

COLORADO RIVER RECOVERY PROGRAM
FY-2012-2013 PROPOSED SCOPE OF WORK for:
(Passage & O&M: Redlands Diversion Dam)

Project No.: C-4b-RED

Lead Agency: Fish and Wildlife Service
Colorado River Fishery Project

Submitted by: Bob D. Burdick, Fishery Biologist (LEAD)
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Date: 9 March 2011
Revised: 14 April 2011

Category:

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

Expected Funding Source:

- Annual funds
- Capital funds
- Other (explain)
- O&M

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:

Project Results to Date

The Redlands Dam fish passageway, constructed on the Gunnison River, a major tributary of the Colorado River, near Grand Junction, Colorado, was completed in June 1996. The first of its kind in the Upper Colorado River Basin, it's specific purpose was to provide upstream passage for two Federally listed fishes, the Colorado pikeminnow and razorback sucker. It was also designed for selective passage. That is, it was to preclude upstream movement of nonnative fish.

Through 2010, 108 sub-adult and adult Colorado pikeminnow, 27 razorback sucker, and one bonytail have ascended the fish passageway. During 2010, the first wild humpback chub was collected in the fish trap. This included 92 individual pikeminnow, 12 single repeat passages, and two double repeat passages. Colorado pikeminnow have used the passageway almost exclusively in August (51) and July (50). Three pikeminnow have been found in the fish trap in late-June and three in September. One pikeminnow was collected in May. Unfortunately, 2008 marked the first year in the fifteen years since the fish trap had been operated that a Colorado pikeminnow was not found in the trap. Twenty-seven adult razorback sucker, all domestic-reared fish that were previously stocked, have used the passageway. Fifteen razorback sucker have ascended the fish ladder in August, 7 in July, 2 September, and 1 fish each in April, May, and June.

About 116,000 fish consisting of 24 different fish species and hybrids (6 native, 15 nonnative, and three catostomid hybrids) have been collected and counted during the first 15 years of operation (Burdick 2010). Native fishes consistently comprised about 93% of the total fish catch for each of the first five years. However, that percentage declined to 84 % native fish over the 15 years data have been collected.

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:

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.

VI. Study Methods/Approach

FY 2012; FY 2013

For FY2012 the Redlands fish passageway will be operated from about 15 April through about 15 October.

However, in FY2013, the fish passageway will be operated differently from past years. The fish trap at Redlands fish passageway may be opened two weeks later than the routine April 15 opener and closed at least two weeks earlier in mid-October. This will be done in order to remain within FY2010 budget limits set by the Recovery Program. To accomplish this, the salaries for the GS-5 Bio Techs (2) had to be reduced by 20 hrs

each (40 hrs total). This will also probably result in some operational changes within the 6-month monitoring period. Moreover, with the uncertainty of future fuel costs operation of the fish trap at the Redlands facility may also result in additional reduced visits on an annual basis. For the most part, daily monitoring of the fish trap will be continued, especially during the months (mid-June through August) when the greatest likelihood of use by Colorado pikeminnow and razorback sucker might occur. This premise is based on the 15 years of historical data documenting the seasonal use by these two fishes at the Redlands fish passageway on the Lower Gunnison River.

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 continued to be collected for all listed species found in the trap. Other introduced species (e. g., largemouth bass, smallmouth bass, green sunfish, black bullhead, white sucker, carp) collected will be sacrificed and disposed of in a manner that will not constitute a nuisance or as otherwise directed by CDOW. 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 forebay of the passageway. Other tasks include: regulating river flows through the fish ladder and attraction flow to remove sediment from the fishway, 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.

VII. 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 fishway entrance; regulating river flows through the fish ladder and attraction flow to remove sediment from the fishway, 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, computerize, and summarize fish use data; prepare annual RIP report.

Schedule

Task 1. 4/2012 – 10/2012; 4/2013 – 10/2013

Task 2. 10/2012 – 11/2012; 10/2013 – 11/2013: (report on 2012 & 2013 passageway results)

VIII. FY-2012 Work (year 3 of multi-year study)

Deliverables/Due Dates:

Annual Report due: 11/2012

Budget (salary + benefits; actual salary rates w/ benefits provided by CRFP Administrative Officer used for labor; funding levels set by RP office)

Tasks 1 & 2. Routine O & M of the fish passageway and fish traps at Redlands Diversion Dam (6 months): monitor fish trap; sort, examine, and enumerate all fish, remove non native fish; compile, computerize, and summarize fish use data; prepare and submit annual RIP report

1. Labor (salary and benefits)(salaries rounded to the nearest dollar)		
Project Leader (1-GS-14@ \$ 74.16/hr)	36 hrs	\$ 2,670
Asst. Project Leader (1-GS-13@ \$ 61.38/hr)	84 hrs	\$ 5,156
Fish Biologist (1-GS-12 @ \$ 49.84/hr)	480 hrs	\$ 23,923
Admin. Officer (GS-9, @ \$ 39.63/hr)	113 hrs	\$ 4,478
Bio Tech (2-GS-5 @ \$ 17.45/hr)	700 hrs ea.	\$ 24,430
	Subtotal	\$ 60,657
2. Travel		
		\$ 0
	Subtotal	\$ 0
3. Equipment		
a) Vehicles: GSA-lease (rate= \$334/month; 0.30/mile)		
Number of vehicles: 1		
Lease: \$ 334/month X 6 months =	\$ 2,004	\$ 2,004
Mileage: 28/miles round trip/day X 135 days of		
annual operation=3,780 miles X 0.30/mile=	\$ 1,134	\$ 1,134
b) Dip net bags		\$ 187
c) PPE (rubber boots, gloves, 1 st aid supplies)		\$ 350
d) Rope		\$ 50
e) Rakes for trash grates (debris removal)		\$ 200
f) Herbicide spray for noxious weed control/maintenance		\$ 200
g) Fish Disposal @ Mesa County Landfill		\$ 180
h) Office supplies/paper, telephones, copy machine		\$ 250
	Subtotal	\$ 4,555
4. Other		
a) Annual Electrical Costs (EXCEL Energy)		
(night lights, sump pump, water data logging		
equipment)		\$ 1,400

b) Operation and Maintenance (@ Redlands)		
Electric Drill Repair (drill used to run slide gates (costs to be covered by O & M agreement w/ Redlands Water & Power Co.)		\$ 0
c) Unplanned and unpredictable expenses related to repairs/materials due to vandalism (chain-link perimeter fence repair, safety chains)(costs to be covered by O & M agreement w/Redlands Water & Power Co.)		\$ 0
	Subtotal	\$ 1,400

FY2012 All Tasks Total \$ 66,612

FY-2013 Work (year 4 of multi-year study)

Deliverables/Due Dates:

Annual Report due: 11/2013

Budget (salary + benefits; actual salary rates w/ benefits provided by CRFP Administrative Officer used for labor; funding levels set by RP office)

Tasks 1 & 2. Routine O & M of the fish passageway and fish traps at Redlands Diversion Dam (6 months): monitor fish trap; sort, examine, and enumerate all fish, remove non native fish; compile, computerize, and summarize fish use data; prepare and submit annual RIP report

1. Labor (salary and benefits)(salaries rounded to the nearest dollar)		
Project Leader (1-GS-14@ \$ 76.34/hr)	36 hrs	\$ 2,748
Asst. Project Leader (1-GS-13@ \$ 65.05/hr)	84 hrs	\$ 5,464
Fish Biologist (1-GS-12 @ \$ 51.29/hr)	480 hrs	\$ 24,619
Admin. Officer (GS-9, @ \$ 40.78/hr)	113 hrs	\$ 4,608
Bio Tech (2-GS-5 @ \$ 17.95/hr)	680 hrs ea.	\$ 24,412
	Subtotal	\$ 61,851
2. Travel		\$ 0
	Subtotal	\$ 0
3. Equipment		
a) Vehicles: GSA-lease (rate= \$334/month; 0.30/mile)		
Number of vehicles: 1		
Lease: \$ 334/month X 6 months =\$ 2,004		\$ 2,004
Mileage: 28/miles round trip/day X 100 days of annual operation=2,800 miles X 0.30/mile=\$ 840		\$ 840
b) Herbicide spray for noxious weed control/maintenance		\$ 150
c) Fish Disposal @ Mesa County Landfill		\$ 167
d) Office supplies/paper, telephones, copy machine		\$ 200
	Subtotal	\$ 3,361

4. Other		
a) Annual Electrical Costs (EXCEL Energy) (night lights, sump pump, water data logging equipment)		\$ 1,400
b) Operation and Maintenance (@ Redlands) Electric Drill Repair (drill used to run slide gates (costs to be covered by O & M agreement w/ Redlands Water & Power Co.)		\$ 0
c) Unplanned and unpredictable expenses related to repairs/materials due to vandalism (chain-link perimeter fence repair, safety chains)(costs to be covered by O & M agreement w/Redlands Water & Power Co.)		<u>\$ 0</u>
	Subtotal	\$ 1,400
	FY2013 All Tasks Total	\$ 66,612

IX. Budget Summary

FY-2012	\$ 66,612
FY-2013	\$ 66,612
Total:	\$ 133,224

X. Reviewers: N/A

XI. 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.

Burdick, B. D. 2010. 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.

Prepared and compiled by: Bob D. Burdick, 9 March 2011
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