

FY-2012-2013 SCOPE OF WORK for:

Project #: NEW

Detection and potential management of razorback sucker in Old Charley wetland.

Lead Agency: U.S. Fish and Wildlife Service
Submitted by: Colorado River Fish Project

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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:

Detection and potential management of razorback sucker in Old Charley wetland.

II. Relationship to RIPRAP:

Green River Action Plan: Mainstem

IV.A. Augment or restore populations as needed.

III. Study Background/Rationale and Hypotheses:

Although population status for razorback suckers in the Upper Colorado River Basin is not well known, stocking efforts over the last decade potentially has increased the population. We know that larval light trapping efforts in project 22F have documented a trend of increasing abundance of larval razorback suckers captured over the last few years (Kevin Bestgen, personal communication), and this likely correlates with increased abundance of adult razorback suckers in the river. An observation we have made is that we capture larval razorback suckers right as they enter backwaters, but within days we no longer can document their presence in those same backwaters. We suspect that the larvae are eaten by the abundant nonnative fishes in those backwaters.

From our study at Baeser Bend wetland, we found that larval razorback suckers, when stocked in an environment with low densities of nonnative fish, can survive and recruit. However, when that environment contains high densities of nonnative fish, there is no survival of larval razorback suckers. This finding prompted us to develop this scope of

work. If we can use wetlands where larval razorback suckers are naturally drifting into the wetlands, and we can manipulate these wetlands to initially have low levels of nonnative fish when the larvae arrive, there is a chance the larval razorback suckers will survive and recruit naturally.

IV. Study Goals, Objectives, End Product:

Goal: Document and help naturally spawned razorback suckers enter the wetland, and recruit to adults.

Objective 1. Reset wetland prior to high water naturally or with rotenone.

Objective 2. As high water connects wetland to the Green River, intensively use light traps to detect presence of razorback sucker larvae.

Objective 3. If we successfully document larvae in the wetland, manage water levels to ensure overwinter survival and later harvest these fish to be tagged and released back into the river.

*If razorback suckers are not detected, remaining funding can be returned to the Recovery Program since other work would not be warranted unless razorbacks are present.

V. Study area:

All work will be conducted within the Old Charley floodplain, with fish being released into the Green River.

VI. Study Methods/Approach:

Old Charley-This wetland typically connects to the river during high water each year. However, by winter, the little water remaining freezes so that the wetland is reset each spring. If this were the case, there would be no need to treat the wetland with rotenone to reset it. If there was sufficient water in the fall to overwinter fish, the following spring we would sample for fish, and if no native fish were found but nonnative fish were found, we would treat the wetland with rotenone to reset the wetland. When high water comes, we would set light traps in the wetland to attempt to document presence of larval razorback suckers. If we did document larval razorback suckers, we would then maintain water levels at the wetland for the rest of the summer, which would include pumping the wetland twice: once during mid summer and once in November prior to ice on. We would attempt to document razorback suckers again in the fall to track survival with the use of fyke nets, minnow traps, and potentially seining and electrofishing. Any razorback suckers captured at this time would likely be too small to PIT tag.

In 2013, we would maintain water levels by pumping once before high water, and once during mid summer. We would harvest the razorback suckers in the fall using the existing kettle and netting fish that remained in the wetland afterwards. We would tag

these fish and release them into the Green River. If this wetland shows that larval razorback suckers will enter and survive, we can then manage it accordingly by maintaining water levels sufficient to overwinter fish and then harvest fish every other year from the wetland.

VII. Task Description and Schedule:

- Task 1: Reset wetland
- Task 2: Light trap for larval razorback suckers
- Task 3: Pump water to maintain water levels
- Task 4: Tag and release fish into Green River
- Task 5: Data Analysis, report writing, presentations

Old Charley Schedule: FY-2012

Task	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1			X	X	X	X						
2								X	X			
3											X	
4												
5												

Old Charley Schedule: FY-2013

Task	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1												
2								X	X			
3		X								X		
4												X
5		X	X	X								

VIII. FY-2012 Work: Reset, water level maintenance, sampling, and annual reporting:

Deliverables/Due Dates:

Annual Report of FY12 field activities due November 2012.

Budget:

FY 2012 Budget:

- **Labor/Administration**

GS-11 Fish Biologist (\$44.25/hr, 120 hrs)	\$5,310
GS-12 Supervisory Fish Biologist (\$49.65/hr, 12 hrs)	\$595.80
GS-13 Assistant Project Leader (\$61.38/hr, 10 hrs)	\$613.80
GS-14 Project Leader (\$74.16/hr, 8 hrs)	\$593.28
GS-9 Admin. Officer (\$38.54/hr, 10 hrs)	\$385.40
GS-5 Tech (\$17.45/hr, 80 hrs)	\$1,396
GS-8 Tech (\$37.38/hr, 40 hrs)	\$1,495.20

TOTAL LABOR

\$10,389.48

-	Equipment	
	GSA vehicle lease \$334/mo x 1 truck x 3 mo	\$1,002
	Net Replacement/repair/light trap replacement	\$1,000
	Pump maintenance/Equipment Repair	\$1,500
	Maintenance on kettle/site maintenance	\$1,500
	Truck Mileage 80 miles/trip X 0.30 X 22 trips	\$528
	Diesel gasoline (300 gal @ \$4.00/gal)	\$1,200
	TOTAL EQUIPMENT	\$6,730

FY-2012 Total: \$17,119.48

FY 2013 Budget:

-	Labor/Administration	
	GS-11 Fish Biologist (\$45.54/hr, 160 hrs)	\$7,286.40
	GS-12 Supervisory Fish Biologist (\$52.69/hr, 12 hrs)	\$632.28
	GS-13 Assistant Project Leader (\$65.05/hr, 10 hrs)	\$650.50
	GS-14 Project Leader (\$76.34/hr, 8 hrs)	\$610.72
	GS-9 Admin. Officer (\$38.54/hr, 20 hrs)	\$770.80
	GS-5 Tech (\$17.95/hr, 240 hrs)	\$4,308
	GS-8 Tech (\$38.45/hr, 240 hrs)	\$9,228
	TOTAL LABOR	\$23,486.70

-	Equipment	
	GSA vehicle lease \$334/mo x 1 truck x 3 mo	\$1,002
	Net Replacement/repair/light trap replacement	\$1,000
	Pump maintenance/Equipment Repair	\$1,500
	Maintenance on kettle/site maintenance	\$1,500
	Truck Mileage 80 miles/trip X 0.30 X 42 trips	\$1,008
	Diesel gasoline (600 gal @ \$4.00/gal)	\$2,400
	TOTAL EQUIPMENT	\$8,410

FY-2013 Total: \$31,896.70

IX. Budget Summary
 FY-2012 \$17,119.48
 FY-2013 \$31,896.70

X. Reviewer: Dale Ryden, USFWS Assistant Project Leader