I. Title of Proposal: **Salvage of Native Fish from Grand Valley Irrigation Company, Grand Valley Water Users, and Green River Canals.**

II. Relationship to RIPRAP:

Colorado River Action Plan: Main stem  
II.B.1.b. Screen Grand Valley Irrigation Company Canal.

Green River Action Plan:  
II.B.2. Screen Tusher Wash diversion to prevent endangered fish entrainment

III. Study Background/Rationale and Hypotheses:

A fish screen was constructed on the Grand Valley Irrigation Company (GVIC) irrigation canal in winter 2001 – 2002. However, for the first few years following construction, the screen was not operated for a full season. The GVIC fish screen is now fully operational. A fish screen was completed in the summer of 2005 for the Grand Valley Water Users (GVWU) Canal. It became fully operational in 2009. However, during events when debris overloads the screens...
and water cannot pass through them, the irrigation companies have the option of either lifting
the screens (GVIC) or using the bypass channel (GVWU). When this occurs, fish can pass
downstream of the fish screen and underground pipe that returns them to the river. Hence, fish
can swim down canal and ultimately become entrained in the canal when it is dewatered during
the fall.

This SOW also includes FWS-Vernal’s work to salvage endangered fish entrained into the
Green River canal at Tusher Diversion. Details of this work are included in SOW 138.

IV. Study Goals, Objectives, End Product(s):

Collect native fish entrained in the GVIC, GVWU, and Green River canals. Return native fish
to the Colorado or Green River, respectively.

V. Study Area: GVIC and GVWU irrigation canals, Grand Junction, Colorado, and Green River
canal, Green River, UT.

VI. Study Methods/Approach:

The two main canals and major laterals that hold water after irrigation diversions are
terminated will be sampled using a truck-mounted electrofishing system. Sampling will begin
at 22 Road on each canal and continue eastwards toward the most upstream portion of the
Grand Valley. Sampling will begin approximately one week after the canals have been shut
off in the fall, allowing them to drain down to a water level that is accessible by the sampling
crew. The sampling crew will travel the canal roads searching for pools of water that could
still hold fish. When pools of water are found, crews will walk the canal using electrofishing
probes and capture all fish possible. Native fish will be placed in a hatchery truck, transported
to the Colorado River and released alive. Records of native species and numbers of native
fishes collected will be maintained.

VII. Task Description and Schedule:

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Task 1. Sample GVIC and GVWU canals.</td>
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<tr>
<td>Task 2. Compile and summarize fish use data; prepare annual RIP report.</td>
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<table>
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<th>Schedule</th>
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#C-29a canal fish salvage: FY 2016-2017, Page 2
VIII. Deliverables, Due Dates, and Budget by Fiscal Year:

**FY 2016**

Deliverables: *Tasks 1 and 2*

<table>
<thead>
<tr>
<th>Labor</th>
<th>Title</th>
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<th>Reg. Rate</th>
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**Labor Subtotal**

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<th>Unit</th>
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**Equipment Total**

| USFWS Grand Jct.           |                                     |          |      |      |          | 33619   |

**Grand Total**

---

Error! Not a valid link.

*Misc. Field Supplies*
Exact use of the money in this line item will vary from year to year depending on what equipment needs to be maintained, repaired, or replaced, but use of these funds for a “typical” field season for one study would include the following:

- Spark plugs for generators – 5 at $7 each = $35
- Synthetic oil for generators - 5 quarts at $7 each = $35
- Generator repair/tune-up - 5 hrs @ $75/hr = $375
- Electrical Gloves - 3 pairs @ $65/pair = $195
- Dura-Frame electrofishing dip nets – 2 @ $300 each = $600

Replace any missing NRS HD-brand tie-down straps:
- Ten 2-ft straps @ $4.20 each = $42
- Five 3-ft straps @ $4.30 each = $21.50
- Ten 4-ft straps @ $4.70 each = $47
- Five 6-ft straps @ $5.05 each = $25.25
- Five 9-ft straps @ $5.7 each = $28.50
- Five 12-ft straps @ $6.15 each = $30.75

Replace any missing D-style carabiners, each boat needs:
- 10 @ $7.50 each = $75
- Mesh rig bag – 1 @ $50 each = $50
- 5-gallon plastic gasoline jerry cans – 5 @ $20 each = $100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtails, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.
FY 2017

Deliverables: Tasks 1 and 2

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<td><strong>Unit</strong></td>
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<td><strong>Duration</strong></td>
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Error! Not a valid link.
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# Outyear Budgets are Estimates Only and May Not Represent Actual Costs

**FY 2018**

**Deliverables:** *Tasks 1 and 2*

<table>
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<th>FY 2018</th>
<th>Labor</th>
<th>Title</th>
<th># of employees</th>
<th>Hours</th>
<th>Reg. Rate</th>
<th>OT Hours</th>
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**Grand Total**

USFWS Grand Jct. 35533

#C-29a canal fish salvage: FY 2016-2017, Page 7
**Misc. Field Supplies**

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- Five 12-ft straps @ $6.15 each = $30.75

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## Deliverables: Tasks 1 and 2

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<th>FY 2019</th>
<th>Labor</th>
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Misc. Field Supplies

Exact use of the money in this line item will vary from year to year depending on what equipment needs to be maintained, repaired, or replaced, but use of these funds for a “typical” field season for one study would include the following:

- Spark plugs for generators – 5 at $7 each = $35
- Synthetic oil for generators - 5 quarts at $7 each = $35
- Generator repair/tune-up - 5 hrs @ $75/hr = $375
- Electrical Gloves - 3 pairs @ $65/pair = $195
- Dura-Frame electrofishing dip nets – 2 @ $300 each = $600

Replace any missing NRS HD-brand tie-down straps:
- Ten 2-ft straps @ $4.20 each = $42
- Five 3-ft straps @ $4.30 each = $21.50
- Ten 4-ft straps @ $4.70 each = $47
- Five 6-ft straps @ $5.05 each = $25.25
- Five 9-ft straps @ $5.7 each = $28.50
- Five 12-ft straps @ $6.15 each = $30.75

Replace any missing D-style carabiners, each boat needs:
- 10 @ $7.50 each = $75
- Mesh rig bag – 1 @ $50 each = $50
- 5-gallon plastic gasoline jerry cans – 5 @ $20 each = $100

Other potential uses for these same funds could include replacing hand tools (ratchet and sockets, screw drivers, vise grips, pliers, Allen wrenches, crescent wrenches, hammer, etc.), WD-40, bailing wire, duct tape, electrical supplies (12 and 14 gage wire for the boats, junction boxes, extra male & female plugs, wire nuts, fuses, Ohm meter, electrical tape), batteries (C, AA and AAA), Gott 5-gallon water jugs, shovels, 5-gallon buckets, cargo nets, fix chips or cracks in vehicle windshields, bulbs, lenses, and wiring to fix trailer lights and pigtails, new electrofishing spheres, wire rope for replacing electrofishing “witches brooms,” etc.
FY 2020

Deliverables: *Tasks 1 and 2*

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#C-29a canal fish salvage: FY 2016-2017, Page 11
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IX. Budget Summary:

FY2016
USFWS-GJ $ 33,619
USFWS-Vernal $ 10,088

FY2017
USFWS-GJ $ 34,558
USFWS-Vernal $ 10,557

2016-2017 Total = $ 88,822

Estimated Budget Summary for Fiscal Years 2018-2020:

FY2018
USFWS-GJ $ 35,533
USFWS-Vernal $ 11,045

FY2019
USFWS-GJ $ 36,528
USFWS-Vernal $ 11,269

FY2020
USFWS-GJ $ 37,507
USFWS-Vernal $ 11,496

2018-2020 Total = $143,378

5-Year Total = $232,200

X. Reviewers: Program Staff and Biology Committee

XI. References: NA