

**RECOVERY PROGRAM  
FY 2016-2017 SCOPE OF WORK for:**

Recovery Program Project Number: C-29a

(Salvage of native fish from the Grand Valley Irrigation Company, Grand Valley Water Users, and Green River canals)

Reclamation Agreement number: R13PG40018

Reclamation Agreement term: June 3, 2013 – Sept. 30, 2017

Lead agency: U.S. Fish and Wildlife Service  
Colorado River Fishery Project – Grand Junction (CRFP-GJ)

Submitted by: Brendan Crowley, Fishery Technician  
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Category:

- Ongoing project
- Ongoing-revised project
- Requested new project
- Unsolicited proposal

Expected Funding Source:

- Annual funds
- Capital funds
- Other [*explain*]

I. Title of Proposal: **Salvage of Native Fish from Grand Valley Irrigation Company, Grand Valley Water Users, and Green River Canals.**

II. Relationship to RIPRAP:

Colorado River Action Plan: Main stem  
II.B.1.b. Screen Grand Valley Irrigation Company Canal.

Green River Action Plan:  
II.B.2. Screen Tusher Wash diversion to prevent endangered fish entrainment

III. Study Background/Rationale and Hypotheses:

A fish screen was constructed on the Grand Valley Irrigation Company (GVIC) irrigation canal in winter 2001 – 2002. However, for the first few years following construction, the screen was not operated for a full season. The GVIC fish screen is now fully operational. A fish screen was completed in the summer of 2005 for the Grand Valley Water Users (GVWU) Canal. It became fully operational in 2009. However, during events when debris overloads the screens

and water cannot pass through them, the irrigation companies have the option of either lifting the screens (GVIC) or using the bypass channel (GVWU). When this occurs, fish can pass downstream of the fish screen and underground pipe that returns them to the river. Hence, fish can swim down canal and ultimately become entrained in the canal when it is dewatered during the fall.

This SOW also includes FWS-Vernal's work to salvage endangered fish entrained into the Green River canal at Tusher Diversion. Details of this work are included in SOW 138.

IV. Study Goals, Objectives, End Product(s):

Collect native fish entrained in the GVIC, GVWU, and Green River canals. Return native fish to the Colorado or Green River, respectively.

V. Study Area: GVIC and GVWU irrigation canals, Grand Junction, Colorado, and Green River canal, Green River, UT.

VI. Study Methods/Approach:

The two main canals and major laterals that hold water after irrigation diversions are terminated will be sampled using a truck-mounted electrofishing system. Sampling will begin at 22 Road on each canal and continue eastwards toward the most upstream portion of the Grand Valley. Sampling will begin approximately one week after the canals have been shut off in the fall, allowing them to drain down to a water level that is accessible by the sampling crew. The sampling crew will travel the canal roads searching for pools of water that could still hold fish. When pools of water are found, crews will walk the canal using electrofishing probes and capture all fish possible. Native fish will be placed in a hatchery truck, transported to the Colorado River and released alive. Records of native species and numbers of native fishes collected will be maintained.

VII. Task Description and Schedule:

Description

Task 1. Sample GVIC and GVWU canals.

Task 2. Compile and summarize fish use data; prepare annual RIP report.

Task 3. Sample Green River Canal.

Schedule

Task 1. 11/2016; 11/2017; 11/2018; 11/2019; 11/2020

Task 2. 11/2016; 11/2017; 11/2018; 11/2019; 11/2020

Task 3. 11/2016; 11/2017; 11/2018; 11/2019; 11/2020

VIII. Deliverables, Due Dates, and Budget by Fiscal Year:

FY 2016

Deliverables: *Tasks 1 and 2*

FY 2016									
Labor	Title	# of employees	Hours	Reg. Rate	OT Hours	OT Rate			Total
	Project Leader GS-14	1	80	83.42	0	0			6673.6
	Administrative Officer GS-09	1	40	44.72	0	0			1788.8
	Fishery Biologist GS-11	1	80	49.36	0	0			3948.8
	Fishery Biologist GS-07	1	80	33.7	0	50.54			2696
	Crew leader Tech. GS-06	1	160	32.76	0	49.14			5241.6
	Biological Tech. GS-05	3	120	24.96	0	37.44			8985.6
<b>Labor Subtotal</b>									29334.4
Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration			Total
	Office Supplies	Computer Supplies and Peripherals							100
	Office Supplies	Ink Cartridges and paper							100
	Office Supplies	Cell, SAT, and Office phone service							200
	Field Equipment	GSA vehicle lease per month	3	each	364.97	1			1094.91
	Field Equipment	Mileage	3000	miles	0.33	1			990
	Field Equipment	PPE (e.g. chest waders, first aid)							800
	Field Equipment	*Misc. Field Supplies See Justification	1	see basis	1,000	1			1,000
<b>Equipment Total</b>									4,285
									<b>Grand Total</b>
<b>USFWS Grand Jct.</b>									33619

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\*Misc. Field Supplies

Exact use of the money in this line item will vary from year to year depending on what equipment needs to be maintained, repaired, or replaced, but use of these funds for a “typical” field season for one study would include the following:

Spark plugs for generators – 5 at \$7 each = \$35

Synthetic oil for generators - 5 quarts at \$7 each = \$35

Generator repair/tune-up - 5 hrs @ \$75/hr = \$375

Electrical Gloves - 3 pairs @ \$65/pair = \$195

Dura-Frame electrofishing dip nets – 2 @ \$300 each = \$600

Replace any missing NRS HD-brand tie-down straps:

Ten 2-ft straps @ \$4.20 each = \$42

Five 3-ft straps @ \$4.30 each = \$21.50

Ten 4-ft straps @ \$4.70 each = \$47

Five 6-ft straps @ \$5.05 each = \$25.25

Five 9-ft straps @ \$5.7 each = \$28.50

Five 12-ft straps @ \$6.15 each = \$30.75

Replace any missing D-style carabiners, each boat needs:

10 @ \$7.50 each = \$75

Mesh rig bag – 1 @ \$50 each = \$50

5-gallon plastic gasoline jerry cans – 5 @ \$20 each = \$100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtails, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.

FY 2017

Deliverables: *Tasks 1 and 2*

FY 2017									
	<b>Labor</b>	<b>Title</b>	<b># of employees</b>	<b>Hours</b>	<b>Reg. Rate</b>	<b>OT Hours</b>	<b>OT Rate</b>		<b>Total</b>
		Project Leader GS-14	1	80	85.92	0	0		6873.6
		Administrative Officer GS-09	1	40	46.06	0	0		1842.4
		Fishery Biologist GS-11	1	80	50.84	0	0		4067.2
		Fishery Biologist GS-07	1	80	34.71	0	52.06		2776.8
		Crew leader Tech. GS-06	1	160	33.74	0	50.62		5398.4
		Biological Tech. GS-05	3	120	25.7	0	38.55		9252
	<b>Labor Subtotal</b>								30210.4
	<b>Equipment &amp; Supplies</b>	<b>Category</b>	<b>Item</b>	<b>Quantity</b>	<b>Unit</b>	<b>Rate</b>	<b>Duration</b>		<b>Total</b>
		Office Supplies	Computer Supplies and Peripherals						100
		Office Supplies	Ink Cartridges and paper						100
		Office Supplies	Cell, SAT, and Office phone service						200
		Field Equipment	GSA vehicle lease per month	3	each	375.92	1		1127.76
		Field Equipment	Mileage	3000	miles	0.34	1		1020
		Field Equipment	PPE (e.g. chest waders, first aid)						800
		Field Equipment	*Misc. Field Supplies See Justification	1	see basis	1,000	1		1,000
	<b>Equipment Total</b>								4,348
									<b>Grand Total</b>
	<b>USFWS Grand Jct.</b>								34558

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Exact use of the money in this line item will vary from year to year depending on what equipment needs to be maintained, repaired, or replaced, but use of these funds for a “typical” field season for one study would include the following:

Spark plugs for generators – 5 at \$7 each = \$35

Synthetic oil for generators - 5 quarts at \$7 each = \$35

Generator repair/tune-up - 5 hrs @ \$75/hr = \$375

Electrical Gloves - 3 pairs @ \$65/pair = \$195

Dura-Frame electrofishing dip nets – 2 @ \$300 each = \$600

Replace any missing NRS HD-brand tie-down straps:

Ten 2-ft straps @ \$4.20 each = \$42

Five 3-ft straps @ \$4.30 each = \$21.50

Ten 4-ft straps @ \$4.70 each = \$47

Five 6-ft straps @ \$5.05 each = \$25.25

Five 9-ft straps @ \$5.7 each = \$28.50

Five 12-ft straps @ \$6.15 each = \$30.75

Replace any missing D-style carabiners, each boat needs:

10 @ \$7.50 each = \$75

Mesh rig bag – 1 @ \$50 each = \$50

5-gallon plastic gasoline jerry cans – 5 @ \$20 each = \$100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtails, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.

## OUTYEAR BUDGETS ARE ESTIMATES ONLY AND MAY NOT REPRESENT ACTUAL COSTS

FY 2018

Deliverables: *Tasks 1 and 2*

<b>FY 2018</b>									
	<b>Labor</b>	<b>Title</b>	<b># of employees</b>	<b>Hours</b>	<b>Reg. Rate</b>	<b>OT Hours</b>	<b>OT Rate</b>		<b>Total</b>
		Project Leader GS-14	1	80	88.5	0	0		7080
		Administrative Officer GS-09	1	40	47.44	0	0		1897.6
		Fishery Biologist GS-11	1	80	52.37	0	0		4189.6
		Fishery Biologist GS-07	1	80	35.75	0	53.62		2860
		Crew leader Tech. GS-06	1	160	34.76	0	52.13		5561.6
		Biological Tech. GS-05	3	120	26.48	0	39.72		9532.8
	<b>Labor Subtotal</b>								31121.6
	<b>Equipment &amp; Supplies</b>	<b>Category</b>	<b>Item</b>	<b>Quantity</b>	<b>Unit</b>	<b>Rate</b>	<b>Duration</b>		<b>Total</b>
		Office Supplies	Computer Supplies and Peripherals						100
		Office Supplies	Ink Cartridges and paper						100
		Office Supplies	Cell, SAT, and Office phone service						200
		Field Equipment	GSA vehicle lease per month	3	each	387.2	1		1161.6
		Field Equipment	Mileage	3000	miles	0.35	1		1050
		Field Equipment	PPE (e.g. chest waders, first aid)						800
		Field Equipment	*Misc. Field Supplies See Justification	1	see basis	1,000	1		1,000
	<b>Equipment Total</b>								4,412
									<b>Grand Total</b>
	<b>USFWS Grand Jct.</b>								35533

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Spark plugs for generators – 5 at \$7 each = \$35

Synthetic oil for generators - 5 quarts at \$7 each = \$35

Generator repair/tune-up - 5 hrs @ \$75/hr = \$375

Electrical Gloves - 3 pairs @ \$65/pair = \$195

Dura-Frame electrofishing dip nets – 2 @ \$300 each = \$600

Replace any missing NRS HD-brand tie-down straps:

Ten 2-ft straps @ \$4.20 each = \$42

Five 3-ft straps @ \$4.30 each = \$21.50

Ten 4-ft straps @ \$4.70 each = \$47

Five 6-ft straps @ \$5.05 each = \$25.25

Five 9-ft straps @ \$5.7 each = \$28.50

Five 12-ft straps @ \$6.15 each = \$30.75

Replace any missing D-style carabiners, each boat needs:

10 @ \$7.50 each = \$75

Mesh rig bag – 1 @ \$50 each = \$50

5-gallon plastic gasoline jerry cans – 5 @ \$20 each = \$100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtales, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.

FY 2019

Deliverables: *Tasks 1 and 2*

FY 2019									
	Labor	Title	# of employees	Hours	Reg. Rate	OT Hours	OT Rate		Total
		Project Leader GS-14		1	80	91.16	0	0	7292.8
		Administrative Officer GS-09		1	40	48.86	0	0	1954.4
		Fishery Biologist GS-11		1	80	53.94	0	0	4315.2
		Fishery Biologist GS-07		1	80	36.82	0	55.24	2945.6
		Crew leader Tech. GS-06		1	160	35.79	0	53.69	5726.4
		Biological Tech. GS-05		3	120	27.27	0	40.91	9817.2
	<b>Labor Subtotal</b>								32051.6
	Equipment & Category	Item	Quantity	Unit	Rate	Duration		Total	
	Office Supplies	Computer Supplies and Peripherals						100	
	Office Supplies	Ink Cartridges and paper						100	
	Office Supplies	Cell, SAT, and Office phone service						200	
	Field Equipment	GSA vehicle lease per month	3	each	398.82	1		1196.46	
	Field Equipment	Mileage	3000	miles	0.36	1		1080	
	Field Equipment	PPE (e.g. chest waders, first aid)						800	
	Field Equipment	*Misc. Field Supplies See Justification	1	see basis	1,000	1		1,000	
	<b>Equipment Total</b>								4,476
									<b>Grand Total</b>
	<b>USFWS Grand Jct.</b>								36528

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- Spark plugs for generators – 5 at \$7 each = \$35
- Synthetic oil for generators - 5 quarts at \$7 each = \$35
- Generator repair/tune-up - 5 hrs @ \$75/hr = \$375
- Electrical Gloves - 3 pairs @ \$65/pair = \$195
- Dura-Frame electrofishing dip nets – 2 @ \$300 each = \$600

Replace any missing NRS HD-brand tie-down straps:

- Ten 2-ft straps @ \$4.20 each = \$42
- Five 3-ft straps @ \$4.30 each = \$21.50
- Ten 4-ft straps @ \$4.70 each = \$47
- Five 6-ft straps @ \$5.05 each = \$25.25
- Five 9-ft straps @ \$5.7 each = \$28.50
- Five 12-ft straps @ \$6.15 each = \$30.75

Replace any missing D-style carabiners, each boat needs:

- 10 @ \$7.50 each = \$75
- Mesh rig bag – 1 @ \$50 each = \$50
- 5-gallon plastic gasoline jerry cans – 5 @ \$20 each = \$100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtales, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.

FY 2020

Deliverables: *Tasks 1 and 2*

FY 2020									
	Labor	Title	# of employees	Hours	Reg. Rate	OT Hours	OT Rate		Total
		Project Leader GS-14		1	80	93.29	0	0	7463.2
		Administrative Officer GS-09		1	40	50.33	0	0	2013.2
		Fishery Biologist GS-11		1	80	55.56	0	0	4444.8
		Fishery Biologist GS-07		1	80	37.92	0	56.88	3033.6
		Crew leader Tech. GS-06		1	160	36.86	0	55.29	5897.6
		Biological Tech. GS-05		3	120	28.09	0	42.14	10112.4
	<b>Labor Subtotal</b>								32964.8
	Equipment & Category	Item	Quantity	Unit	Rate	Duration		Total	
	Office Supplies	Computer Supplies and Peripherals						100	
	Office Supplies	Ink Cartridges and paper						100	
	Office Supplies	Cell, SAT, and Office phone service						200	
	Field Equipment	GSA vehicle lease per month	3	each	410.78	1		1232.34	
	Field Equipment	Mileage	3000	miles	0.37	1		1110	
	Field Equipment	PPE (e.g. chest waders, first aid)						800	
	Field Equipment	*Misc. Field Supplies See Justification	1	see basis	1,000	1		1,000	
	<b>Equipment Total</b>								4,542
									<b>Grand Total</b>
	<b>USFWS Grand Jct.</b>								37507

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- Synthetic oil for generators - 5 quarts at \$7 each = \$35
- Generator repair/tune-up - 5 hrs @ \$75/hr = \$375
- Electrical Gloves - 3 pairs @ \$65/pair = \$195
- Dura-Frame electrofishing dip nets – 2 @ \$300 each = \$600

Replace any missing NRS HD-brand tie-down straps:

- Ten 2-ft straps @ \$4.20 each = \$42
- Five 3-ft straps @ \$4.30 each = \$21.50
- Ten 4-ft straps @ \$4.70 each = \$47
- Five 6-ft straps @ \$5.05 each = \$25.25
- Five 9-ft straps @ \$5.7 each = \$28.50
- Five 12-ft straps @ \$6.15 each = \$30.75

Replace any missing D-style carabiners, each boat needs:

- 10 @ \$7.50 each = \$75
- Mesh rig bag – 1 @ \$50 each = \$50
- 5-gallon plastic gasoline jerry cans – 5 @ \$20 each = \$100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtails, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.

IX. Budget Summary:

FY2016

USFWS-GJ \$ 33,619

USFWS-Vernal \$ 10,088

FY2017

USFWS-GJ \$ 34,558

USFWS-Vernal \$ 10,557

2016-2017 Total = \$ 88,822

Estimated Budget Summary for Fiscal Years 2018-2020:

FY2018

USFWS-GJ \$ 35,533

USFWS-Vernal \$ 11,045

FY2019

USFWS-GJ \$ 36,528

USFWS-Vernal \$ 11,269

FY2020

USFWS-GJ \$ 37,507

USFWS-Vernal \$ 11,496

2018-2020 Total = \$143,378

5-Year Total = \$232,200

X. Reviewers: Program Staff and Biology Committee

XI. References: NA