



FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

All sections must be addressed, or the application will be considered invalid



I. APPLICANT INFORMATION

A. Applicant Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

B. Contact Person (if different than applicant): _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

C. Landowner and/or Lessee Name (if different than applicant): _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

II. PROJECT INFORMATION

A. Project Name: _____

River, stream, or lake: _____

Location: Township: _____ Range: _____ Section: _____

Latitude: _____ Longitude: _____ *within project (decimal degrees)*

County: _____

B. Purpose of Project:

C. Brief Project Description (attach additional information to end of application):

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

E. Project Budget:

Grant Request (Dollars): \$ _____

Matching Dollars: \$ _____

Matching In-Kind Services:* \$ _____

salaries of government employees are not considered matching contributions*Total Project Cost:** \$ _____F. **Attach** itemized (line item) budget – *see budget template***Attach** specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other informationG. necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete a *supplemental questionnaire*. (<http://fwp.mt.gov/fwpDoc.html?id=36110>)H. **Attach** land management & maintenance plans that will ensure protection of the reclaimed area.III. **PROJECT BENEFITS** (attach additional information to end of application):

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

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

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

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

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?

Boles Creek fish screening and passage
BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

001-2020

Both tables must be completed or the application will be returned

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	24	Hours	\$100.00	\$ 2,400.00			2,400.00	\$ 2,400.00
Design	45	Hours	\$115.00	\$ 5,175.00			5,175.00	\$ 5,175.00
Engineering	60	Hours	\$115.00	\$ 6,900.00			6,900.00	\$ 6,900.00
Permitting	61	Hours	\$45.00	\$ 2,745.00		2,745.00		\$ 2,745.00
Oversight	80	Hours	\$115.00	\$ 9,200.00			9,200.00	\$ 9,200.00
Oversight	75	Hours	\$45.00	\$ 3,375.00		3,375.00		\$ 3,375.00
			Sub-Total	\$ 29,795.00	\$ -	\$ 6,120.00	\$ 23,675.00	\$ 29,795.00
Travel								
Mileage	1250	Miles	\$0.58	\$ 725.00		725.00		\$ 725.00
Per diem				\$ -				\$ -
			Sub-Total	\$ 725.00	\$ -	\$ 725.00	\$ -	\$ 725.00
Construction Materials****								
Coanda Fish Screen	1	each	\$7,000.00	\$ 7,000.00	3,000.00		4,000.00	\$ 7,000.00
Headgate	2	each	\$2,000.00	\$ 4,000.00	2,000.00		2,000.00	\$ 4,000.00
Rock	75	each	\$100.00	\$ 7,500.00		7,500.00		\$ 7,500.00
Pipe	1	lump sum	\$3,000.00	\$ 3,000.00	1,500.00		1,500.00	\$ 3,000.00
Fittings	1	lump sum	\$1,300.00	\$ 1,300.00			1,300.00	\$ 1,300.00
				\$ -				\$ -
			Sub-Total	\$ 22,800.00	\$ 6,500.00	\$ 7,500.00	\$ 8,800.00	\$ 22,800.00
Equipment and Labor								
Hydraulic Excavator	124	Hours	\$175.00	\$ 21,700.00	11,125.00		10,575.00	\$ 21,700.00
Track Truck	40	Hours	\$160.00	\$ 6,400.00	3,000.00		3,400.00	\$ 6,400.00
Labor	70	Hours	\$55.00	\$ 3,850.00	1,500.00		2,350.00	\$ 3,850.00
Service Truck	50	Hours	\$50.00	\$ 2,500.00	500.00		2,000.00	\$ 2,500.00
			Sub-Total	\$ 34,450.00	\$ 16,125.00	\$ -	\$ 18,325.00	\$ 34,450.00
Mobilization								
All Equipment	1	Lump Sum		\$ 9,000.00	3,000.00		6,000.00	\$ 9,000.00
			Sub-Total	\$ 9,000.00	\$ 3,000.00	\$ -	\$ 6,000.00	\$ 9,000.00
TOTALS				\$ 96,770.00	\$ 25,625.00	\$ 14,345.00	\$ 56,800.00	\$ 96,770.00

MATCHING CONTRIBUTIONS (do not include requested funds)

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
USFWS Partners for Fish & Wildlife Program	-	\$ 9,800.00	\$ 9,800.00	Yes
The Nature Conservancy	-	\$ 5,000.00	\$ 5,000.00	Yes
United States Forest Service	-	\$ 5,000.00	\$ 5,000.00	Yes

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

MTU-Log Jam Presents	\$ -	\$ 20,000.00	\$ 20,000.00	Yes
Private Landowner	\$ -	\$ 5,000.00	\$ 5,000.00	Yes
Montana Trout Foundation	\$ -	\$ 12,000.00	\$ 12,000.00	No
BBCTU	\$ 14,345.00	\$ -	\$ 14,345.00	Yes
TOTALS	\$ 14,345.00	\$ 56,800.00	\$ 71,145.00	



Photos 1-2: Existing diversion on Boles Creek entraining salmonids and creating channel impacts. Note the sediment accumulation upstream of the wooden dam.

Date: November 12, 2019

To the Montana Trout Foundation review committee,

Please find this letter in my support of the Harbin Ditch Irrigation Diversion project that is located within Boles Creek. This project is an important project within the Clearwater River system, a tributary to the Blackfoot River.

Boles Creek is an important bull trout stream that supports low densities of adfluvial and resident bull trout and resident pure westslope cutthroat trout population. Bull trout in this stream reside in Placid Lake as adults and migrate through a short reach of Placid Creek into Boles Creek to spawn. The Forest Service recognizes Boles Creek and a large portion of the Clearwater watershed as a Priority Watershed under the Inland Native Fish Strategy (1995). In addition, the Fish and Wildlife Service has designated the stream as bull trout Critical Habitat. Boles Creek is the last known bull trout stream within the Placid Lake watershed.

This project removes and upgrades an irrigation diversion structure that will improve upstream and downstream access and eliminate any entrainment issues. The location of the structure/project make it a priority project as it is located near the mouth of Boles Creek and will help reconnect approximately 8.0 miles of fish bearing habitat.

This project seems small in comparison to some, however, its combination with other restoration projects and conservation acquisitions within the Placid and greater Clearwater watershed make this an important contribution. This project is also anchored within the Clearwater Blackfoot Project land ownership, which will ensure the lasting benefits of this project. Together these projects are trying to create a positive cumulative impact within these watersheds.

Thank you for the consideration of this project. Please feel free to contact me for more information. Email shane.hendrickson@usda.gov or Phone 406-329-3727.

Sincerely,

/s/Shane R. Hendrickson
East Zone Fisheries Biologist



The Nature Conservancy in Montana Tel (406) 443-0303
32 South Ewing Street Fax (406) 443-8311
Helena, MT 59601

nature.org/montana

November 12, 2019

To: Montana Trout Foundation, FWP Future Fisheries Program, and Partners

RE: Letter of Support for **BBCTU Boles Creek – Harbin Headgate Project**

Dear Montana Trout Foundation, Future Fisheries Grant Committee, and Partners,

We are writing to express our support for the Boles Creek – Harbin Headgate Reconstruction Project that Big Blackfoot Chapter of Montana Trout Unlimited is facilitating. The two Harbin irrigation system headgates are on The Nature Conservancy (TNC) property west of Placid Lake, on some of our recently-purchase Plum Creek Timberlands.

The existing, historic irrigation system for this water right is problematic as it dams Boles Creek, allows entrainment of bull trout and other fish into the two Harbin irrigation ditches, and cannot properly measure flows or be shut off. Your support can help correct these serious issues, and provide for better connectivity for Boles Creek and its important fisheries. The Boles Creek watershed above this diversion is all protected, as TNC or USFS lands. BBCTU and FWP have already done excellent work, over several years, to bring the irrigator to the table on this project.

This project is a critical part of improving native fisheries in the Blackfoot Watershed and on The Nature Conservancy's Montana Forest lands, a 140,000-acre wildlife habitat, land conservation and public-access project that ties together Missoula, Seeley Lake, and adjacent public lands.

Thank you for your time and consideration of this exciting and critical project.

Sincerely,

A handwritten signature in black ink that reads "Steven Kloetzel". The signature is written in a cursive, flowing style.

Steven Kloetzel
Western Montana Land Steward
The Nature Conservancy in Montana

FWP.MT.GOV

THE OUTSIDE IS IN US ALL.

Region 2 Headquarters
3201 Spurgin Road
Missoula, MT 59804
Phone 406-542-5500
November 14, 2019

MEMORANDUM AND SUPPORT LETTER

RE: Irrigation Diversion Upgrades and Stream Enhancements on Boles Creek near Seeley Lake

Dear Collaborators and Funding Partners:

This letter is written in support of planned restoration and fisheries enhancement activities on Boles Creek, located in the Blackfoot River Basin near Seeley Lake. This stream is a tributary to Placid Creek and Placid Lake in the lower Clearwater Watershed. Boles Creek is a unique native trout stronghold in this basin and remains one of the key restoration opportunities identified through extensive surveys and collaborative project prioritization in the Blackfoot over the past decade.

Boles Creek has been prioritized for restoration and enhancement work because of existing bull trout and westslope cutthroat trout (WCT) populations, as well as perceived high potential for post-fire recovery and improvements facilitated by large scale public land acquisitions (USFS) that include much of the watershed. Restoration potential in this very cold stream is also elevated by established cooperative relationships with private landowners in lower reaches.

Accordingly, initial projects involve fish screens and fish passage improvements on the only irrigation diversions in the system. These projects reflect identified limiting factors and ongoing partnerships among the private landowner and water user, Trout Unlimited, Montana Fish, Wildlife & Parks (MFWP), and the USFS. Once implemented, I expect these projects, recent public land acquisitions, and the established monitoring program will facilitate an expanded effort focused on long term protection and enhancement of native trout.

Fisheries and aquatic enhancement in this drainage is expected to be a cost-effective, collaborative commitment involving numerous partners. Please give strong consideration to the proposed initial projects in Boles Creek and feel free to contact me for additional information regarding aquatic resource values and concerns.

Sincerely,

William Ladd Knotek
Fisheries Management Biologist

FISH SCREEN INSTALLATION AND IRRIGATION DIVERSION IMPROVEMENT BOLES CREEK PRELIMINARY DESIGN



PROJECT PARTNERS



US FISH AND WILDLIFE SERVICE
P.O. BOX 66
196 LOWER LAKE SIDE LANE
OVANDO, MONTANA 59854



The Nature Conservancy
Protecting nature. Preserving life.

32 SOUTH EWING
HELENA, MONTANA 59601



Montana Fish, Wildlife & Parks

MONTANA FISH, WILDLIFE & PARKS
3201 SPURGIN ROAD
MISSOULA, MONTANA 59804



PROJECT DESCRIPTION

THE PROPOSED PROJECT WILL REPLACE THREE WOODEN WEIRS THAT ARE CURRENTLY A FISH MIGRATION BARRIER, TRAP FISH IN THE ASSOCIATED DITCHES AND TRAP SEDIMENT. THE PROPOSED STRUCTURE WILL CONSIST OF A ROCK WEIR WITH FISH MIGRATION STEPS, A COANDA TYPE FISH SCREEN AND TWO HEADGATES TO ELIMINATE THE EXISTING ISSUES.

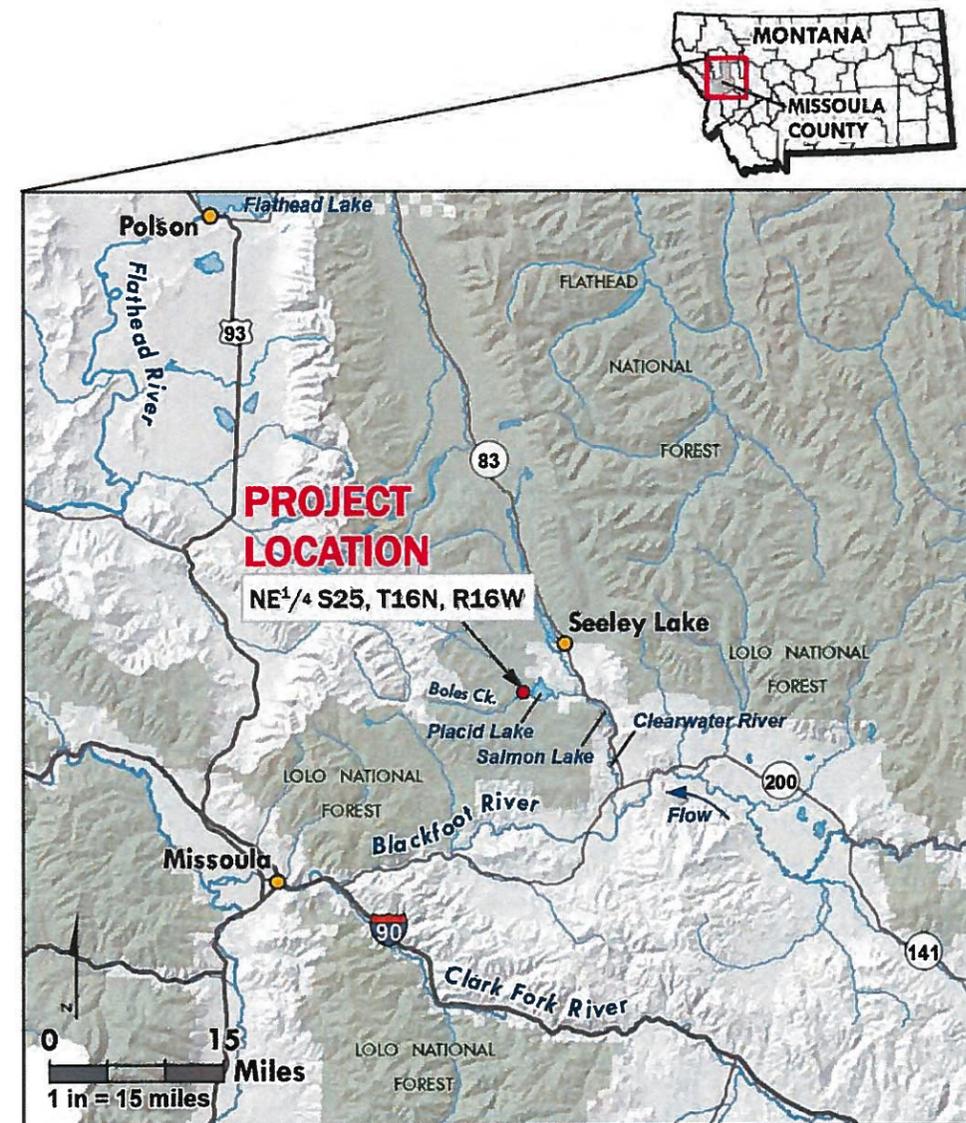
PROJECT OBJECTIVES INCLUDE:

1. ELIMINATE ENTRAINMENT IN EXISTING IRRIGATION DIVERSIONS FOR ALL SALMONIDS.
2. PROVIDE UPSTREAM FISH PASSAGE FOR ALL SIZES OF SALMONIDS (>1+) AT ALL FLOW LEVELS.
3. INSTALL ROCK CROSS-VANE AND HEAD WORKS THAT PASS STREAM BEDLOAD, MINIMIZE DEPOSITION IN DIVERSION INLET, BYPASS SALMONIDS AND DELIVER PRESCRIBED WATER FOR IRRIGATION.

DRAWING INDEX

- 1.0 COVER PAGE
- 2.0 EXISTING CONDITIONS
- 2.1 SITE PLAN
- 2.2 PROFILE SHEET
- 3.0 FISH SCREEN DIVERSION DETAIL

BOLES CREEK VICINITY MAP



COVER PAGE
BOLES CREEK
NEAR SEELEY, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	11-22-19	NW	CONCEPTUAL DESIGN	JM
			preliminary	
			-not for construction-	

PROJECT NUMBER
RDG-18-001

SHEET NUMBER

1.0



PHOTO OF THE EAST DIVERSION HEAD GATE



PHOTO OF THE BOLES CREEK CHECK GATE DAM



IMAGE: 2017 ESRI DIGITAL GLOBE



PHOTO OF THE WEST DIVERSION HEAD GATE



EXISTING CONDITIONS
BOLES CREEK
NEAR SEELEY, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	11-22-19	NW	CONCEPTUAL DESIGN	JM
<i>preliminary</i>				
<i>-not for construction-</i>				

PROJECT NUMBER
RDG-19-082

SHEET NUMBER

2.0




RDG
RIVER DESIGN GROUP

236 Wisconsin Avenue
Whitefish, MT 59937
tel.406.862.4927
fax.406.862.4963

311 SW Jefferson Avenue
Covallis, OR 97333
tel.541.788.2920
fax.541.788.8524

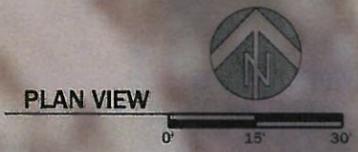
SITE PLAN
BOLES CREEK
NEAR SEELEY, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	11-22-19	NW	CONCEPTUAL DESIGN	JM
			preliminary	
			-not for construction-	

PROJECT NUMBER
RDG-19-082

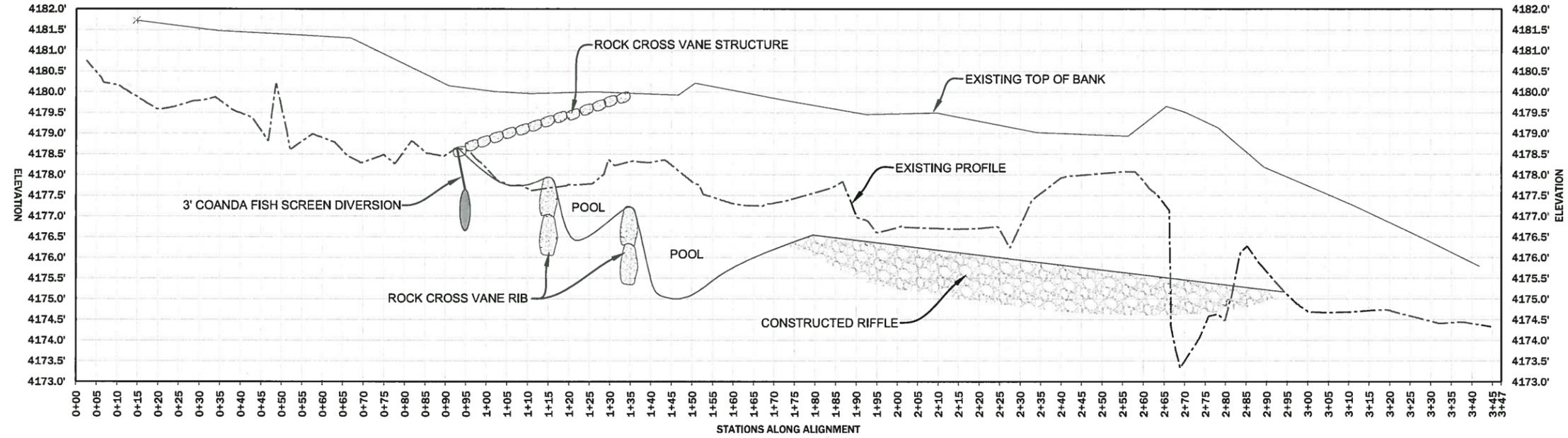
SHEET NUMBER

2.1

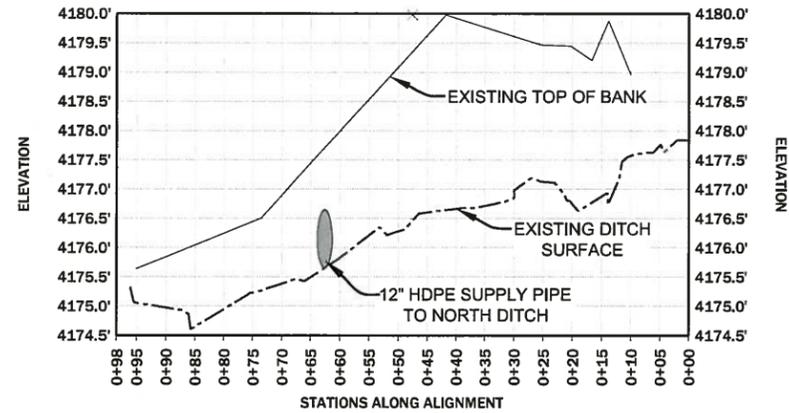




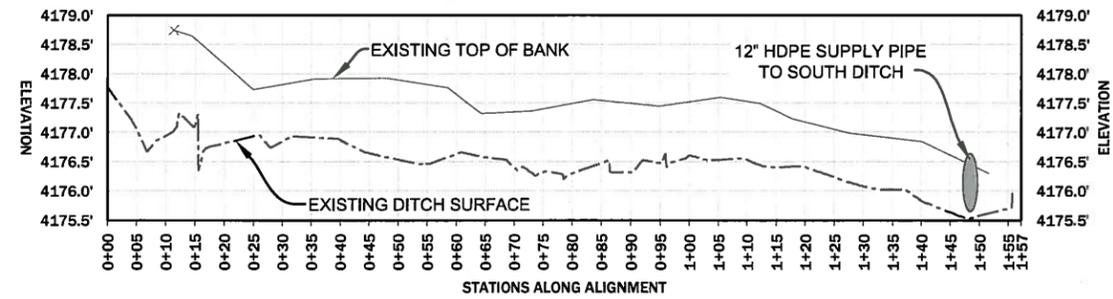
MAIN BOLES CREEK CHANNEL PROFILE



NORTH DITCH PROFILE



SOUTH DITCH PROFILE



PROFILE SHEET
BOLES CREEK
NEAR SEELEY, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	11-22-19	NW	CONCEPTUAL DESIGN	JM
preliminary -not for construction-				

PROJECT NUMBER
RDG-19-082

SHEET NUMBER

2.2

PLAN VIEW





FISH SCREEN DIVERSION DETAIL
BOLES CREEK
NEAR SEELEY, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	11-22-19	NW	CONCEPTUAL DESIGN	JM
			preliminary	
			-not for construction-	

PROJECT NUMBER
 RDG-19-082
 SHEET NUMBER
3.0

CONSTRUCTION NOTES

THE SUPPLIER OF THE STATIC TILTED WIRE "COANDA EFFECT" WEDGE WIRE SCREENS SHALL HAVE BEEN IN BUSINESS FOR A PERIOD OF A MINIMUM OF THREE YEARS, AND HAVE COMPLETED AT LEAST THREE SIMILAR INSTALLATIONS. A MINIMUM OF THREE REFERENCES, INCLUDING CONTACT INFORMATION, SHALL BE FURNISHED.

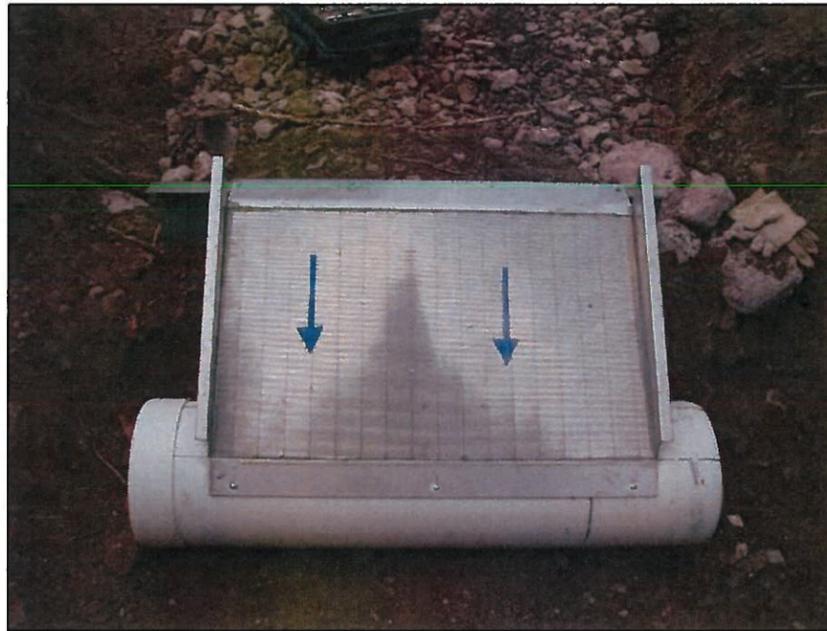
THE SCREEN SHALL BE DESIGNED TO PROVIDE FISH PROTECTION, DEBRIS REMOVAL, AND TO OPERATE IN A MAINTENANCE FREE CONDITION FOR EXTENDED PERIODS OF TIME. THE SCREEN SHALL BE CAPABLE OF DIVERTING 2.5 CFS FROM THE CHANNEL.

THE SCREENS SHALL BE SELF-SUPPORTING AND SHALL BE SUITABLY FRAMED FOR MOUNTING ON THE SPECIFIED PLASTIC PIPE. A WEIR CREST ACCELERATION PLATE SHALL BE FURNISHED TO ASSURE AN EVEN DISTRIBUTION OF FLUID ACROSS THE WIDTH OF THE SCREEN WITHOUT SEPARATION OF FLUID FROM THE SCREEN FACE.

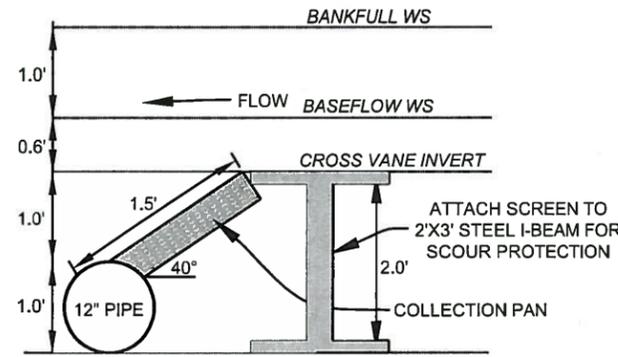
THE SCREEN MATERIAL, ALL SUPPORTING FRAMING, ACCELERATION PLATE, AND FASTENERS SHALL BE TYPE 304 STAINLESS STEEL. THE WEDGE SHAPED PROFILE WIRE SCREEN MATERIAL SHALL BE TYPE # 63 HAVING 1.0 MM WIRE SPACING. THE WIRES SHALL BE TILTED 5 DEGREES FROM A PLANE PERPENDICULAR TO THE SUPPORTING RODS, ALL WIRES SHALL BE WELDED IN A WORKMAN LIKE MANNER. THE SCREEN MATERIAL SHALL BE FREE OF WELD SPATTER. ALL SCREENS SHALL BE MANUFACTURED IN A FLAT CONDITION; SCREEN THAT IS CUT AND STRAIGHTENED AFTER A CYLINDRICAL MANUFACTURING PROCESS IS NOT ACCEPTABLE.

THE SCREEN SHALL BE FLAT AND REMOVABLE FROM THE PAN FOR REPLACEMENT AND OR MAINTENANCE.

THE SCREEN, PAN AND PIPE WILL BE SHIPPED COMPLETE WITH ALL FASTENERS REQUIRED FOR FIELD INSTALLATION. THE MANUFACTURER SHALL SUPPLY A MINIMUM OF ONE DAY OF FIELD ENGINEERING INSTALLATION ASSISTANCE.



EXAMPLE OF A PIPE-MOUNTED WEDGE WIDE SCREEN



COANDA FISH SCREEN
CROSS SECTION



EXAMPLE INSTALLATION



EXAMPLE INSTALLATION