirement of the Montana Environmental Policy Act (MEPA) which require state agencies to consider the environmental, social, cultural, and economic effects of proposed actions. This EA considers potential consequences of two alternatives to conserve fish in Carpenter Creek.

1. Alternative 1: No Action
2. Alternative 2 (Preferred): Conservation of Native Westslope Cutthroat Trout in Carpenter Creek by Construction of a Concrete Fish Barrier

Alternative 2 is the preferred alternative. It would have short-term, minor effects on wildlife, recreation, and vegetation. This alternative would be highly beneficial to WCT and would be a substantial contribution to the long-term conservation of the species in the Belt Creek watershed.

MEPA requires public involvement and opportunity for the public to comment on projects undertaken by the act's agencies. A 30-day public comment period will extend from January 11th to February 10th, 2022. Interested parties should send comments to:

Montana Fish, Wildlife & Parks – Region 4
c/o Carpenter Creek Westslope Cutthroat Trout Conservation
4600 Giant Springs Rd. Great Falls, MT 59405

Email: fwpr4publiccom@mt.gov

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List of Abbreviations

BMP	Best management practices
DEQ	Montana Department of Environmental Quality
EA	Environmental Assessment
FWP	Montana Fish, Wildlife & Parks
GMU	Geographic management unit
MCA	Montana Code Annotated
MCTSC	Montana Cutthroat Trout Steering Committee
MEPA	Montana Environmental Policy Act
MNHP	Montana Natural Heritage Program
MOU	Memorandum of Understanding
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
WCT	Westslope Cutthroat Trout
YCT	Yellowstone Cutthroat Trout

1 PROPOSED ACTION and BACKGROUND

1.1 *Type of Proposed Action*

Conservation Action for Westslope Cutthroat Trout (WCT)

1.2 *Agency Authority for the Proposed Action*

Montana state law provides Montana Fish, Wildlife & Parks (FWP) with the authority for implementation of fish management and restoration projects (MCA § 87-1-702; § 87-1-201[9][a]). In addition, Montana state law authorizes FWP to manage wildlife, fish, game and nongame animals to prevent the need for listing under the Endangered Species Act (ESA), and listed, sensitive, or species that are candidates for listing under the ESA must be managed in a manner that assists in the maintenance or recovery of the species (MCA§ 87-5-107).

Planning documents and strategies developed by agencies and collaborating entities also provide official justification for the proposed project (Table 1). These include conservation agreements among stakeholder groups, state and federal laws, and agency plans designed to conserve, secure and protect WCT within the Smith River Sub-basin (i.e., restore WCT to 20% of historic range).

Table 1. Planning and strategy documents with relevance to conservation of WCT in Carpenter Creek

<i>Agency</i>	<i>Citation</i>	<i>Website</i>
Montana Cutthroat Trout Steering Committee (MCTSC)	Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana (2007)	https://myfwp.mt.gov/getRepositoryFile?objectID==28662
FWP	Status and Conservation Needs for Westslope Cutthroat Trout in Northcentral Montana (2011)	Internal document
FWP	Statewide Fisheries Management Plan (2019)	http://fwp.mt.gov/fishAndWildlife/management/fisheries/statewidePlan/

1.3 *Estimated Commencement Date*

The estimated commencement date is June 2022.

1.4 *Name and Location of the Project*

Conservation of Native Westslope Cutthroat Trout in Carpenter Creek by Construction of a Concrete Fish Barrier

Carpenter Creek is in the Belt Creek watershed. The project is in Cascade County, approximately 2 miles north of Neihart, Montana (Figure 1). The legal description is T14N, R8E, section 20.

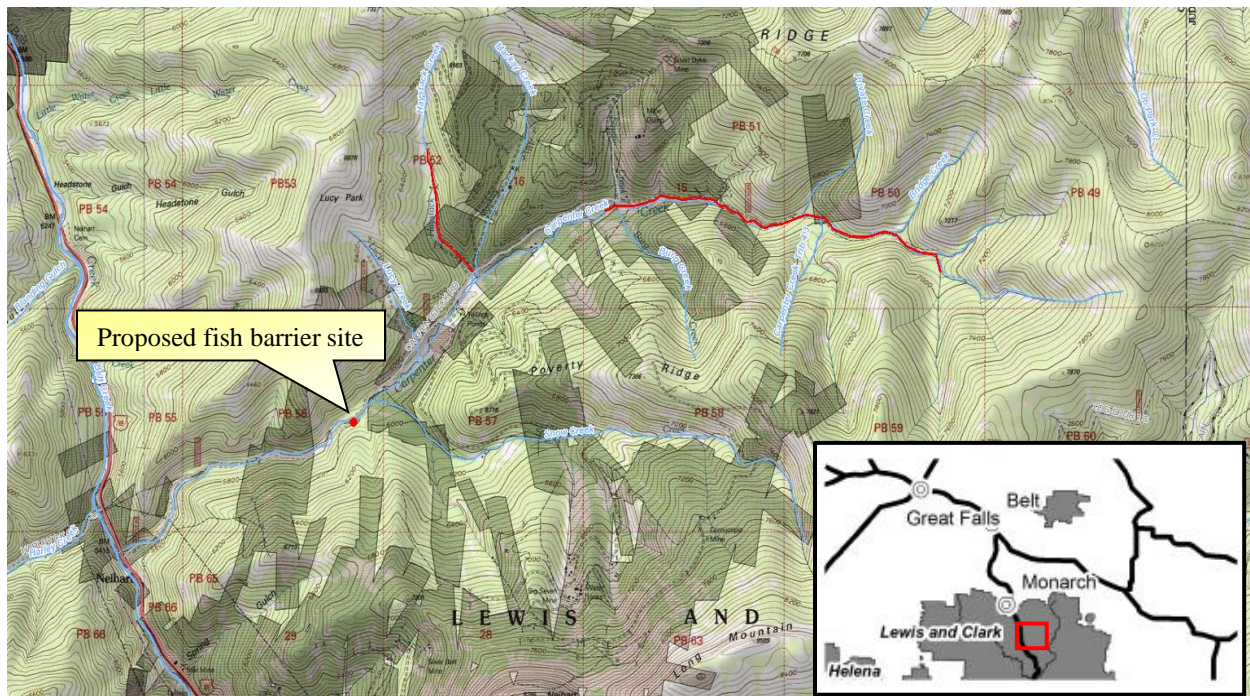


Figure 1. Map of Carpenter Creek. Stream segments delineated in red indicate current WCT distribution. Barrier site indicated by red marker.

1.5 *Project Size (Affected Area)*

1. Developed/residential	0 acres
2. Industrial	0 acres
3. Open space/woodlands/recreation	0 acres
4. Wetlands/riparian	approximately 100-125 linear feet of stream
5. Floodplain	0 acres
6. Irrigated cropland	0 acres
7. Dry cropland	0 acres
8. Forestry	0 acres
9. Rangeland	0 acres

The project area includes approximately 100-125 linear feet of Carpenter Creek located at 46.95994, -110.72883.

1.6 *Narrative Summary of the Proposed Action and the Purpose of the Proposed Action*

1.6.1 *Summary and Background*

Westslope cutthroat trout (WCT) *Oncorhynchus clarkii lewisi*, historically the most widely distributed subspecies of cutthroat trout, have undergone reductions in distribution and abundance throughout their native range (Behnke 2002; Shepard et al. 2005; Heckel et al. 2020). The upper Missouri River drainage in Montana in particular has experienced marked reductions, with nonhybridized WCT occupying less than 5% of their historical range (Shepard et al. 1997; Shepard et al. 2003). Nonnative species introductions, habitat degradation and fragmentation, and overexploitation have been identified as factors leading to population declines (Shepard et al. 2005; Muhlfeld et al. 2016; Heckel et al. 2020). However,

human-induced hybridization with nonnative trout has been especially detrimental causing widespread genomic extinction of WCT populations (Allendorf and Leary 1988; Muhlfeld et al. 2014). The declining status of WCT has led to its designation as a Species of Special Concern by the State of Montana, a Sensitive Species by the U.S. Forest Service (FS), and a Special Status Species by the U.S. Bureau of Land Management (BLM). In addition, in 1997 a petition was submitted to the U.S. Fish and Wildlife Service (USFWS) to list WCT as “threatened” under the Endangered Species Act (ESA). A 2003 USFWS status reviews found that WCT are “not warranted” for ESA listing; however, this finding was in litigation until 2008 and additional efforts to list WCT under ESA are possible in the future.

Completion of the proposed project would increase the amount of protected WCT habitat in the Belt Creek sub-basin by 16% (from 59 miles to 68 miles). Objective 3 of the *Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout and Yellowstone Cutthroat Trout in Montana* is “Seek collaborative opportunities to restore and/or expand each cutthroat trout subspecies into selected suitable habitats within their respective historic ranges.” (FWP 2007). The *Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout and Yellowstone Cutthroat Trout in Montana* was cooperatively developed and signed by American Wildlands, Blackfeet Tribe, Crow Tribe, Confederated Salish and Kootenai Tribes, Federation of Fly-Fishers, Glacier National Park, Greater Yellowstone Coalition, Montana Chapter of the American Fisheries Society, Montana Department of Natural Resources & Conservation, Montana Farm Bureau, Montana Fish, Wildlife & Parks, Montana Stockgrowers Association, Montana Trout Unlimited, Montana Wildlife Federation, Natural Resource Conservation Service, private landowners, the Bureau of Land Management, the U.S. Fish & Wildlife Service, the U.S. Forest Service, and Yellowstone National Park (FWP 2007).

Carpenter Creek is a small 2nd order stream that enters Belt Creek just downstream of Neihart, MT. The Carpenter Creek drainage currently supports two nonhybridized populations of WCT. Mainstem Carpenter Creek contains a robust nonhybridized WCT population that occupies 2 miles of stream upstream of Sih-mem Creek. Haystack Creek is a small tributary to Carpenter Creek and supports a small (less than 20 spawning pairs) nonhybridized population of WCT in 0.5 miles of stream. Both of these populations became isolated from Belt Creek over 60 years ago when mining effluent resulted in a stream reach inadequate of supporting fish or even allowing fish passage because of poor water quality, extending from Sih-mem Creek down to the confluence of Carpenter Creek and Belt Creek. These two populations are genetically distinct and important in terms of genetic conservation. Current and future efforts to clean up the mining contamination will improve water quality; however, it will also subsequently remove the current chemical barrier that isolates and protects the native WCT populations from invasion of nonnative species in Belt Creek. Removal of this chemical barrier will ultimately result in increased competition and hybridization with invading nonnatives. Monitoring efforts since 2014 in lower Carpenter Creek have consistently found rainbow and brook trout near the confluence with Belt Creek, where no fish had been observed prior. Given the future improved water quality and loss of the chemical barrier, a plan was developed to construct a fish barrier on Carpenter Creek.

In May 2021, \$28,200 was awarded by Northwestern Energy to hire an engineer to evaluate the best potential sites and design the barrier. The best site location was determined to be on Forest Service land downstream of the Snow Creek confluence (Figure 1), and the design for the barrier was completed on December 10th, 2021. Partial funding to construct the barrier has been secured with the remainder pending final approval. Once the barrier is complete and water quality improves, an additional 1.7 miles of habitat would be available in Carpenter Creek for WCT (Sih-mem Creek to barrier site) as well as 4.8 miles of tributary habitat (Snow, Lucy, Mackay, and Burg Creeks). This is in addition to the 2.5 miles of stream in Carpenter Creek and the Haystack Creek populations of WCT that are already present and would be protected by the completion of the barrier. If the barrier is not completed the WCT populations in the drainage would eventually be lost as a result of hybridization with rainbow trout.

This project is unique compared to many other barrier construction projects in that a nonhybridized population currently resides upstream of the chemical barrier. As such, if the barrier is constructed before the chemical barrier is lost; no additional and costly restoration activities (e.g., piscicide treatments to remove nonnative trout) would be needed.

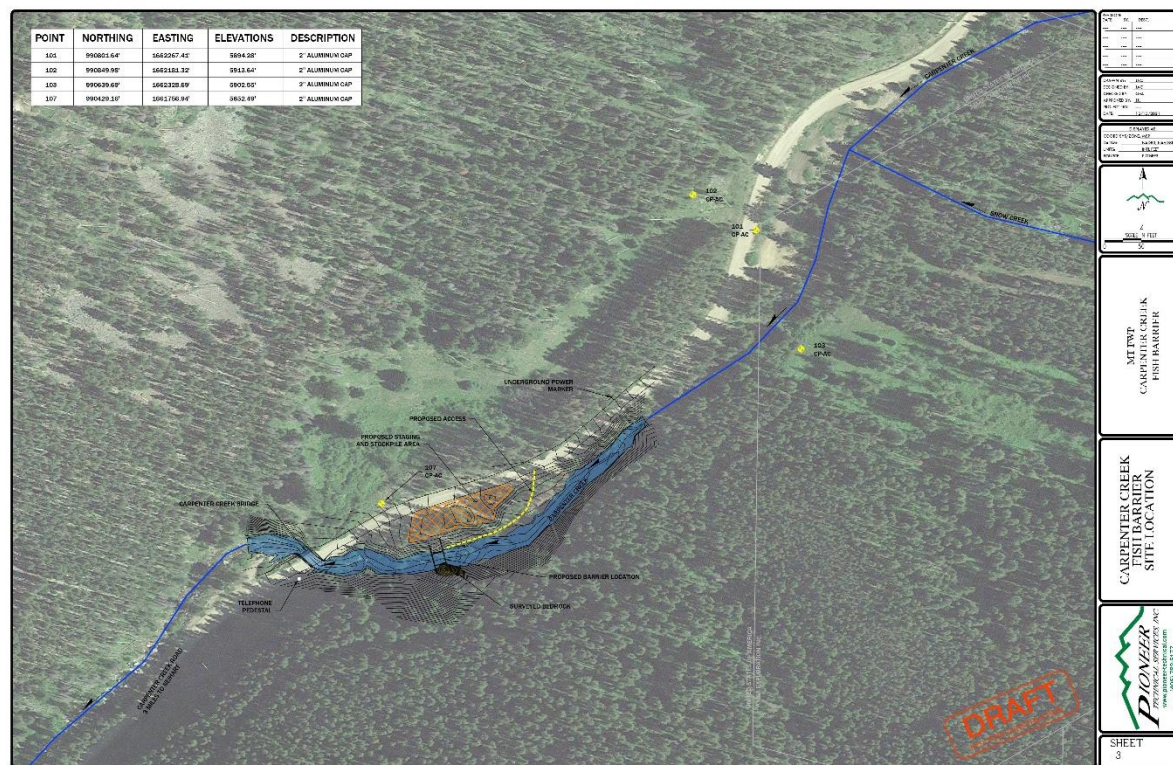
1.6.2 Proposed Action

The proposed action is to construct a cast-in-place concrete fish barrier in Carpenter Creek. This fish barrier will protect the upper nine miles of fish habitat in Carpenter Creek and its tributaries from nonnative trout invasion. As water quality improves in the drainage following mine clean-up activities, it is expected the two nonhybridized WCT populations in the drainage will expand and eventually meet the “secured” criteria identified in the Conservation Goals for Westslope Cutthroat Trout in the Montana Statewide Fisheries Management Plan (FWP 2019).

The barrier will be constructed of cast-in place concrete with a double drop design. The upper drop is perched above a concrete splash pad that prevents fish from jumping while the lower drop prevents the splashpad from being backwatered under flood conditions or downstream bedload or debris accumulation. The barrier will be designed to exclude fish up to the 50-year recurrence interval flow (296 cfs) and remain structurally stable up to a 100-year recurrence interval flow (356 cfs). For additional methodology please reference Appendix 1 for the technical write ups in the plan designs for this project.

1.6.3 Project Area

The project area encompasses a 100-125 ft reach of Carpenter Creek approximately 240 m below the Snow Creek confluence (46.95994, -110.72883; Figure 2).



1.6.4 Duration of Project

The proposed action would occur following peak discharge in Carpenter Creek (typically June) and conclude November 2022.

1.6.5 Monitoring

Construction oversight will be provided by Pioneer Technical Services. Oversight includes Design Engineer or Engineer Representative on-site inspections during stream diversion, site dewatering, barrier site excavation, concrete structure and barrier backfill as well as substantial completion review, submittal reviews, design clarifications/adjustments and pay request reviews. Effectiveness of the proposed project would be determined through continued genetic and demographic monitoring of the Carpenter Creek WCT population.

2 Environmental Review

2.1 Physical Environment

2.1.1 Land Resources

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Soil instability or changes in geologic substructure?			X		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		Yes	1d
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:						

Comment 1a, 1b, 1d

If the proposed action is implemented, a barrier would be constructed across the channel of Carpenter Creek. Construction activities would result in some short term increases in sediment levels; the disturbed area would be confined to the construction and staging areas (approximately 100-125 linear feet of stream). The construction area is nearby an adjacent road, but some disturbance would occur between the road and the barrier site. The project would be implemented based on conditions stipulated by permitting agencies as well as the use of Construction Best Management Practices (BMPs) designed to reduce erosion and sedimentation and would include but may not be limited to the following measures:

- Work would occur during low flow conditions, which typically occurs late-summer or early-fall.
- Erosion control measures would be installed to control erosion and sediment release into the stream.
- Disturbed areas would be mulched and reseeded with a native plant mixture as soon as possible following construction.

2.1.2 Water

2. <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		Yes	2a
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				2b
c. Alteration of the course or magnitude of flood water or other flows?		X				2c
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 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. Will the project affect a designated floodplain?		X				
m. Will the project result in any discharge that will affect federal or state water quality regulations?		X				

Comment 2a

There would be a temporary increase in turbidity during construction. BMPs would be in place before, during, and after construction to reduce turbidity impacts. All required permits would be obtained prior to construction including: Montana Stream Protection Act (SPA 124), Short-Term Water Quality Standard for Turbidity (318 Authorization), and Federal Clean Water Act (401, 404) permits.

Comments 2b and 2c

The proposed action would not affect the rate or amount of surface water or flood flows; however, by design it would alter the drainage pattern by having a barrier in the stream. The barrier may create a ponding affect for a short distance upstream (less than 1 acre-foot), but the same amount of flow would pass below the barrier as prior to construction.

2.1.3 Air

3. <u>AIR</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Emission of air pollutants or deterioration of ambient air quality?			X		No	3a

b. Creation of objectionable odors?			X		No	3b
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				

Comment 3a and 3b

Use of heavy equipment could impact air quality and create objectionable odors during construction in the immediate area. These impacts would be limited to when equipment is operating during construction (approximately 1-3 months). Impacts to the air from pollutants and odors are expected to be short-term and minor. The project location occurs on lands administered by the USFS and there is limited activity in the area. Use of heavy equipment would be minimized to the extent possible, and construction would occur over as short of time frame possible to minimize impacts.

2.1.4 Vegetation

4. <u>VEGETATION</u> 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, grasses, crops, and aquatic plants)?			X		Yes	4a
b. Alteration of 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		Yes	4e
f. Will the project affect wetlands, or prime and unique farmland?		X				

Comment 4a

During construction there would be localized impacts to vegetation for gaining access to the construction site and at the immediate construction site. Impacts to vegetation would be limited to staging areas and ground immediately adjacent to the construction site. Following construction, all disturbed areas would be mulched and reseeded with a native plant mix. Woody riparian species may also be planted to help stabilize banks.

Comment 4e

Temporary and localized disturbance to the ground during construction may create an environment conducive to noxious weed recruitment and growth. In addition, machinery and equipment used during the project may inadvertently carry noxious weeds to the project site. Proposed mitigation includes: 1) washing all equipment and vehicles prior to work on the construction site; removal of mud, dirt, and plant parts from project equipment before moving into the project area; 2) inspection of the project area for noxious weeds after the project is completed. If noxious weeds are found in the project area after

completion, integrated weed management methods, including bagging and appropriate disposal would be implemented. Inspections would continue for at least three years after weeds are observed.

2.1.5 Fish/Wildlife

5. FISH/WILDLIFE 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			5a
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		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			5g
h. 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?		X				
i. Will the project introduce or export any species not presently or historically occurring in the receiving location?		X				

Comment 5a

During construction, water quality may temporarily decline which could have short term effects to fish (see Water, Comment 3a). However, fish are not present in Carpenter Creek immediately below the barrier site, and changes to water quality in Belt Creek would be minimal. Implementation of BMPs and erosion control measures should make any alterations to fish habitat short term with minor to negligible impacts. The EPA cleanup is designed to reduce threats to human health. One side effect of that would be improved water quality which would likely improve fish use of lower Carpenter Creek. Putting the barrier in place would continue this scenario. This action would not prevent fish from Belt Creek using lower Carpenter Creek, but there would be a long-term prevention of fish to move upstream of this point. Nonhybridized WCT would be able to move downstream.

Comment 5e

The goal of the proposed action is to create a migration barrier that prevents the movement of rainbow trout and brook trout upstream to protect the WCT population above the barrier. The action would have a positive impact on WCT security and reduces a potential extinction risk (competition and hybridization with nonnatives) to WCT in the Carpenter Creek populations.

Comment 5g

During construction, noise levels in the immediate area would be elevated, which could stress resident wildlife populations resulting in dispersal from the site. Construction activities would occur during base

flow conditions (late summer/early fall) after most breeding and nesting seasons and prior to most hunting seasons.

2.2 Human Environment

2.2.1 Noise/Electrical Effects

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. Increase in existing noise levels?			X			6a
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				

Comment 6a

During construction there would be heavy equipment operating in the immediate area which would increase ambient noise levels. There would also be a slight increase in use of the Carpenter Creek Road for mobilization of equipment.

2.2.2 Land Use

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 probability of the existing land use of an area?			X			7a
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				

Comments 7a

The proposed barrier site is located on USFS property. The USFS supports and has agreed to construction of the barrier. The barrier would not interfere with the productivity or profitability of the area.

2.2.3 Risks/Health Hazards

8. <u>RISKS/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		Yes	8a
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. Will any chemical toxicants be used?		X				

Comment 8a

During construction, BMPs will be in place to minimize the effects of accidental fuel or oil spills by construction personnel.

2.2.4 Community Impact

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?			X		No	9e

Comment 9e

During mobilization and construction there would be heavy equipment operating at the construction site and movement of equipment and materials on Carpenter Creek Road.

2.2.5 Public Services/Taxes/Utilities

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

2.2.6 Aesthetics/Recreation

11. <u>AESTHETICS/RECREATION</u> 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			11a
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and setting?		X				
d. Will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted?		X				

Comment 11a

The outcome of the proposed project is the construction of a concrete fish barrier in Carpenter Creek. The proposed barrier site is located on USFS land approximately 20 m south of the Carpenter Creek Road in an area that is not highly visible due to natural channel incision and the presence of obscuring vegetation. The completed fish barrier is expected to have minimal impacts to the aesthetic character of Carpenter

Creek. Disturbance of the ground and vegetation during and immediately following construction may be aesthetically displeasing. Any areas disturbed during construction activities would be recontoured and revegetated as soon as possible following construction.

2.2.7 Cultural/Historic Resources

12. CULTURAL/HISTORIC RESOURCES 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, or paleontological importance?	X					12a
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. Will the project affect historic or cultural resources?		X				12d

Comment 12a and 12d

A cultural/historical survey including consideration of archaeological resources and Native American culture has been completed. The Helena-Lewis and Clark National Forest issued a No Inventory Decision in their Heritage Report R201601150018A. Previous surveys (R201401150026A) along the Carpenter Creek Road did not identify any sites along the road and between the road and creek in the location of this project. Prehistoric site probability in this drainage is low due to historic mining activity. However, there is some associated uncertainty due to ground-breaking activities which may result in unknown impacts.

2.2.8 Summary of Evaluation of Significance

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action result in:	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 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. Is the project expected to have organized opposition or generate substantial public controversy?		X				
g. List any federal or state permits required.		X				13g

Comment 13g

The following permits would be required for the proposed project:

SPA 124 Permit—Montana Stream Protection Act (FWP)

318 Authorization—Short-term Water Quality Standard for Turbidity (Montana DEQ)

Section 401 Permit – Water Quality Certification (Montana DEQ)

Section 404 Permit—Federal Clean Water Act (U.S. Army Corps of Engineers)

3 Alternatives

3.1 *Alternatives Evaluated*

3.1.1 Alternative 1 – No Action

The no action alternative would be to not construct a fish barrier. As mine clean-up activities continue and water quality improves, nonnative species in Belt Creek would eventually move up Carpenter Creek and compete, displace, and hybridize with the currently nonhybridized WCT. The establishment of nonnative trout in Carpenter Creek would eventually lead to the extirpation of this unprotected population of native WCT. As a result, the objectives of the project would not be met.

3.1.2 Alternative 2 – Conservation of Native Westslope Cutthroat Trout in Carpenter Creek by Construction of a Concrete Fish Barrier

The proposed action involves construction of a fish barrier on Carpenter Creek that would prevent nonnative trout from moving upstream into Carpenter Creek as water quality improves. The predicted benefits of Alternative 2 include:

- Protection and conservation of two nonhybridized WCT populations inhabiting approximately 2 miles of Carpenter Creek and 0.5 miles of Haystack Creek by preventing upstream colonization by rainbow trout and brook trout.
- Would allow for colonization of an additional 1.7 miles of Carpenter Creek and 4.8 miles of tributaries by WCT as mine clean-up activities continue and water quality improves within the drainage.
- Would allow for reconnection of the Carpenter Creek and Haystack Creek WCT populations, as water quality conditions improve.
- Reduction in the risk of potential listing of WCT under the Endangered Species Act.

4 Public Participation and Comments Instructions

The public will be notified in the following manners to comment on this current EA, the proposed action, and alternatives:

1. Public notices provided to all the daily and weekly newspapers in the region.
2. Public notice on the Fish, Wildlife & Parks webpage: <http://fwp.mt.gov>
3. Draft EA's will be available at the FWP Region 4 Headquarters in Great Falls.
4. A news release will be prepared and distributed to a standard list of media outlets interested in FWP Region 4 issues.
5. A news release posted on the FWP R4 Facebook page.

This level of public notice and participation is appropriate for a project of this scope having limited impacts, many of which can be mitigated.

A 30-day public comment period will extend from January 11th to February 10th, 2022. Interested parties should send comments to:

Montana Fish, Wildlife & Parks – Region 4
c/o Carpenter Creek Westslope Cutthroat Trout Conservation
4600 Giant Springs Road, Great Falls, MT 59405

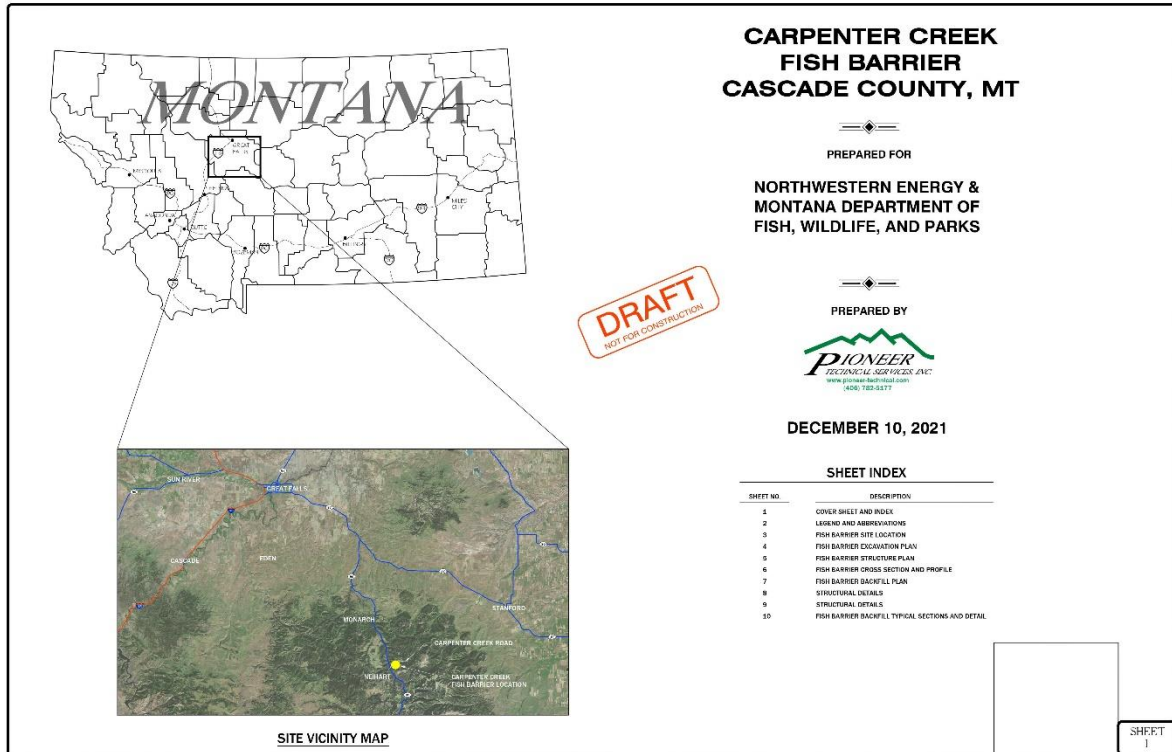
Email: fwpr4publiccom@mt.gov

Prepared by: Alex Poole Date: 1/11/2022

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6 Appendix I

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