

I. Project Title: Operation and Maintenance of the Fish Screen and Maintenance of the Fish Passage Facility at the Redlands Water And Power Company Diversion Dam

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III. Project Summary: The Redlands Water and Power Diversion, located on the Gunnison River near Grand Junction, CO, diverts water into the Redlands Power Canal. A fish passage structure was constructed around the diversion dam in 1996. A fish screen and fish return pipeline was constructed in the canal in 2004. The fish passage is operated by the US Fish and Wildlife Service. Redlands operates and maintains the fish screen and performs maintenance on the fish passage.

IV. Study Schedule: Redlands makes every effort to operate the fish screen whenever diverting water into Power Canal. Maintenance on the fish passage is performed after the US Fish and Wildlife Service completed annual operation.

V. Relationship to RIPRAP: Colorado River Action Plan: Mainstem II.B.3.

VI. Accomplishment of FY 2009 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

The following major maintenance activities were completed on the fish passage.

- 1) Refer to US Fish and Wildlife Service. Bob Burdick
- 2) Redlands Water and Power cooperated with FWS on maintenance

The following improvements were made to the fish passage:

- 1) Refer to US Fish and Wildlife Service. Bob Burdick
- 2) Redlands Water and Power cooperated with FWS on maintenance

The fish screen was operated during the following periods:

- |             |         |                                   |
|-------------|---------|-----------------------------------|
| 1) online   | 4-29-09 |                                   |
| 2) bypassed | 5-21-09 | due to plugged discharge line     |
| 3) online   | 6-9-09  |                                   |
| 4) bypassed | 9-2-09  | to repair dam panels              |
| 5) online   | 9-2-09  |                                   |
| 6) bypassed | 9-8-09  | to install gate on discharge line |
| 7) online   | 9-9-09  |                                   |
| 8) bypassed | 9-16-09 | to replace brush drive cable      |
| 9) online   | 9-17-09 |                                   |

- |                   |          |                            |
|-------------------|----------|----------------------------|
| 10) canal offline | 11-2-09  | maintenance on Power Canal |
| 11) canal online  | 11-5-09  |                            |
| 12) bypassed      | 11-16-09 | cold weather caused icing  |

The following major maintenance activities were completed on the fish screen:

- 1) complete service on air compressor
- 2) complete service on trash rake
- 3) hired crane to clear plugged discharge inlet
- 4) replaced east brush drive cable
- 5) installed gate on discharge pipe at river

The following improvements were made to the fish screen:

- 1) added carport to cover air compressor for lower operating temps.
- 2) added gravel for wet weather access

VII. Recommendations:

- 1) Recovery Program could consider installing water level sensors and controls to aid in canal water level management.
- 2) Update automation of Fish Screen to lower utility costs.
- 3) Add water flow meter to discharge pipe.
- 4) Add manhole or cleanout in discharge line for power cleaning.

VIII. Project Status: On schedule and on budget.

IX. FY 2009 Budget Status

- A. Funds Provided: \$85,000\*
- B. Funds Expended: \$83,327.62\*

See attached FY2009 Invoice summary for detail of expenditures by activity.

X. Status of Data Submission: Not applicable

XI. Signed: Kevin Jones December 17, 2009  
Principal Investigator Date