

RECOVERY PROGRAM
FY 2016-2017 SCOPE OF WORK for:
(Passage & O&M: Redlands Diversion Dam)

Recovery Program Project Number: C-4bRED

Reclamation Agreement number: R13PG40018
Reclamation Agreement term: June 3, 2013 – Sept. 30, 2017

Note: Recovery Program FY16-17 scopes of work are drafted in May 2015. They often are revised before final Program approval and may subsequently be revised again in response to changing Program needs. Program participants also recognize the need and allow for some flexibility in scopes of work to accommodate new information (especially in nonnative fish management projects) and changing hydrological conditions.

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

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Date Last Modified: 6/16/2015 3:10:00 PM *[This field is set to update automatically.]*

<u>Category:</u>	<u>Expected Funding Source:</u>
<input checked="" type="checkbox"/> Ongoing project	<input checked="" type="checkbox"/> Annual funds
<input type="checkbox"/> Ongoing-revised project	<input type="checkbox"/> Capital funds
<input type="checkbox"/> Requested new project	<input type="checkbox"/> Other <i>[explain]</i>
<input type="checkbox"/> Unsolicited proposal	

I. Title of Proposal: **Annual Operation and Maintenance of the Fish Passage Structure at Redlands Diversion Dam on the Gunnison River.**

II. Relationship to RIPRAP:

Colorado River Action Plan: Gunnison River
II.B.1. Restore passage at Redlands.
II.B.1.c. Operate and maintain fish ladder.

Study Background/Rationale and Hypotheses:

General

The fish passage at Redlands Power and Water Diversion Dam, on the Lower Gunnison River, was completed by 1996. It was designed for selective fish passage, with a fish trap at the upstream terminus of the ladder. Fishes are collected, counted and sorted (non-native fish are

removed, native fish and salmonids are allowed to make passage upstream), endangered fish (Bonytail [*Gila elegans*], Colorado Pikeminnow [*Ptychocheilus lucius*], Humpback Chub [*Gila cypha*], Razorback Sucker [*Xyrauchen texanus*]) and Roundtail (*Gila robusta*) are checked for a PIT tag, and endangered fish without a PIT tag have one implanted.

Project Results to Date

Thirteen thousand three hundred thirty one fish were counted in the trap of the Redlands Diversion Dam fish-way between 17 April and 17 October 2014. This annual total is the second highest (highest total was in 2013 with 16,687 fish counted) in nineteen years of operation. Native fishes comprised 68% of the total number of fishes collected in 2014, compared to 94% in 1996 and 1997, 93% in 1998 and 1999, 92% in 2000, 83% in 2001 and 2013, 66% in 2002, 68% in 2003, 77% in 2004, 74% in 2005, 85% in 2006, 83% in 2007, 76% in 2008, 86% in 2009, 87% in 2010, and 81% in 2011. From 2001–2003, and again from 2012–2014, there was a significant downward trend in the relative percentage of native fishes compared to the first 5 years that the ladder was operated and monitored when the relative percentage of native fishes was somewhat constant at about 92% per year. The total number of all fishes collected in the 19-year operation of the fish trap is 166,606. Endangered fish totals from 1996 to 2014 include 141 Colorado pikeminnow, 31 Razorback Sucker, 13 Bonytail, and 1 Humpback Chub. Overall, native fish still continue to comprise about 83% of all fish processed during this 19-year period (Francis and Ryden 2014).

A final report was completed in July 2001 and distributed in late-August 2001. This report evaluated the use of the fishway by all fishes, with particular reference to the native, listed fish, Colorado pikeminnow, from 1996-2000 (Burdick 2001).

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

Continue to collect data on the number of large-bodied fish, different fish species, and seasonal distribution of fish that use the Redlands passageway. Summarize the annual results of passageway fish use in the annual RIP report.

IV. Study Area: Gunnison River: river mile 3.0.

Study Methods/Approach: FY 2016-2017

The fish trap at Redlands fish passageway may be opened by mid-April and closed in mid-October. The trap is designed to collect large-bodied fish. Depending upon manpower, the fish trap at the passageway will be run at least every other day, Monday through Friday, and where possible every weekday. All fish will be sorted by species and counted. Vital statistics including length, weight, and PIT-tag IDs will be collected for all listed species found in the trap. Other introduced species (e. g., largemouth bass, smallmouth bass, green sunfish, black bullhead, gizzard shad, white sucker, and carp) collected will be sacrificed and disposed of in a manner that will not constitute a nuisance or as otherwise directed by Colorado Parks and Wildlife (CPW). Channel catfish will be returned downstream of the fish ladder alive.

In addition to collecting and counting fish in the fish trap, FWS personnel will continue to be responsible for periodic cleaning of river borne sediment in the fish trap and routine cleaning of surface and submerged trash, debris, and river borne algae from the trash grates and bar screens in the fore bay of the passageway. Other tasks include: regulating river flows through the fish ladder and attraction flow to remove sediment from the fish-way, noxious weed control, and removing all stranded fish in the fish trap and dewatered portion of the fish ladder prior to winterizing. FWS personnel will also be responsible for opening and winterizing the passageway.

V. Task Description and Schedule:

Description

Task 1. Routine O & M of Redlands fish ladder and fish trap which includes monitoring the fish trap, sorting, examining, and enumerating all fish in addition to removing and disposing of all non-native fish; removing sediment from the trap and cleaning trash and debris from the trash racks, bar screens, fish trap, and fish-way entrance; regulating river flows through the fish ladder and attraction flow to remove sediment from the fish-way, noxious weed control, and removing all stranded fish in the fish trap and dewatered portion of the fish ladder prior to winterizing

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

Schedule

Task 1. 4/2016 – 10/2016; 4/2017 – 10/2017

Task 2. 10/2016 – 11/2016; 10/2017 – 11/2017

VI. 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	100	83.42	0	0	8342
	Administrative Officer GS-09		1	100	44.72	0	0	4472
	Fishery Biologist GS-11		1	480	49.36	0	0	23692.8
	Crew leader Tech. GS-06		1	120	32.76	0	49.14	3931.2
	Biological Tech. GS-05		2	680	24.96	0	37.44	33945.6
Labor Subtotal								74383.6
Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration		Total
	Office Supplies	Computer Supplies and Peripherals						50
	Office Supplies	Ink Cartridges and paper						50
	Office Supplies	Cell, SAT, and Office phone service						100
	Field Equipment	GSA vehicle lease per month	1	each	364.97	6		2189.82
	Field Equipment	Mileage	2800	miles	0.33	1		924
	Field Equipment	PPE (e.g. rubber boots, first aid)						200
	Field Equipment	Fish disposal at county landfill						200
	Field Equipment	Ground Maint. (e.g. sprayer, round-up)						200
	Field Equipment	Nets, Rakes, Tools						200
	Annual Electrical	lights, pump, water data logging equip.						1442
Equipment Total								5,556
								Grand Total
USFWS Grand Jct.								79939

FY 2017

Deliverables: *Tasks 1 and 2*

FY 2017								
Labor	Title	# of employees	Hours	Reg. Rate	OT Hours	OT Rate		Total
	Project Leader GS-14		1	100	85.92	0	0	8592
	Administrative Officer GS-09		1	100	46.06	0	0	4606
	Fishery Biologist GS-11		1	480	50.84	0	0	24403.2
	Crew leader Tech. GS-06		1	120	33.74	0	50.62	4048.8
	Biological Tech. GS-05		2	680	25.7	0	38.55	34952
Labor Subtotal								76602
Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration		Total
	Office Supplies	Computer Supplies and Peripherals						50
	Office Supplies	Ink Cartridges and paper						50
	Office Supplies	Cell, SAT, and Office phone service						100
	Field Equipment	GSA vehicle lease per month	1	each	375.92	6		2255.52
	Field Equipment	Mileage	2800	miles	0.34	1		952
	Field Equipment	PPE (e.g. rubber boots, first aid)						200
	Field Equipment	Fish disposal at county landfill						200
	Field Equipment	Ground Maint. (e.g. sprayer, round-up)						200
	Field Equipment	Nets, Rakes, Tools						200
	Annual Electrical	lights, pump, water data logging equip.						1442
Equipment Total								5,650
								Grand Total
USFWS Grand Jct.								82252

Out-year budgets for Redlands Fish Ladder Operation: 2018-2020

**THESE BUDGETS ARE ESTIMATES ONLY AND MAY NOT REPRESENT
ACTUAL COSTS**

FY 2018

Deliverables: *Tasks 1 and 2*

FY 2018									
	Labor	Title	# of employees	Hours	Reg. Rate	OT Hours	OT Rate		Total
		Project Leader GS-14		1	100	88.5	0	0	8850
		Administrative Officer GS-09		1	100	47.44	0	0	4744
		Fishery Biologist GS-11		1	480	52.37	0	0	25137.6
		Crew leader Tech. GS-06		1	120	34.76	0	52.13	4171.2
		Biological Tech. GS-05		2	680	26.48	0	39.72	36012.8
	Labor Subtotal								78915.6
	Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration		Total
		Office Supplies	Computer Supplies and Peripherals						50
		Office Supplies	Ink Cartridges and paper						50
		Office Supplies	Cell, SAT, and Office phone service						100
		Field Equipment	GSA vehicle lease per month	1	each	387.2	6		2323.2
		Field Equipment	Mileage	2800	miles	0.35	1		980
		Field Equipment	PPE (e.g. rubber boots, first aid)						200
		Field Equipment	Fish disposal at county landfill						200
		Field Equipment	Ground Maint. (e.g. sprayer, round-up)						200
		Field Equipment	Nets, Rakes, Tools						200
		Annual Electrical	lights, pump, water data logging equip.						1442
	Equipment Total								5,745
									Grand Total
	USFWS Grand Jct.								84661

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	100	91.16	0	0	9116
		Administrative Officer GS-09		1	100	48.86	0	0	4886
		Fishery Biologist GS-11		1	480	53.94	0	0	25891.2
		Crew leader Tech. GS-06		1	120	35.8	0	53.7	4296
		Biological Tech. GS-05		2	680	27.27	0	40.91	37087.2
	Labor Subtotal								81276.4
	Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration		Total
		Office Supplies	Computer Supplies and Peripherals						50
		Office Supplies	Ink Cartridges and paper						50
		Office Supplies	Cell, SAT, and Office phone service						100
		Field Equipment	GSA vehicle lease per month	1	each	398.82	6		2392.92
		Field Equipment	Mileage	2800	miles	0.36	1		1008
		Field Equipment	PPE (e.g. rubber boots, first aid)						200
		Field Equipment	Fish disposal at county landfill						200
		Field Equipment	Ground Maint. (e.g. sprayer, round-up)						200
		Field Equipment	Nets, Rakes, Tools						200
		Annual Electrical	lights, pump, water data logging equip.						1442
	Equipment Total								5,843
									Grand Total
	USFWS Grand Jct.								87119

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	100	93.89	0	0	9389
		Administrative Officer GS-09		1	100	50.33	0	0	5033
		Fishery Biologist GS-11		1	480	55.56	0	0	26668.8
		Crew leader Tech. GS-06		1	120	36.87	0	55.3	4424.4
		Biological Tech. GS-05		2	680	28.09	0	42.14	38202.4
	Labor Subtotal								83717.6
	Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration		Total
		Office Supplies	Computer Supplies and Peripherals						50
		Office Supplies	Ink Cartridges and paper						50
		Office Supplies	Cell, SAT, and Office phone service						100
		Field Equipment	GSA vehicle lease per month		1 each	410.78	6		2464.68
		Field Equipment	Mileage		2800 miles		0.37	1	1036
		Field Equipment	PPE (e.g. rubber boots, first aid)						200
		Field Equipment	Fish disposal at county landfill						200
		Field Equipment	Ground Maint. (e.g. sprayer, round-up)						200
		Field Equipment	Nets, Rakes, Tools						200
		Annual Electrical	lights, pump, water data logging equip.						1442
	Equipment Total								5,943
									Grand Total
	USFWS Grand Jct.								89660

VII. Budget Summary:

FY2016
 USFWS-GJ \$79,939

FY2017
 USFWS-GJ \$82,252

2016-2017 Total = \$162,191

Estimated Budget Summary for Fiscal Years 2018-2020:

FY2018
 USFWS-GJ \$84,661

FY2019
 USFWS-GJ \$87,119

FY2020
 USFWS-GJ \$89,660

2018-2020 Total = \$261,440

5-Year Total = \$423,631

VIII. Reviewers: Program Staff and Biology Committee

IX. References:

Burdick, B. D. 2001. Five-year evaluation of fish passage at the Redlands Diversion Dam on the Gunnison River near Grand Junction, Colorado: 1996-2000. Recovery Program Project Number CAP-4b. Final report prepared for the Recovery Implementation Program for Endangered Fishes in the Upper Colorado River Basin. U. S. Fish and Wildlife Service, Grand Junction, Colorado. 57 pp. + appendices.

Francis, T.A. and D.W. Ryden 2014. Evaluation of the effectiveness of the fish passage structure at the Redlands Dam. Annual report prepared for the Recovery Implementation Program for the Endangered Fishes of the Upper Colorado River Basin. Recovery Program Project Number C-4b-RED. U. S. Fish and Wildlife Service, Colorado River Fishery Project, Grand Junction, Colorado.