

**FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION**

(please fill in the highlighted areas)

I. APPLICANT INFORMATION

- A. Applicant Name: Turner Enterprises, Inc. C/O Eric Leinonen
- B. Mailing Address: 1123 Research Drive
- C. City: Bozeman State: MT Zip: 59718
- Telephone: Office: (406) 556-8500 Cell (406) 396-5377
- D. Contact Person: Eric Leinonen – TEI Senior Biological Technician
- Address if different from Applicant:
- City: State: Zip:
- Telephone:
- E. Landowner and/or Lessee Name
(if other than Applicant): Turner Enterprises, INC. - Flying D Ranch LLC. -
- Mailing Address: 1123 Research Dr.
- City: Bozeman State: MT Zip: 59718
- Telephone: (406) 556-8500

II. PROJECT INFORMATION*

- A. Project Name: Cherry Creek Fish Passage
- River, stream, or lake: Cherry Creek of the Madison River
- Location: Township T3S Range R2E Section 26
- County: Madison
- B. Purpose of Project:
The purpose of the proposed project is to provide improved fish passage over an existing irrigation structure found within the piscicide renovated portion of Cherry Creek.
- C. Brief Project Description:

Cherry Creek of the Madison River is home to the most ambitious piscicide renovation project ever completed for cutthroat trout conservation. Nearly 100km of stream and 3ha of lake habitat is now available exclusively to thriving populations of genetically pure Westslope Cutthroat Trout [WCT] (*Oncorhynchus clarki lewisi* - a Montana species of special concern).

This proposed fish passage project is within the Cherry Creek Native WCT Project area. The fish passage project would connect the lowest 13km of stream <6km of Cherry Creek and the entire 7km of Mill Creek> within the WCT project area to the 85+ stream km found above an irrigation structure which currently acts as a barrier to up-stream fish movement. [Area Map #1]. Presently and for the past 50+ years, a concrete irrigation structure directs the entirety of Cherry Creek's flow off a 30' wide, 3'6" vertical drop. The water falls onto a concrete splash pad which extends 10ft. from the pour and effectively removes any usable jump-pool. [Photo #1, #2, #3] The structure successfully acts as a barrier to the upstream movement of fish. This feature was an asset during the years of piscicide renovation, necessary to complete the Cherry Creek Native WCT Project. However, now it is an issue needing a fix as the first generations of Remote-Streamside-Incubated fish are reaching reproductive maturity.

Passage would be achieved with the installment of two, rock-weir structures, placed immediately downstream of an existing irrigation dam. [Area Map #2]. The rock-weirs would predominantly consist of boulders sized greater than 8ft³, placed in such a way to create two ascending step-pools. Additionally, the design would focus flows towards mid-channel to prevent bank scouring and erosion. The material would be trucked in from an off-site rock source and placed in-stream by excavator. An 18" difference in elevation is the maximum desired from top of weir to downstream water surface elevation of the creek. A 12" difference is the maximum desired drop from the top of the existing irrigation structure to the water surface in the top-most plunge pool formed by the rock weir. These elevation differences are well within the jumping/swimming ability of migrating WCT. Furthermore, the interstitial spaces found in the rough structure of the weirs should provide other avenues of ascent and ultimately, upstream passage. It is because of this added quality of the design, that the larger drops are desired to occur over the constructed rock-weirs.

To ensure the hydrology will be favorable at all flows, a HEC-RAS analysis of the proposed plans will be done prior to construction. The installment of the fish passage step pools will be completed by R.E. Miller & Sons of Dillon, MT. This construction firm is sufficiently experienced with projects of this nature and a familiar name for projects sponsored by MT FWP.

Ideally, the irrigation structure would simply be removed. However, this has been ruled out as an option by Turner Enterprises, Inc. and property owners due to the larger financial requirement, a desire to retain a means to fill irrigation ditches should current water rights management be changed, and of greatest concern; the risk of negatively influencing a large riparian spring complex immediately upstream and alongside the barrier in question. [Area Map #3]. Above these springs, Cherry Creek flows annually become intermittent and the creek bed is dry for several hundred meters. The spring complex is source for nearly all the late summer/ early fall flows in the 6km reach of Cherry Creek Below the Barrier. Throughout the year the springs contribute a significant portion of the total flows and provide an invaluable service buffering water temperatures. Stable in temperature and rich in nutrients, water sourced at these springs enables both impressive fish densities and excellent growth rates in the immediate 6km of stream below. It would be safe to call this section of creek the "crown Jewel" of the Native WCT project Area.

The currently disconnected lower reaches of Cherry Creek is the most productive, high quality late summer, and over-wintering habitat found within the entire project area. Population data from 2014 sampling found biomass per m²/km to be 58% greater in the disconnected reach below the barrier than the biomass measured within the stream 5km above the barrier. To enable fish found in the disconnected reach, to migrate upstream and contribute to the genetic integrity of the entire population, fostering the development of a true fluvial life history, would be beneficial to the vigor of the entire population.

The directly impacted area of stream will be less than 50 meters longitudinally from the irrigation structure and within 25 meters lateral to either side of the stream. Any damage done to riparian vegetation will be remedied with replanting following construction. With the instalment of the fish passage rock-weirs, the population of fish occupying the 13 km of Cherry Creek and Mill Creek will gain access to 85+km of exclusively WCT stream habitat.

D. Length of stream or size of lake that will be treated:

E. Project Budget:

Grant Request (Dollars): \$ **7,080**

Contribution by Applicant (Dollars): \$ 7,204 In-kind \$ 1,600
 (salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ In-kind \$
 (attach verification - See page 2 budget template)

Total Project Cost: \$ **15,884**

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Westslope Cutthroat Trout (*Oncorhynchus clarki lewis*).

B. How will the project protect or enhance wild fish habitat?:

The project will provide significant improvements in connectivity within the Cherry Creek drainage. The enhanced mobility will enable a larger fish population to freely occupy high quality late summer and winter habitat (downstream of irrigation structure), yet maintain access to upper stream reaches; necessary for a fully fluvial life history. Such an improvement would not alter habitats directly, but instead link approximately 13km of WCT habitat (with approximately 6km of the 13km being fourth-order stream) with more than 85km of up-stream WCT habitat.

C. Will the project improve fish populations and/or fishing? To what extent?:

The improved fish passage will enable fluvial migrations of individuals from the lower reaches of the renovated section of Cherry Creek. With this, Cherry creek would be host to robust representations of a variety of freshwater salmonid life histories. Assuming such migratory and subsequent spawning behavior will be adopted readily, a fully connected Cherry Creek will lead to an improved fishery overall with greater genetic integrity from a larger contiguous population.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

The majority of the Cherry Creek Native WCT Project area is found on privately owned land. However, should WCT trout be allowed full access to the available habitat, WCT populations within Cherry Creek could increase and better serve as an upstream source population to the lower Madison River. Since the completion of the Cherry Creek project, state fisheries managers and public anglers have reported increased occurrences of Westslope Cutthroat in the lower Madison River.

E. If the project requires maintenance, what is your time commitment to this project?:

Turner Enterprises Inc. is committed to a high standard of land stewardship. Both full-time, and seasonal staff, would be made available to satisfy all maintenance needs had for the life of the fish passage structure.

What was the cause of habitat degradation in the area of this project and how will the project

F. correct the cause?:

An irrigation diversion structure within Cherry Creek is the cause for habitat fragmentation. The project will correct the issue by providing readily achievable passage up and over the irrigation structure with the instalment of a step-pool structure below the current barrier.

G. What public benefits will be realized from this project?:

Genetically, a more vigorous population of Westslope cutthroat will be available to be used as seed stock for future renovation and restoration projects. As was always the intention, Cherry Creek offers an unparalleled egg source for WCT conservation, renovation, and restoration efforts across the species native range. Also, with greater spawning potential, there is greater opportunity for fish populations to increase in numbers, and potentially "spill" or out-migrate from Cherry creek and into water more readily available to public access. Cherry Creek is the only known population of pure Westslope Cutthroat Trout within the lower Madison River (below Ennis Reservoir).

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No. The entirety of the project is to occur on land owned by Turner Enterprises, Inc. and managed by The Flying D Ranch. Likewise, Turner Enterprises is in possession of all water rights allocated from Cherry Creek.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No

J. Is this project associated with the reclamation of past mining activity?:

No

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

AUTHORIZING STATEMENT

IV.

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: Eric Linneman Date: 5/30/2015

Sponsor (if applicable): _____

***Highlighted boxes will automatically expand.**

**Mail To: Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701**

Incomplete or late applications will be returned to applicant.

Applications may be rejected if this form is modified.

*****Applications may be submitted at anytime, but must be received by the Future Fisheries Program office in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

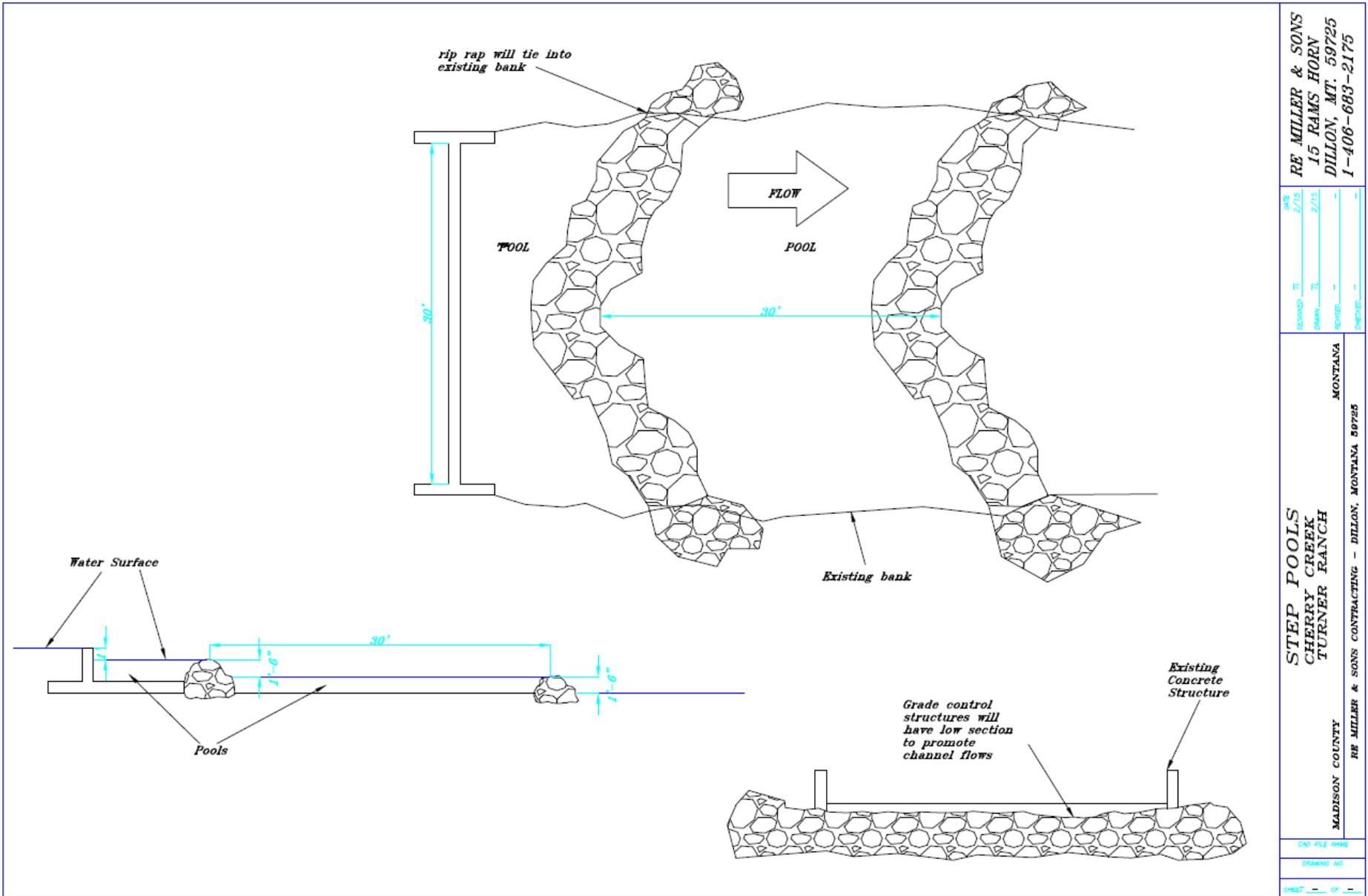
WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES	IN-KIND CASH	TOTAL
Personnel								
Survey				\$ -				\$ -
Design	1		\$975.00	\$ 975.00			975.00	\$ 975.00
Engineering				\$ -				\$ -
Permitting	1		\$300.00	\$ 300.00		300.00		\$ 300.00
Oversight	1		\$1,000.00	\$ 1,000.00		1,000.00		\$ 1,000.00
Labor	1		\$300.00	\$ 300.00		300.00		\$ 300.00
			Sub-Total	\$ 2,575.00	\$ -	\$ 1,600.00	\$ 975.00	\$ 2,575.00
Travel								
Mileage				\$ -				\$ -
Per diem				\$ -				\$ -
			Sub-Total	\$ -	\$ -	\$ -	\$ -	\$ -
Construction Materials								
Rip Rap	140	rock/ boulder	\$27.00	\$ 3,780.00	3,780.00		-	\$ 3,780.00
				\$ -				\$ -
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			Sub-Total	\$ 3,780.00	\$ 3,780.00	\$ -	\$ -	\$ 3,780.00
Equipment								
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
			Sub-Total	\$ -	\$ -	\$ -	\$ -	\$ -
Mobilization								
	1	mobilization	\$800.00	\$ 800.00			800.00	\$ 800.00
	1	hauling material	\$6,100.00	\$ 6,100.00	1,000.00		5,100.00	\$ 6,100.00
	1	Installation	\$2,300.00	\$ 2,300.00	2,300.00		-	\$ 2,300.00
	1	misc.	\$329.00	\$ 329.00			329.00	\$ 329.00
			Sub-Total	\$ 9,529.00	\$ 3,300.00	\$ -	\$ 6,229.00	\$ 9,529.00
TOTALS				\$ 15,884.00	\$ 7,080.00	\$ 1,600.00	\$ 7,204.00	\$ 15,884.00

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

*Units = feet, hours, inches, lump sum, etc.

MATCHING CONTRIBUTIONS

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Verified? (Y/N)
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
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	\$ -	\$ -	\$ -	



RE MILLER & SONS
15 RAMS HORN
DILLON, MT. 59725
1-406-683-2175

DATE 2/15
DESIGNED BY
DRAWN BY
CHECKED BY

MONTANA
STEP POOLS
CHERRY CREEK
TURNER RANCH
MADISON COUNTY
RE MILLER & SONS CONTRACTING - DILLON, MONTANA 59725

CAD FILE NAME
DRAWING NO.
SHEET 1 OF 1



*Montana Department
of
Fish, Wildlife & Parks*

Region 3 Headquarters

1400 S 9th

Bozeman, MT 59718

May 26, 2015

Future Fisheries Review Panel,

I am writing this letter to wholeheartedly support funding for the proposed fish passage structures on Cherry Creek. The Cherry Creek Westslope Cutthroat Trout (WCT) restoration project – which has restored approximately 60 miles of stream to native WCT – has been a cooperative project from its inception. Individuals, non-governmental institutions, State, and Federal government agencies have all made restoration in Cherry Creek possible.

The proposed passage structures will enhance movement of WCT, a Species of Special Concern in Montana, through the lower reaches of Cherry Creek. Promoting a fluvial life history will increase gene flow in the greater Cherry Creek metapopulation. Moreover, increasing fish passage may produce the added benefit of downstream movement of individuals into the Lower Madison. WCT are a valuable resource both taxonomically and as a sport fish. There have been reports of WCT being caught in the Lower Madison; enhancement of fluvial life histories will only increase the opportunity for anglers to catch this native species.

Sincerely,

A handwritten signature in black ink, appearing to read "David C Moser". The signature is fluid and cursive, with a large initial "D" and "M".

David C Moser
Fisheries Biologist



United States
Department of
Agriculture

Forest
Service

Gallatin National Forest

Bozeman Ranger District
3710 Fallon Street, Suite C
Bozeman, MT 59718
Phone: 406-522-2520
Fax: 406-522-2528

File Code: 2620

Date: May 15, 2015

Dear Future Fisheries Citizen Review Panel Members,

The Custer Gallatin National Forest has been a long-term partner with Turner Enterprises, Inc. and Montana Fish, Wildlife and Parks on the overall Cherry Creek westslope cutthroat trout restoration project, from its initiation way back in the mid-1990's. We were there together during all phases of planning and implementation regardless of land ownership. The majority of the overall Cherry Creek restoration project area is located on private land including the proposed "Cherry Creek Fish Passage Project" project before you today. The overall restoration project greatly enhanced National Forest system lands by placing genetically pure westslope cutthroat trout into the headwaters of the Cherry Creek drainage and assisting with the overall conservation of westslope cutthroat trout range-wide by increasing the overall occupied miles of stream habitat by over 60 miles.

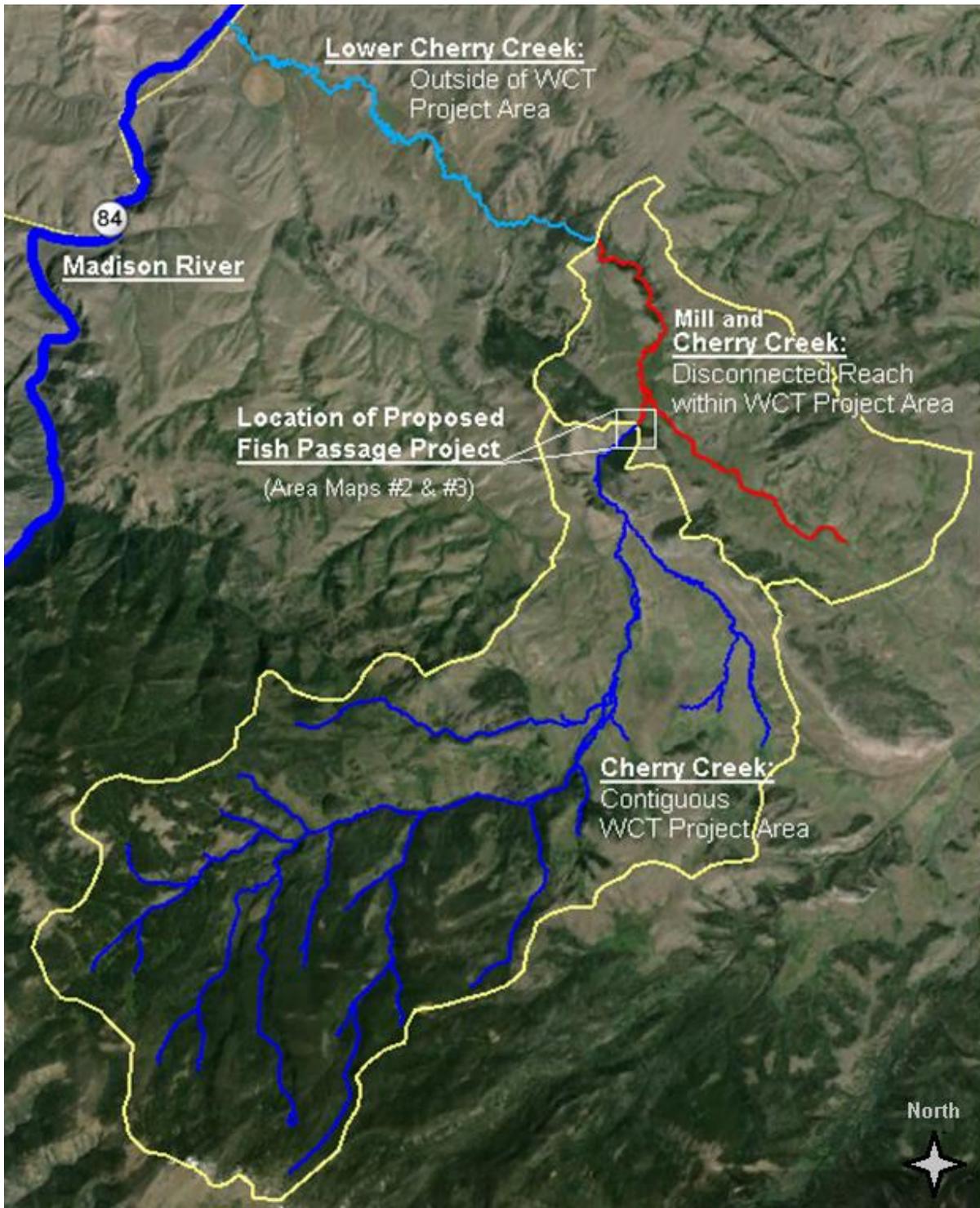
The fish passage proposal before you is the final piece to a very successful project. Improving fish passage as proposed would allow fish to freely migrate between the lower and middle portions of the overall project area. My staff and I fully support this proposal putting an exclamation point on this incredibly rewarding project. If you have any questions regarding this individual project or the overall project that we can answer from a partner perspective, please feel free to call me at (406) 522-2531 or Bruce Roberts, District Fisheries Biologist, at (406) 522-2544.

Sincerely,

LISA STOEFFLER
Bozeman District Ranger



Area Map #1: Location of fish passage project within Cherry Creek of the Madison River.

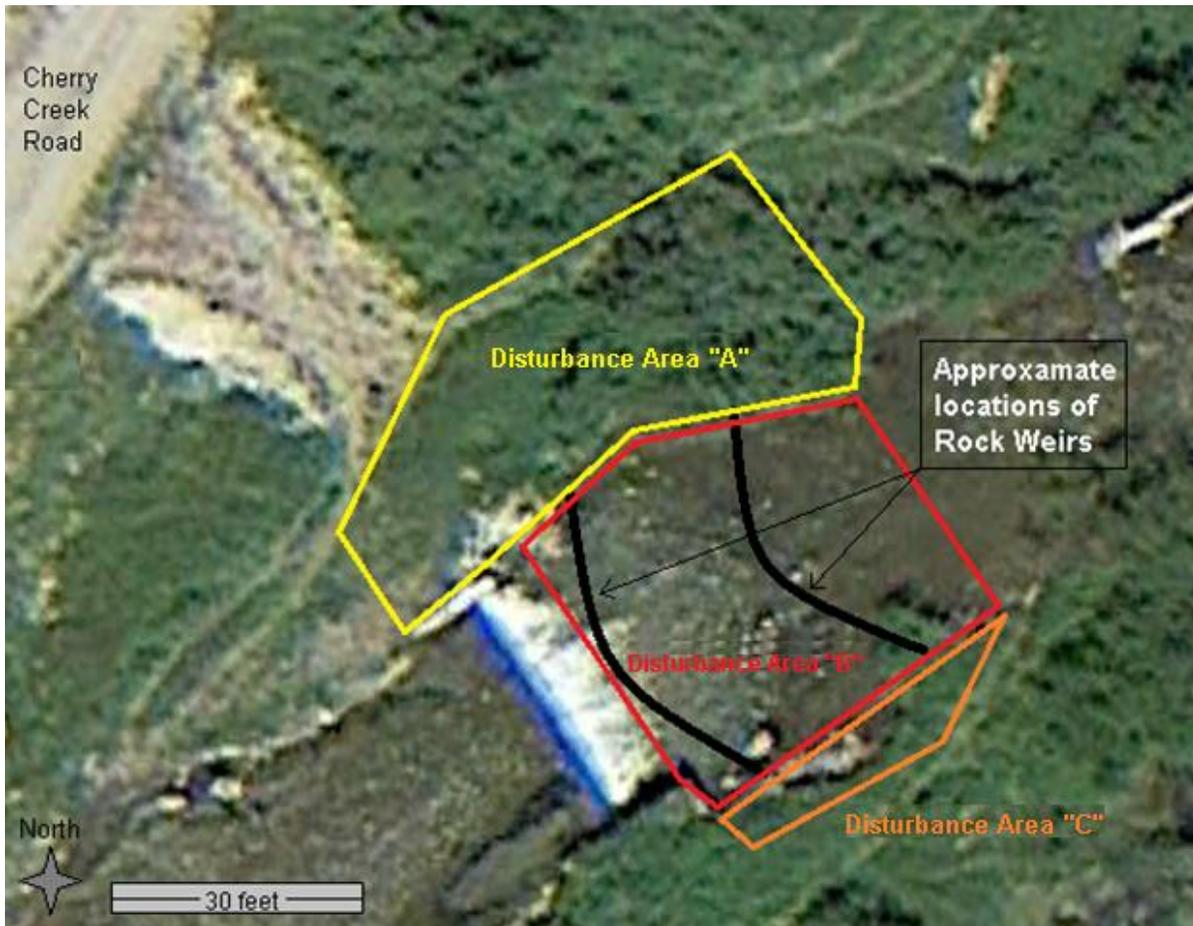


Area Map #2: Approximate location of rock-weirs, and construction disturbance areas.

Area "A"- Disturbance limited to material storage and minimal bank work, as needed to secure rock weirs and prevent erosion

Area "B"- Disturbance limited to construction of rock weirs (2), and the resulting step-pools.

Area "C"- Disturbance limited to moderate bank work, as needed to secure rock weirs and prevent erosion.



Area Map #3: location of spring complex in relation to irrigation structure currently obstructing fish movement.

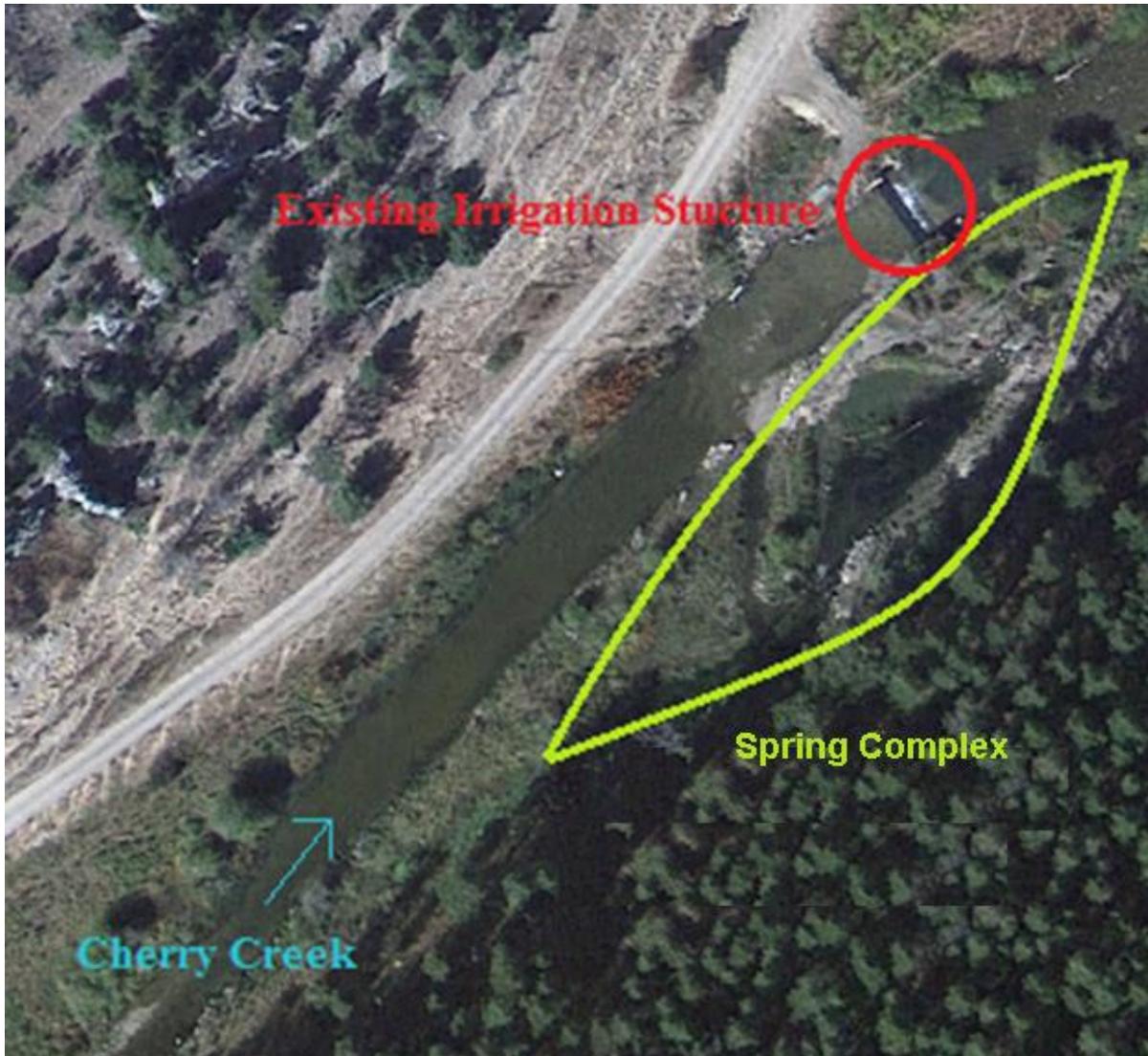


Photo #1: The existing Irrigation structure [foreground] with portion of spring complex [background] as seen in January, 2015.

(Photo taken from northwest bank, looking southeast.)



Photo #2: The existing Irrigation structure as seen in May, 2015.

(Photo taken from mid-stream, approximately 40' downstream of structure)



Photo #3: The existing irrigation structure as seen May, 2015

(Photo taken from the Northwest bank, at waters edge.)

