

**COLORADO RIVER RECOVERY PROGRAM
FY 2013 PROPOSED SCOPE-OF-WORK for:
Smallmouth Bass control in the Green River**

Project No.: 123a

Lead Agency: USFWS

Submitted by:

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Category:

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

Expected Funding Sources:

- Annual funds
- Capital funds
- Other (explain)

I. Title of Proposal:

Nonnative Fish Control in the Echo Park to Split Mountain Reach of the Green River, Utah

II. Relationship to RIPRAP:

GENERAL RECOVERY PROGRAM SUPPORT ACTION PLAN

- III. Reduce negative impacts of nonnative fishes and sportfish management activities (nonnative and sportfish management).
- III.A. Reduce negative interactions between nonnative and endangered fishes.
- III.A.2. Identify and implement viable active control measures.

GREENRIVER ACTION PLAN: MAINSTEM

- III. Reduce impacts of nonnative fishes and sportfish management activities (nonnative and sportfish management).
- III.A. Reduce negative impacts to endangered fishes from sportfish management activities.
- III.A.4. Develop and implement control programs for nonnative fishes in river reaches occupied by the endangered fishes to identify

required levels of control. Each control activity will be evaluated for effectiveness, and then continued as needed.

III. Study Background/Rationale and Hypotheses:

The Upper Colorado River Endangered Fish Recovery Program has determined that control of nonnative fish in the upper Colorado River basin is essential to the recovery of the four endangered fish species: Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. Smallmouth bass abundance has dramatically increased in the Green River since 2000. This information resulted in a recommendation from the December 2003 Nonnative Fish Control Workshop (Grand Junction, CO) to attempt control of this species in the Green River. Nine years of removal and Nonnative Fish Control Workshops have added to the knowledge base of the effort required to successfully remove smallmouth bass from the Green River. During the December 2006 workshop, participants discussed the importance of increasing the removal effort and reallocating effort to concentration areas, resulting in this scope of work for the Echo Park to Split Mountain reach of the Green River in Utah.

In 2008, two control/monitoring trips were completed to assess smallmouth abundance and distribution within Desolation/Gray Canyons. The 2008 assessment showed that although distribution had spread downstream, relative abundance remained low and intensive control efforts in this reach were not warranted at that time. In January of 2011, reports of increasing smallmouth captures in the upper most section of Desolation Canyon prompted a change in the distribution of control efforts for 2011. Sampling in 2011 and 2012 resulted in overall catch rates similar to previous years, but bass were still present further downstream compared to the 2004-2006 period.

In 2012, large numbers of young of year bass were captured in the Echo-Split reach as a result of warm, low discharge. For 2013, we recommend keeping and increasing passes in the Echo Park to Split Mountain reach. Bass removal will occur in Desolation Canyon during spring Colorado pikeminnow estimates, therefore additional effort will not be expended in this reach for 2013 under this scope of work.

IV. Study Goals, Objectives, End Product:

Goal:

Control smallmouth bass in the Green River between Echo Park and Split Mountain boat ramp.

Objectives:

1. Remove smallmouth bass and other nonnative fishes in the Green River from Echo Park (RM 344.5) to Split Mountain (RM 319.5).
2. Monitor adult and juvenile smallmouth bass to determine extent of control needed.

End Products: An in-depth annual report will provide the current year's data for: adult and juvenile total CPUE, CPUE by river mile and size class, monthly length frequency histograms, CPUE for other nonnative species, total catch numbers, and estimates of spawning periods and locations. Data from past years will be included for relevant metrics to provide background and demonstrate trends.

V. Study Area

The study area is located on the Green River from Echo Park (RM 344.5) to Split Mountain boat ramp (RM 319.5); a total of 26 miles. Crews from UDWR - Moab and USFWS CRFP will both work in this reach to complete a total of twelve passes. The UDWR – Moab crew will complete back-to-back sampling trips (with a one day camp break) in all of their visits (6 passes) to minimize mileage and other travel related costs.

VI. Study Methods/Approach

Sampling: Smallmouth bass will be removed primarily by electrofishing. Two electrofishing boats will simultaneously electrofish each shoreline of the river. Effort will be focused on shoreline habitat that is likely to contain smallmouth bass. Sampling crews will conduct removal activities in a manner that minimizes potential negative impacts to endangered fish as a result of electrofishing activities. This includes discontinuing electrofishing when elevated numbers of endangered fish are known to be present. Twelve electrofishing passes will be conducted beginning June and ending in late September. Due to low capture rates in 2011 and 2012, mark-recapture population estimates will not be attempted, therefore all passes will include removal of all size classes of smallmouth bass. All bass removed will be deposited in shoreline areas deemed low use in consultation with Dinosaur National Monument. The Vernal USFWS office will coordinate passes with Moab UDWR in order to maximize the number of passes conducted during the bass spawning and nesting period.

Data Analysis: Adult and juvenile smallmouth bass catch rates, total catch-per-unit-effort (CPUE), CPUE by river mile and length frequency histograms, and CPUE for other nonnative fish will be calculated for both reaches. Data from past years of sampling will be included for relevant comparisons and to demonstrate trends.

Fish Handling and Disposal: All other centrarchids (green sunfish, bluegill, black crappie, and largemouth bass), northern pike, white sucker, and walleye encountered will be removed. Any nonnative species of special concern such as grass carp, gizzard shad, or burbot which are encountered will be removed and the appropriate state Fish and Game agencies will be contacted. All nonnative fish removed in Dinosaur National Park will be euthanized and deposited within the river corridor, as advised by the National Park Service. Any endangered fish captured will be scanned for a PIT tag, tagged if needed, weighed (g), measured TL (mm), and released alive. Endangered fish data will then be reported to appropriate principal investigators and included in annual reporting.

VII. Task Description and Schedule

Task 1. Six removal passes from Echo Park to Split Mountain boat ramp on the Green River in Dinosaur National Monument (USFWS CRFP – Vernal; July - August 2013).

Task 2. Six removal passes from Echo Park to Split Mountain boat ramp (UDWR Moab; June - August 2013).

Task 3. Data entry, analysis, and reporting – October/November 2012-13.

VIII. FY2013 Work Deliverables/Due Dates

- Annual Report, November 2013
- Data to USFWS database manager by December 2013
- FY2013 Work budget

FY 2013:

| Task 1 – USFWS Echo Sampling (6 trips) | Rate \$/hr | Total hours | Cost |
|--|-------------------|--------------------|-----------------|
| Labor | | | |
| GS-12 Supervisory Fish Biologist | \$52.69 | 240 | \$12,646 |
| 4 GS-5 Tech | \$18.80 | 960 | \$18,048 |
| Overtime for technicians (6 hrs/week x 6 weeks x 4 techs) | \$28.20 | 144 | \$4,061 |
| Subtotal | | | \$34,754 |
| Travel | | | |
| Shuttle (3 trucks/trip x \$150/truck x 6 trips) Echo to Split Mountain | | | \$2,700 |
| Per diem (5 people/day x \$30/person x 3 days/trip x 6 trips) | | | \$2,700 |
| Subtotal | | | \$5,400 |
| Equipment | | | |
| 3 trucks/trip x 175 mi/truck x \$0.30/mi x 6 trips, Vernal to Echo Park, round trip | | | \$945 |
| 12 gal gas/boat x 3 boats/trip x \$4.00/gal x 6 trips | | | \$576 |
| 1 qts motor boat oil/boat x 3 boats/trip x \$11/qt | | | \$176 |
| GSA trucks (3 trucks x 1.5 months) | \$334 | 4.5 | \$1,503 |
| Vehicle maintenance (oil chgs, tires, cleaning, etc.) | | | \$0 |
| Maintenance/replacement of rafting gear, sampling nets, electrofishing gear, etc. | | | \$1,022 |
| GS-8 Fish Tech maintenance work | \$38.45 | 383 | \$14,726 |
| Subtotal | | | \$18,948 |
| Task 1 Total | | | \$59,103 |
| Task 3 - USFWS, Data analysis, reporting, administration | | | |
| | Rate \$/hr | Total hours | Cost |
| Labor | | | |
| GS-13 Asst. Project Leader | \$65.05 | 148 | \$9,627 |
| GS-12 Supervisory Fish Biologist | \$52.69 | 336 | \$17,704 |
| GS-9 Admin. Officer | \$38.54 | 263 | \$10,136 |
| Subtotal | | | \$37,467 |
| Travel | | | |
| Per diem (1 person x \$137/day x 3 days) Vernal to Grand Junction | | | \$411 |
| Travel to give presentations at workshops and meetings (1 truck/trip x 288 mi/truck x \$0.30/mi) | | | \$86 |
| Subtotal | | | \$497 |
| Task 4 USFWS Total | | | \$37,964 |
| SOW USFWS Total | | | \$97,067 |

| FY 2013 costs for UDWR Moab: | Work Days | UDWR Moab |
|--|-------------------------------|------------------------|
| <u>Task 2. Six Echo Removal Passes.</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$438/day) | 7 | \$3,066 |
| 2 Biologist (\$340/day) | 30 | \$10,200 |
| Technicians (\$195/day) | 154 | \$30,030 |
| <i>Food and Transport (Current Expense)</i> | | |
| Vehicle - 3 trips(2 trucks for 11.3% of fleet expense) ^a | | \$4,811 |
| Food - 6 passes (4 days/ 5 people @ \$25 day) | | \$3,000 |
| Shuttle service: 2 trucks / 6passes @ \$150 per truck | | \$1,800 |
| <i>Equipment (Current Expense)</i> | | |
| Camp gear repair and replacement | | \$375 |
| Boat, Trailer, Sampling gear repair and maintenance | | \$1650 |
| Sampling Equipment | | \$500 |
| Boat/generator fuel, propane 3 trips | | \$650 |
| | <i><u>Task 2 subtotal</u></i> | <u>\$56,082</u> |
| <p>^a Calculated as the total percentage of annual fleet costs based on the number of trucks, days used, and total miles driven. Annual fleet costs for the Moab Field Station FY13 is estimated to be \$42,753 for 7 vehicles. Moab fleet vehicles are not assigned to specific projects.</p> | | |
| <u>Task 3. Data management and reporting</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$438/day) | 1 | \$438 |
| 2 Biologist (\$340/day) | 15 | \$5,100 |
| 2 Technicians (\$195/day) | 2 | \$390 |
| | <i><u>Task 3 subtotal</u></i> | <u>\$5,928</u> |
| Total for FY 2013 – Moab | | <u>\$62,010</u> |

FY 2014:

| Task 1 – USFWS Echo Sampling (6 trips) | Rate \$/hr | Total hours | Cost |
|--|-------------------|--------------------|-----------------|
| Labor | | | |
| GS-12 Supervisory Fish Biologist | \$53.74 | 240 | \$12,898 |
| 4 GS-5 Tech | \$19.18 | 960 | \$18,413 |
| Overtime for technicians (6 hrs/week x 6 weeks x 4 techs) | \$28.76 | 144 | \$4,141 |
| Subtotal | | | \$35,452 |
| Travel | | | |
| Shuttle (3 trucks/trip x \$153/truck x 6 trips) Echo to Split Mountain | | | \$2,754 |
| Per diem (5 people/day x \$31/person x 3 days/trip x 6 trips) | | | \$2,790 |
| Subtotal | | | \$5,544 |
| Equipment | | | |
| 3 trucks/trip x 175 mi/truck x \$0.31/mi x 6 trips, Vernal to Echo Park, round trip | | | \$977 |
| 12 gal gas/boat x 3 boats/trip x \$4.24/gal x 6 trips | | | \$611 |
| 1 qts motor boat oil/boat x 3 boats/trip x \$11.22/qt | | | \$34 |
| GSA trucks (3 trucks x 1.5 months) | \$341 | 4.5 | \$1,535 |
| Vehicle maintenance (oil chgs, tires, cleaning, etc.) | | | \$0 |
| Maintenance/replacement of rafting gear, sampling nets, electrofishing gear, etc. | | | \$1,022 |
| GS-8 Fish Tech maintenance work | \$39.22 | 383 | \$15,021 |
| Subtotal | | | \$19,198 |
| Task 1 Total | | | \$60,194 |
| | | | |
| Task 3 - USFWS, Data analysis, reporting, administration | Rate \$/hr | Total hours | Cost |
| Labor | | | |
| GS-13 Asst. Project Leader | \$66.35 | 148 | \$9,820 |
| GS-12 Supervisory Fish Biologist | \$53.74 | 336 | \$18,057 |
| GS-9 Admin. Officer | \$39.31 | 263 | \$10,339 |
| Subtotal | | | \$38,215 |
| Travel | | | |
| Per diem (1 person x \$140/day x 3 days) Vernal to Grand Junction | | | \$420 |
| Travel to give presentations at workshops and meetings (1 truck/trip x 288 mi/truck x \$0.31/mi) | | | \$89 |
| Subtotal | | | \$509 |
| Task 4 USFWS Total | | | \$38,724 |
| SOW USFWS Total | | | \$98,919 |

| FY 2014 costs for UDWR Moab: | Work Days | UDWR Moab |
|--|-------------------------------|------------------------|
| <u>Task 2. Six Echo Removal Passes.</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$438/day) | 7 | \$3,066 |
| 2 Biologist (\$340/day) | 30 | \$10,200 |
| Technicians (\$195/day) | 154 | \$30,030 |
| <i>Food and Transport (Current Expense)</i> | | |
| Vehicle - 3 trips(2 trucks for 11.3% of fleet expense) ^a | | \$4,811 |
| Food - 6 passes (4 days/ 5 people @ \$25 day) | | \$3,000 |
| Shuttle service: 2 trucks / 6passes @ \$150 per truck | | \$1,800 |
| <i>Equipment (Current Expense)</i> | | |
| Camp gear repair and replacement | | \$375 |
| Boat, Trailer, Sampling gear repair and maintenance | | \$1650 |
| Sampling Equipment | | \$500 |
| Boat/generator fuel, propane 3 trips | | \$650 |
| | <i><u>Task 2 subtotal</u></i> | <u>\$56,082</u> |
| <p>^a Calculated as the total percentage of annual fleet costs based on the number of trucks, days used, and total miles driven. Annual fleet costs for the Moab Field Station FY13 is estimated to be \$42,753 for 7 vehicles. Moab fleet vehicles are not assigned to specific projects.</p> | | |
| <u>Task 3. Data management and reporting</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$438/day) | 1 | \$438 |
| 2 Biologist (\$340/day) | 15 | \$5,100 |
| 2 Technicians (\$195/day) | 2 | \$390 |
| | <i><u>Task 3 subtotal</u></i> | <u>\$5,928</u> |
| Total for FY 2014 – Moab | | <u>\$62,010</u> |

FY 2015:

| Task 1 – USFWS Echo Sampling (6 trips) | Rate \$/hr | Total hours | Cost |
|--|-------------------|--------------------|------------------|
| Labor | | | |
| GS-12 Supervisory Fish Biologist | \$54.81 | 240 | \$13,154 |
| 4 GS-5 Tech | \$19.56 | 960 | \$18,778 |
| Overtime for technicians (6 hrs/week x 6 weeks x 4 techs) | \$29.34 | 144 | \$4,225 |
| Subtotal | | | \$36,157 |
| Travel | | | |
| Shuttle (3 trucks/trip x \$156/truck x 6 trips) Echo to Split Mountain | | | \$2,808 |
| Per diem (5 people/day x \$32/person x 3 days/trip x 6 trips) | | | \$2,880 |
| Subtotal | | | \$5,688 |
| Equipment | | | |
| 3 trucks/trip x 175 mi/truck x \$0.32/mi x 6 trips, Vernal to Echo Park, round trip | | | \$1,008 |
| 12 gal gas/boat x 3 boats/trip x \$4.32/gal x 6 trips | | | \$622 |
| 1 qts motor boat oil/boat x 3 boats/trip x \$11.44/qt | | | \$34 |
| GSA trucks (3 trucks x 1.5 months) | \$348 | 4.5 | \$1,566 |
| Vehicle maintenance (oil chgs, tires, cleaning, etc.) | | | \$0 |
| Maintenance/replacement of rafting gear, sampling nets, electrofishing gear, etc. | | | \$1,022 |
| GS-8 Fish Tech maintenance work | \$40.00 | 383 | \$15,320 |
| Subtotal | | | \$19,572 |
| Task 1 Total | | | \$61,417 |
| | | | |
| Task 3 - USFWS, Data analysis, reporting, administration | Rate \$/hr | Total hours | Cost |
| Labor | | | |
| GS-13 Asst. Project Leader | \$67.68 | 148 | \$10,017 |
| GS-12 Supervisory Fish Biologist | \$54.81 | 336 | \$18,416 |
| GS-9 Admin. Officer | \$40.10 | 263 | \$10,546 |
| Subtotal | | | \$38,979 |
| Travel | | | |
| Per diem (1 person x \$143/day x 3 days) Vernal to Grand Junction | | | \$429 |
| Travel to give presentations at workshops and meetings (1 truck/trip x 288 mi/truck x \$0.32/mi) | | | \$92 |
| Subtotal | | | \$521 |
| Task 4 USFWS Total | | | \$39,500 |
| SOW USFWS Total | | | \$100,918 |

| FY 2015 costs for UDWR Moab: | Work Days | UDWR Moab |
|--|-------------------------------|------------------------|
| <u>Task 2. Six Echo Removal Passes.</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$447/day) | 7 | \$3,127 |
| 2 Biologist (\$347/day) | 30 | \$10,424 |
| Technicians (\$199/day) | 154 | \$30,631 |
| <i>Food and Transport (Current Expense)</i> | | |
| Vehicle - 3 trips(2 trucks for 11.3% of fleet expense) ^a | | \$4,907 |
| Food - 6 passes (4 days/ 5 people @ \$25 day) | | \$3,060 |
| Shuttle service: 2 trucks / 6passes @ \$150 per truck | | \$1,800 |
| <i>Equipment (Current Expense)</i> | | |
| Camp gear repair and replacement | | \$400 |
| Boat, Trailer, Sampling gear repair and maintenance | | \$1680 |
| Sampling Equipment | | \$500 |
| Boat/generator fuel, propane 3 trips | | \$675 |
| | <i><u>Task 2 subtotal</u></i> | <u>\$57,204</u> |
| <p>^a Calculated as the total percentage of annual fleet costs based on the number of trucks, days used, and total miles driven. Annual fleet costs for the Moab Field Station FY13 is estimated to be \$42,753 for 7 vehicles. Moab fleet vehicles are not assigned to specific projects.</p> | | |
| <u>Task 3. Data management and reporting</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$447/day) | 1 | \$447 |
| 2 Biologist (\$347/day) | 15 | \$5,202 |
| 2 Technicians (\$199/day) | 1 | \$398 |
| | <i><u>Task 3 subtotal</u></i> | <u>\$6,047</u> |
| Total for FY 2015 – Moab | | <u>\$63,251</u> |

FY 2016:

| Task 1 – USFWS Echo Sampling (6 trips) | Rate \$/hr | Total hours | Cost |
|--|-------------------|--------------------|------------------|
| Labor | | | |
| GS-12 Supervisory Fish Biologist | \$55.91 | 240 | \$13,418 |
| 4 GS-5 Tech | \$19.95 | 960 | \$19,152 |
| Overtime for technicians (6 hrs/week x 6 weeks x 4 techs) | \$29.93 | 144 | \$4,310 |
| Subtotal | | | \$36,880 |
| Travel | | | |
| Shuttle (3 trucks/trip x \$159/truck x 6 trips) Echo to Split Mountain | | | \$2,862 |
| Per diem (5 people/day x \$33/person x 3 days/trip x 6 trips) | | | \$2,970 |
| Subtotal | | | \$5,832 |
| Equipment | | | |
| 3 trucks/trip x 175 mi/truck x \$0.33/mi x 6 trips, Vernal to Echo Park, round trip | | | \$1,040 |
| 12 gal gas/boat x 3 boats/trip x \$4.41/gal x 6 trips | | | \$635 |
| 1 qts motor boat oil/boat x 3 boats/trip x \$11.67/qt | | | \$35 |
| GSA trucks (3 trucks x 1.5 months) | \$355 | 4.5 | \$1,598 |
| Vehicle maintenance (oil chgs, tires, cleaning, etc.) | | | \$0 |
| Maintenance/replacement of rafting gear, sampling nets, electrofishing gear, etc. | | | \$1,022 |
| GS-8 Fish Tech maintenance work | \$40.80 | 383 | \$15,626 |
| Subtotal | | | \$19,955 |
| Task 1 Total | | | \$62,668 |
| | | | |
| Task 3 - USFWS, Data analysis, reporting, administration | Rate \$/hr | Total hours | Cost |
| Labor | | | |
| GS-13 Asst. Project Leader | \$69.03 | 148 | \$10,216 |
| GS-12 Supervisory Fish Biologist | \$55.91 | 336 | \$18,786 |
| GS-9 Admin. Officer | \$40.90 | 263 | \$10,757 |
| Subtotal | | | \$39,759 |
| Travel | | | |
| Per diem (1 person x \$146/day x 3 days) Vernal to Grand Junction | | | \$438 |
| Travel to give presentations at workshops and meetings (1 truck/trip x 288 mi/truck x \$0.33/mi) | | | \$95 |
| Subtotal | | | \$533 |
| Task 4 USFWS Total | | | \$40,292 |
| SOW USFWS Total | | | \$102,960 |

| FY 2016 costs for UDWR Moab: | Work Days | UDWR Moab |
|--|-------------------------------|------------------------|
| <u>Task 2. Six Echo Removal Passes.</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$447/day) | 7 | \$3,127 |
| 2 Biologist (\$347/day) | 30 | \$10,424 |
| Technicians (\$199/day) | 154 | \$30,631 |
| <i>Food and Transport (Current Expense)</i> | | |
| Vehicle - 3 trips(2 trucks for 11.3% of fleet expense) ^a | | \$4,907 |
| Food - 6 passes (4 days/ 5 people @ \$25 day) | | \$3,060 |
| Shuttle service: 2 trucks / 6passes @ \$150 per truck | | \$1,800 |
| <i>Equipment (Current Expense)</i> | | |
| Camp gear repair and replacement | | \$400 |
| Boat, Trailer, Sampling gear repair and maintenance | | \$1680 |
| Sampling Equipment | | \$500 |
| Boat/generator fuel, propane 3 trips | | \$675 |
| | <i><u>Task 2 subtotal</u></i> | <u>\$57,204</u> |
| <p>^a Calculated as the total percentage of annual fleet costs based on the number of trucks, days used, and total miles driven. Annual fleet costs for the Moab Field Station FY13 is estimated to be \$42,753 for 7 vehicles. Moab fleet vehicles are not assigned to specific projects.</p> | | |
| <u>Task 3. Data management and reporting</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$447/day) | 1 | \$447 |
| 2 Biologist (\$347/day) | 15 | \$5,202 |
| 2 Technicians (\$199/day) | 1 | \$398 |
| | <i><u>Task 3 subtotal</u></i> | <u>\$6,047</u> |
| Total for FY 2016 – Moab | | <u>\$63,251</u> |

FY 2017:

| Task 1 – USFWS Echo Sampling (6 trips) | Rate \$/hr | Total hours | Cost |
|--|-------------------|--------------------|------------------|
| Labor | | | |
| GS-12 Supervisory Fish Biologist | \$57.03 | 240 | \$13,687 |
| 4 GS-5 Tech | \$20.35 | 960 | \$19,536 |
| Overtime for technicians (6 hrs/week x 6 weeks x 4 techs) | \$30.53 | 144 | \$4,396 |
| Subtotal | | | \$37,620 |
| Travel | | | |
| Shuttle (3 trucks/trip x \$162/truck x 6 trips) Echo to Split Mountain | | | \$2,916 |
| Per diem (5 people/day x \$34/person x 3 days/trip x 6 trips) | | | \$3,060 |
| Subtotal | | | \$5,976 |
| Equipment | | | |
| 3 trucks/trip x 175 mi/truck x \$0.34/mi x 6 trips, Vernal to Echo Park, round trip | | | \$1,071 |
| 12 gal gas/boat x 3 boats/trip x \$4.50/gal x 6 trips | | | \$648 |
| 1 qts motor boat oil/boat x 3 boats/trip x \$11.90/qt | | | \$36 |
| GSA trucks (3 trucks x 1.5 months) | \$362 | 4.5 | \$1,629 |
| Vehicle maintenance (oil chgs, tires, cleaning, etc.) | | | \$0 |
| Maintenance/replacement of rafting gear, sampling nets, electrofishing gear, etc. | | | \$1,022 |
| GS-8 Fish Tech maintenance work | \$41.62 | 383 | \$15,940 |
| Subtotal | | | \$20,346 |
| Task 1 Total | | | \$63,942 |
| | | | |
| Task 3 - USFWS, Data analysis, reporting, administration | Rate \$/hr | Total hours | Cost |
| Labor | | | |
| GS-13 Asst. Project Leader | \$70.41 | 148 | \$10,421 |
| GS-12 Supervisory Fish Biologist | \$57.03 | 336 | \$19,162 |
| GS-9 Admin. Officer | \$41.72 | 263 | \$10,972 |
| Subtotal | | | \$40,555 |
| Travel | | | |
| Per diem (1 person x \$149/day x 3 days) Vernal to Grand Junction | | | \$447 |
| Travel to give presentations at workshops and meetings (1 truck/trip x 288 mi/truck x \$0.34/mi) | | | \$98 |
| Subtotal | | | \$545 |
| Task 4 USFWS Total | | | \$41,100 |
| SOW USFWS Total | | | \$105,042 |

| FY 2017 costs for UDWR Moab: | Work Days | UDWR Moab |
|---|-------------------------------|------------------|
| <u>Task 2. Six Echo Removal Passes.</u> | | |
| <i>Labor (Personal services)</i> | | |
| Proj. leader (\$447/day) | 7 | \$3,127 |
| 2 Biologist (\$347/day) | 30 | \$10,424 |
| Technicians (\$199/day) | 154 | \$30,631 |
| <i>Food and Transport (Current Expense)</i> | | |
| Vehicle - 3 trips(2 trucks for 11.3% of fleet expense) ^a | | \$4,907 |
| Food - 6 passes (4 days/ 5 people @ \$25 day) | | \$3,060 |
| Shuttle service: 2 trucks / 6passes @ \$150 per truck | | \$1,800 |
| <i>Equipment (Current Expense)</i> | | |
| Camp gear repair and replacement | | \$400 |
| Boat, Trailer, Sampling gear repair and maintenance | | \$1680 |
| Sampling Equipment | | \$500 |
| Boat/generator fuel, propane 3 trips | | \$675 |
| | <i><u>Task 2 subtotal</u></i> | <u>\$57,204</u> |
| Total for FY 2017 – Moab | | \$63,251 |

^a Calculated as the total percentage of annual fleet costs based on the number of trucks, days used, and total miles driven. Annual fleet costs for the Moab Field Station FY13 is estimated to be \$42,753 for 7 vehicles. Moab fleet vehicles are not assigned to specific projects.

IX. Program Budget Summary

| | USFWS – Vernal | UDWR – Moab | Total |
|--------|----------------|-------------|-----------|
| FY2013 | \$ 97,067 | \$ 62,010 | \$159,077 |
| FY2014 | \$ 98,919 | \$ 62,010 | \$160,929 |
| FY2015 | \$100,918 | \$ 63,251 | \$164,169 |
| FY2016 | \$102,960 | \$ 63,251 | \$166,211 |
| FY2017 | \$105,042 | \$ 63,251 | \$168,293 |

X. Reviewers: Dale Ryden, Krissy Wilson