

COLORADO RIVER RECOVERY PROGRAM
FY-2008-2009 PROPOSED SCOPE OF WORK for:
(Passage O&M: Grand Valley Project)

Project No.: C-4b-GVP

Lead Agency: Fish and Wildlife Service
Colorado River Fishery Project
Submitted by: Bob D. Burdick, Fishery Biologist (lead)
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Date: 20 April 2007

<u>Category:</u>	<u>Expected Funding Source:</u>
<input type="checkbox"/> Ongoing project	<input type="checkbox"/> Annual funds
<input checked="" type="checkbox"/> Ongoing-revised project	<input type="checkbox"/> Capital funds
<input type="checkbox"/> Requested new project	<input type="checkbox"/> Other (explain)
<input type="checkbox"/> Unsolicited proposal	<input checked="" type="checkbox"/> O&M

I. Title of Proposal: **Annual operation and maintenance of the fish passage structure at the Government Highline Diversion Dam on the Upper Colorado River**

II. Relationship to RIPRAP:

Colorado River Action Plan: Mainstem

II.B.3. Restore fish passage at Government Highline Dam (Grand Valley Project)

II.B.3.a.(3) Operate and maintain fish ladder.

II.B.3.a.(4) Monitor and evaluate success.

III. Study Background/Rationale and Hypotheses:

The fish passage at Government Highline Diversion Dam on the Upper Colorado River at the lower end of Debeque Canyon was scheduled to be operational 1 August 2004. It also was designed for selective fish passage. Although the passage was completed in August 2004, it was not operated in 2004. In both 2005 and 2006, it was operated only on a trial basis.

IV. Study Goals, Objectives, End Product:

Operate the fish passage for the entire season from early-April through the first of October. Collect data on the number of large-bodied fish, different fish species, and seasonal distribution of fish that use this passageway. Summarize the annual results of passageway fish use in the annual RIP report.

V. Study Area

Colorado River: river mile 193.7.

VI. Study Methods/Approach

2005 Results

The fishway was operated on a trial basis for 6 days each in mid-June and late-September. In June, 2,527 fish were processed in the fish trap that included one razorback sucker and one humpback chub. In September, 2,111 fish were processed that included two humpback chub.

2006 Results

During 2006 the fish passageway was operated on an experimental basis. Operations consisted of 10 days per month for a total of 5 months (late-April through late-September). Similar to the Redlands fishway, the passageway at the Grand Valley Project has a fish trap that requires workers to remove and sort fish. The trap is designed to collect large-bodied fish. Depending upon manpower, the fish trap at the passageway at each site was run at least every other day, Monday through Friday, and where possible every weekday. All fish were be sorted by species and counted. Vital statistics including length, weight, and PIT-tag ID's were collected for all listed species found in the trap. No endangered fish were caught during 2006 in the fish trap. A total of 11,978 fish were processed in the fish trap; 90% of these were native fishes.

In addition to collecting and counting fish in the fish trap, FWS personnel were 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. FWS personnel were also responsible for opening and winterizing the passageway.

2007 Plans

Fish passage at Price-Stubb Dam 5.4 miles downstream is now planned to be completed sometime in the spring of 2008. The fish passage at Government Highline has now been operated on a experimental trial basis for 2 years, 2005 and 2006. Most of the Abugs@, mechanical problems, and unknowns associated with operating fish passage at this site have

been identified and corrected during this trial period. During low river flow and high irrigation demand months (i. e., July to September), we have identified the necessary threshold river discharges at the Cameo USGS gauging station that we can minimally operate the fish passage (with and without attraction flows) without impacting the capability of diverting river water into the Government High Canal.

Until fish passage is completed at the downstream Price-Stubb Dam, fish passage at the upstream Grand Valley Project will not be fully operational. Therefore, during 2007, the plan is to perform sediment maintenance only. No biological data will be collected from the fish trap. Sediment has continued to accrue on the fish passage side of the river and an island now has formed in front of the attraction flow gate. During the height and descending limb of spring runoff on the Upper Colorado River, the fish passage will be continuously operated to flush built up sediment through the fish ladder. Both the fish ladder and attraction flow will be opened. Operation of the fish ladder during this time should not impact the diversion capabilities of the Grand Valley Project. In the fall, when irrigation demand lessens we again plan to flush sediment that had accreted at the head end of the fish ladder and attraction flow entrance. During these periods, personnel will need to visit the site daily to clean and remove trash and debris from the trash racks and bar screens to maintain water velocity and water depth in the fish ladder for optimal sediment flushing. Any and all fish remaining in the fish trap and dewatered section of the fish ladder will be manually removed and returned to the river after each flushing session.

2008/2009 Plans

The Bureau of Reclamation awarded the construction contract for the fish ladder at Price Stubb Dam April 17, 2007. Construction is planned to start sometime in July 2007 and completion is scheduled sometime in the spring of 2008. Therefore, it is assumed that fish passage will be in place and operational at Price Stubb Dam by either late-spring or early-summer 2008. Government Highline fish ladder then should be fully operational. Plans are to operate Government Highline fish ladder continuously from the first of May to mid-October 2008. In 2009, the fish ladder will operated continuously from the first of April to mid-October, similar to the operational period at Redlands fishway.

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. Initially, channel catfish will be returned downstream of the fish ladder alive.

VII. Task Description and Schedule

Description

Task 1. O & M of Government Highline fish ladder 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. Other tasks include: regulating river flows through the fish ladder and attraction flow to remove sediment from the fishway; noxious weed control; 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. 5/2008 B 10/2008; 4/2009 B 4/2009

Task 2. 10/2008 B 11/2008; 10/2009 B 11/2009

VIII. FY-2008 Work (year 4 of multi-year study)

Deliverables/Due Dates:

Annual Report due: 11/2008

Budget (actual salary rates w/ benefits provided by CRFP Administrative Officer used for labor; 3% inflation rate applied from 2007 for equipment/supplies, and operation and maintenance)

Tasks 1 & 2. O & M of the fish passageway at Government Highline Diversion Dam: 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. Other tasks include: regulating river flows through the fish ladder and attraction flow to remove sediment from the fishway; noxious weed control; removing all stranded fish in the fish trap and dewatered portion of the fish ladder prior to winterizing; prepare and submit annual RIP report

Labor (salaries and benefits)

Project Leader (1-GS-14 @ 2,245)	2 weeks	\$ 4,490
Fishery Biologist (1-GS-12 @ 2,025)	8 weeks	\$ 16,200
Biological Technician (2-GS-4/5 @ 632)	13 weeks	\$ 16,432
Admin. Assistant (1-GS-9, @ 1,391)	2 weeks	\$ 2,782
	Subtotal	\$ 39,904

Equipment/Supplies

FWS Vehicle maintenance, GSA-lease,
 FWS vehicle gasoline (\$ 2,600: assumed
 \$ 3.00/gal, 10 miles/gal per vehicle, 64 miles
 round trip, 135 days passage operation) +
 dip nets, rakes; herbicide for spraying
 weeds; misc. office supplies \$ 3,700

Fish Disposal Fee @ Mesa County
 Landfill \$ 150

Subtotal \$ 3,850

Operation and Maintenance (@ Government Highline)

Annual Energy Costs: propane: \$ 1,200: assumed
 \$ 2.47/gal, 500 gal tank. propane used to operate
 sump pump, overhead cranes (costs to be
 covered by O & M agreement w/
 Grand Valley Water Users) \$ 0

Maintenance/Service on Propane-powered generator

On-site servicing of air/oil filters, spark plugs
 (Source: Rocky Mountain Cummins Grand
 Junction Bas per Beth/Donna) (costs to be
 covered by O & M agreement w/
 Grand Valley Water Users) \$ 0

Subtotal \$ 0

FY2008 Total \$ 43,754

FY-2009 Work (year 5 of multi-year study)

Deliverables/Due Dates:

Annual Report due: 11/2009

Budget (actual salary rates w/ benefits provided by CRFP Administrative Officer used for labor; 3% inflation rate applied from 2008 for equipment/supplies, and operation and maintenance)

Tasks 1 & 2. O & M of the fish passageway at Government Highline Diversion Dam: 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. Other tasks include: regulating river flows through the fish ladder and attraction flow to remove sediment from the fishway; noxious weed control; removing all stranded fish in the fish trap and dewatered portion of the fish ladder prior to winterizing; prepare and submit annual RIP report

Labor (salaries and benefits)

Project Leader (1-GS-14 @ 2,353)	2 weeks	\$ 4,706
Fishery Biologist (1-GS-12 @ 2,246)	8 weeks	\$ 17,968
Biological Technician (2-GS-4/5 @ 654)	15 weeks	\$ 19,620
Admin. Assistant (1-GS-9, @ 1,485)	2 weeks	\$ 2,970
	Subtotal	\$ 45,264

Equipment/Supplies

FWS Vehicle maintenance, GSA-lease, FWS vehicle gasoline (\$ 2,600: assumed \$ 3.00/gal, 10 miles/gal per vehicle, 64 miles round trip, 135 days passage operation) + dip nets, rakes; herbicide for spraying weeds; misc. office supplies		\$ 3,810
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Fish Disposal Fee @ Mesa County Landfill		\$ 155
	Subtotal	\$ 3,965

Operation and Maintenance (@ Government Highline)

Annual Energy Costs: propane: \$ 1,200: assumed \$ 2.47/gal, 500 gal tank. propane used to operate sump pump, overhead cranes (costs to be covered by O & M agreement w/ Grand Valley Water Users)		\$ 0
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Maintenance/Service on Propane-powered generator
 On-site servicing of air/oil filters, spark plugs
 (Source: Rocky Mountain Cummins BGrand
 Junction Bas per Beth/Donna) (costs to be
 covered by O & M agreement w/
 Grand Valley Water Users)

	<u>\$ 0</u>
Subtotal	\$ 0
FY2009	Total \$ 49,229

IX. Budget Summary

FY-2008 \$ 43,754
 FY-2009 \$ 49,229
 Grand
 Total: \$ **92,983**

X. Reviewers: N/A

XI. References: None

Prepared and compiled by: Bob D. Burdick, 20 April 2007
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