

RECOVERY PROGRAM
FY 2018-2019 SCOPE OF WORK for:
(Passage & O&M: Redlands Diversion Dam)

Recovery Program Project Number: C-4bRED

Reclamation Agreement number: R15PG00083
Reclamation Agreement term: October 1, 2014 – Sept. 30, 2019

Note: Recovery Program FY18-19 scopes of work are drafted in May 2017. 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: U.S. Fish and Wildlife Service
Grand Junction Fish and Wildlife Conservation Office
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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: **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.

III. 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. Beginning in 2015, all Colorado Pikeminnow are translocated upstream to either Escalante or Delta along with other endangered fish collected the same day.

Project Results to Date

The Redlands Fish Passage was first operational in 1996 and the total number of fishes processed through the end of 2016 is 184,428. Native fishes comprised 73% of the total number of fishes collected in 2015 and 2016, 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 and 2014, 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 2012–2016, 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. Endangered fish totals from 1996 to 2016 include 180 Colorado pikeminnow, 35 Razorback Sucker, 90 Bonytail, and 1 Humpback Chub. Overall, native fish still continue to comprise about 82% of all fish processed during this 21-year period (Francis and Ryden 2016).

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).

IV. 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.

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

Study Methods/Approach: FY 2018-2019

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. All Colorado Pikeminnow will be translocated upstream to either Escalante or Delta along with other endangered fish collected the same day. 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.

VI. 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. 4/2018 – 10/2018; 4/2019 – 10/2019

Task 2. 10/2018 – 11/2018; 10/2019 – 11/2019

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

FY 2018

Deliverables: *Tasks 1 and 2*

Labor	Title	# of employees	Hours	Reg. Rate	OT		Total	
					Hours	OT Rate		
	Project Leader GS-14		1	100	80.95	0	0	8095
	Administrative Officer GS-09		1	100	42.14	0	0	4214
	Fishery Biologist GS-11		1	480	52.8	0	0	25344
	Crew leader Tech. GS-07		1	120	31.82	0	47.73	3818.4
	Crew leader Tech. GS-06		1	120	27.2	0	40.8	3264
	Biological Tech. GS-05		2	680	22.94	0	34.41	31198.4
Labor Subtotal								75933.8
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	365	6	2190	
	Field Equipment	Mileage	4000	miles	0.42	1	1680	
	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							6,312	
							Grand Total	
USFWS Grand Jct.							82246	

FY 2019

Deliverables: *Tasks 1 and 2*

Labor	Title	# of employees			OT		Total	
			Hours	Reg. Rate	Hours	OT Rate		
	Project Leader GS-14		1	100	82.57	0	0	8257
	Administrative Officer GS-09		1	100	42.98	0	0	4298
	Fishery Biologist GS-11		1	480	53.84	0	0	25843.2
	Crew leader Tech. GS-07		1	120	32.46	0	48.69	3895.2
	Crew leader Tech. GS-06		1	120	27.74	0	41.62	3328.8
	Biological Tech. GS-05		2	680	23.4	0	35.1	31824
Labor Subtotal								77446.2
Equipment & Supplies	Category	Item			Rate	Duration	Total	
			Quantity	Unit				
	Office Supplies	Computer Supplies and Peripherals					51	
	Office Supplies	Ink Cartridges and paper					51	
	Office Supplies	Cell, SAT, and Office phone service					102	
	Field Equipment	GSA vehicle lease per month	1	each	372.3	6	2233.8	
	Field Equipment	Mileage	4000	miles	0.43	1	1720	
	Field Equipment	PPE (e.g. rubber boots, first aid)					204	
	Field Equipment	Fish disposal at county landfill					204	
	Field Equipment	Ground Maint. (e.g. sprayer, round-up)					204	
	Field Equipment	Nets, Rakes, Tools					204	
	Annual Electrical	lights, pump, water data logging equip.					1470.84	
Equipment Total							6,445	
							Grand Total	
USFWS Grand Jct.							83891	

Out-year budgets for Redlands Fish Ladder Operation: 2020-2022

THESE BUDGETS ARE ESTIMATES ONLY AND MAY NOT REPRESENT ACTUAL COSTS

FY 2020

Deliverables: *Tasks 1 and 2*

Labor	Title	# of employees			OT		Total	
			Hours	Reg. Rate	Hours	OT Rate		
	Project Leader GS-14		1	100	84.22	0	0	8422
	Administrative Officer GS-09		1	100	43.84	0	0	4384
	Fishery Biologist GS-11		1	480	54.92	0	0	26361.6
	Crew leader Tech. GS-07		1	120	33.11	0	49.66	3973.2
	Crew leader Tech. GS-06		1	120	28.3	0	42.45	3396
	Biological Tech. GS-05		2	680	23.87	0	35.8	32463.2
Labor Subtotal								79000
Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration	Total	
	Office Supplies	Computer Supplies and Peripherals						52
	Office Supplies	Ink Cartridges and paper						52
	Office Supplies	Cell, SAT, and Office phone service						104
	Field Equipment	GSA vehicle lease per month	1	each	379.75	6		2278.5
	Field Equipment	Mileage	4000	miles	0.44	1		1760
	Field Equipment	PPE (e.g. rubber boots, first aid)						208
	Field Equipment	Fish disposal at county landfill						208
	Field Equipment	Ground Maint. (e.g. sprayer, round-up)						208
	Field Equipment	Nets, Rakes, Tools						208
	Annual Electrical	lights, pump, water data logging equip.						1500.26
Equipment Total								6,579
								Grand Total
USFWS Grand Jct.								85579

FY 2021

Deliverables: *Tasks 1 and 2*

Labor	Title	# of employees			OT		Total	
			Hours	Reg. Rate	Hours	OT Rate		
	Project Leader GS-14		1	100	85.9	0	0	8590
	Administrative Officer GS-09		1	100	44.72	0	0	4472
	Fishery Biologist GS-11		1	480	56.02	0	0	26889.6
	Crew leader Tech. GS-07		1	120	33.77	0	50.65	4052.4
	Crew leader Tech. GS-06		1	120	28.87	0	43.3	3464.4
	Biological Tech. GS-05		2	680	24.35	0	36.52	33116
Labor Subtotal								80584.4
Equipment & Supplies	Category	Item			Rate	Duration	Total	
			Quantity	Unit				
	Office Supplies	Computer Supplies and Peripherals					53	
	Office Supplies	Ink Cartridges and paper					53	
	Office Supplies	Cell, SAT, and Office phone service					106	
	Field Equipment	GSA vehicle lease per month	1	each	387.35	6	2324.1	
	Field Equipment	Mileage	4000	miles	0.45	1	1800	
	Field Equipment	PPE (e.g. rubber boots, first aid)					212	
	Field Equipment	Fish disposal at county landfill					212	
	Field Equipment	Ground Maint. (e.g. sprayer, round-up)					212	
	Field Equipment	Nets, Rakes, Tools					212	
	Annual Electrical	lights, pump, water data logging equip.					1530.27	
Equipment Total							6,714	
							Grand Total	
USFWS Grand Jct.							87299	

FY 2022

Deliverables: *Tasks 1 and 2*

Labor	Title	# of employees			OT		Total	
			Hours	Reg. Rate	Hours	OT Rate		
	Project Leader GS-14		1	100	87.62	0	0	8762
	Administrative Officer GS-09		1	100	45.61	0	0	4561
	Fishery Biologist GS-11		1	480	57.14	0	0	27427.2
	Crew leader Tech. GS-07		1	120	34.45	0	51.66	4134
	Crew leader Tech. GS-06		1	120	29.45	0	44.17	3534
	Biological Tech. GS-05		2	680	24.84	0	37.25	33782.4
Labor Subtotal								82200.6
Equipment & Supplies	Category	Item	Quantity	Unit	Rate	Duration	Total	
	Office Supplies	Computer Supplies and Peripherals					54	
	Office Supplies	Ink Cartridges and paper					54	
	Office Supplies	Cell, SAT, and Office phone service					108	
	Field Equipment	GSA vehicle lease per month	1	each	395.1	6	2370.6	
	Field Equipment	Mileage	4000	miles	0.46	1	1840	
	Field Equipment	PPE (e.g. rubber boots, first aid)					216	
	Field Equipment	Fish disposal at county landfill					216	
	Field Equipment	Ground Maint. (e.g. sprayer, round-up)					216	
	Field Equipment	Nets, Rakes, Tools					216	
	Annual Electrical	lights, pump, water data logging equip.					1560.88	
Equipment Total							6,851	
							Grand Total	
USFWS Grand Jct.								89052

VIII. Budget Summary:

FY2018
USFWS-GJ \$82,246

FY2019
USFWS-GJ \$83,891

2018-2019 Total = \$166,137

Estimated Budget Summary for Fiscal Years 2020-2022:

FY2020
USFWS-GJ \$85,579

FY2021
USFWS-GJ \$87,299

FY2022
USFWS-GJ \$89,052

2018-2020 Total = \$261,930

5-Year Total = \$428,067

IX. Reviewers: Program Staff and Biology Committee

X. 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 2016. Annual Operation and Maintenance of the Fish Passage Structure at the Redlands Diversion Dam on the Gunnison River. Annual report prepared for the Upper Colorado River Endangered Fish Recovery Program. Recovery Program Project Number C-4b-RED. U. S. Fish and Wildlife Service, Grand Junction Fish and Wildlife Conservation Office, Grand Junction, Colorado.