

## Operation and Maintenance Report

COLORADO RIVER RECOVERY PROGRAM  
FY 2014 ANNUAL PROJECT REPORT

RECOVERY PROGRAM  
PROJECT NUMBER 01-WC-40-7050

I. Project Title: Operation and Maintenance of the Fish Screen and Fish Passage Facility at the Grand Valley Irrigation Company Diversion in Palisade.

II. Prepared by: Charles D. Guenther  
Grand Valley Irrigation Company  
688 26 Road  
Grand Junction, CO 81506  
Phone (970) 242-2762  
Email: charlieg@sprynet.com

III. **Project Summary:**

The Grand Valley Irrigation Company (GVIC) diversion, located on the Colorado River (River) near Palisade, Colorado, diverts water in the GVIC Mainline Canal. A fish passage structure was constructed in the River on the downstream side of and adjacent to GVIC's diversion structure in 1998-1999 during the off water season. The fish screen was constructed in the GVIC canal below the diversion gates on the River in 2002. This fish passage and fish screen is owned by the US Fish and Wildlife Service. GVIC operates and maintains the fish screen and the fish passage through a cooperative agreement with the United States.

IV. **Study Schedule:**

GVIC makes every effort to operate the fish screen whenever diverting water in the GVIC canal from the Colorado River and adequate supply allows for GVIC's decreed diversion amount and needed fish screen by-pass flows. Maintenance of the fish screen/passage is performed following the US Fish and Wildlife Service, the Bureau of Reclamation and GVIC complete an annual inspection and submittal and approval of an annual work plan by GVIC.

V. **Accomplishments of FY 2014 Tasks and Deliverables, Discussion of Initial Findings and shortcomings:**

**The following maintenance and activities were completed on the fish screen:**

October, 2013

1. Build new hook for lifting fish screens.
2. Grease fish screen.
3. Meet with Mark Wernke on fish by-pass.
4. Assist FWS in fish test on by-pass exit in Colorado River.

November, 2013

1. Prepare annual O & M Report.
2. Meet with Mark Wernke and Brent Medford on potential major fish screen improvements.
3. Lift screen #1 and #2 to flush screens.
4. Set new pre-cleaner rack.
5. Discuss with Rocky Mountain (RM) Stand-by Power backup generator malfunctions .

December, 2013

1. Work plan, talk to RM Stand-by Power on backup generator.

January, 2014

1. Talk to RM Stand-by Power for generator work.
2. Discuss getting crane for placing new trash rack.

February, 2014

March, 2014

1. Replaced HDPE pre-cleaner racks with new steel galvanized racks.
2. Fasten new trash racks to bridge abutment.
3. Inspect fish screen for startup water season.

April, 2014

1. Raise screens, #1 brush arm damaged.
2. Rebuild brush arm; replace belt drive; still in-operable; excessive algae.
3. Met with Mountain Peaks Controls; work on PLC for fishscreen.
4. Repair fish screen hoist switches.
5. Talk with RM Stand-by Power backup generator.

May, 2014

1. Cleaned pre-cleaner rack; opened screen #1; flush aft bay.

June, 2014

1. Get quotes for thumb on Bobcat for pre-cleaner.
2. Try to desilt fish screen floor bay.
3. Repair air on brush arm #1.
4. Bypass plugged with small wood debris; opened fish screens.
5. Unplugged bypass pipe.

July, 2014

1. Resolve back-up generator problems.
2. Add temporary airline to brush arm #1.
3. Routine maintenance on air compressor; cotton from trees on screen, running hot.
4. Build racks to keep cotton from trees out of air compressor cooler.
5. Repair festoon system pulleys.
6. Clean all filters on air compressor.

August, 2014

1. Met with Brian, Mt. Peaks Control on PLC; fix programs and signal to gate keepers house.
2. Raise screens due to flash floods in Canyon.
3. Contact Diesel Performance on generator, possible repair.
4. Install new screens on intake to air compressor to keep cotton out of cooler.

September, 2014

1. Raise screens, floods up-stream.
2. Lower screens.
3. Discuss back-up generator power and alarms.

The fish screen was operated during the following periods:

**FISHSCREEN OPERATIONS – 2013 On-Off**

Lowered On Date/Time	Raised Off Date/Time	Days On	Days Off	Shutdown Reason
4/1 8:45 am	4/18/14	7	65	#1 Brusharm broken/excessive River debris
6/12/14	6/18/14	6	1	By-pass plugged
6/19/14	7/30/14	41	8	Excessive River debris
8/7/14	8/27/14	21	2	Excessive River debris
8/29/14	9/9/14	11	3	Excessive River debris
9/11/14	10/1/14	20	1	Excessive River debris
10/2/14	11/3/14	32	0	Water off in canal
<b>TOTAL RUN</b>	<b>217 DAYS</b>	<b>138</b>	<b>79</b>	

Percentages

64% on  
36% off

**VI. The following major maintenance activities were completed on the FISH PASSAGE.**

No MAJOR maintenance required for year.

**OBERMEYER OPERATIONS 2013-2014**

Gate Lowered as Normal Positions	Raised	Lowered	Days Raised	Days Lowered	Reason
		4/1/13		217	Gates never raised during season due to Adequate water in River

TOTAL					

Total day run -217  
 0% Raised  
 100% Lowered

**VII. Expenditures FY 2014:**

Total fiscal period October 1, 2013 -- October 31, 2014

Screen/Passage  
\$58,648.90

Break Down of Expenses

Labor Screens -	<u>\$28,054.50</u>
Electrical Screens -	<u>\$15,257.58</u>
Phone Screens -	<u>\$ 719.79</u>
Material Screens -	<u>\$12,980.58</u>
Equipment Screens -	<u>\$ 973.58</u>
Labor Passage -	<u>\$ -0-</u>
Electrical Passage -	<u>\$ 161.47</u>
Material Passage -	<u>\$ -0-</u>
Equipment Passage -	<u>\$ 501.40</u>

TOTAL \$58,648.90

**VIII. Recommendations:**

1. Replace cables for all brush arms.
2. Sand blast and replace hot galvanizing on screen and baffle slots below water surface.
3. Continue evaluating replacing of some wedgewire screens with travelling screens. Price, engineering, operations, installing, etc.
4. Video camera by-pass pipeline, have had no internal inspection on by-pass pipe since 2002.
5. Place curb on diversion to allow screens to perform during lower water in river.

**IX. Signed:**  10/31/14  
Charles D. Guenther Date  
Assistant Superintendent