

## Operation and Maintenance Report

COLORADO RIVER RECOVERY PROGRAM  
FY 2015 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  
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**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 2015 Tasks and Deliverables, Discussion of Initial Findings and shortcomings:**

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

October, 2014

1. Work on Annual Report for FWS.
2. Normal maintenance on fish screen and pre-cleaner.

November, 2014

1. Work on Annual Report for FWS.

December, 2014

1. No Activity.

January, 2015

1. No Activity.

February, 2015

1. No Activity.

March, 2015

1. Run screens, check brush arm, check generator, check compressor.
2. Replaces brushes on all brush arms.
3. Raised gates 4-5; cleaned silt behind screen with excavator.
4. Lowered all screens; started fish screen; checked Obermeyer operation, fish passage.

April, 2015

1. River debris on brush arms cleaned off, kept fish screens operational..
2. Normal maintenance, greasing, clean trash rack.
3. Met with Mountain Peaks control on PLC, reset parameters, fishscreen.
4. Fixed air hose on brush arm #1.
5. Communicated with air compressor on service per running hours, fishscreen.

May, 2015

1. Training on fish screen for new headgate attendant.
2. Raise screens, excessive river debris.
3. Cleaned sonar boxes; fixed #3 brush arm airline; started headgate keepers lap top.
4. Work on work plan for FWS.

5. Started screens.
6. Measure for chain hoist bag on fish screen; estimate air hoses for replacement.
7. Replaced air chuck on fishscreencompressor; repaired lead car festoon puller, made spares.
8. Added gear oil on brush arm motor.
9. Replaced 9 volt battery on stand-by generator.

#### June, 2015

1. Raised screens.
2. Fixed festoon trolley puller.
3. Set up inspection with BoR, FWS and GVIC.
4. Shot grades at by-pass at canal and river exit of by-pass, .4 ft. difference.
5. Lower screens.
6. HUP meeting, report on recovery.
7. Used air to blow out silt under gates at fishscreen.

#### July, 2015

1. Loaded and hauled river debris pile from pre-cleaner rack with Yanmar excavator and leased trucks.
2. Install chain holder bags on chain hoist, fishscreen.

#### August, 2015

1. Met with air compressor service about oil leak on compressor, fishscreen.
2. Chemical control of small trees and vegetation at fish passage.
3. Reinstall top lid air compressor; cleaned radiator, fishscreen.
4. Clean debris behind Obermeyer Gate and ramps with water truck, fish passage.

#### September, 2015

1. Raised screens, excessive river debris.

2. Lower screens.

End FY2015

The fish screen was operated during the following periods:

**FISHSCREEN OPERATIONS – 2015 On-Off**

Lowered On Date/Time	Raised Off Date/Time	Days On	Days Off	Shutdown Reason
3/30 8:30 AM	5/5/15	36	5	Excessive moss and algae
5/11/15	5/19/15	8	2	Heavy storm events- Excessive river debris
5/21/15	6/2/15	12	20	High river, plugging by-pass Excessive river debris
6/22/15	7/7/15	15	6	Heavy storm events (monsoons) Excessive river debris
7/13/15	8/31/15	49	1	Heavy storm event Excessive river debris
9/1/15	11/1/15	62	0	Excessive River debris
<b>TOTAL RUN</b>	<b>216 DAYS</b>	<b>182</b>	<b>34</b>	

Percentages

84% on  
16% off

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

No MAJOR maintenance required for year.

**FISH PASSAGE  
OBERMEYER OPERATIONS 2015**

Gate Lowered as Normal Positions	Raised	Lowered	Days Raised	Days Lowered	Reason
		3/30/15		148	Adequate water In river
	8/25/15		68		Low river water.
		11/1/15			Water out of canal.
TOTAL					

Total day run -216  
 31% Raised-Closed  
 69% Lowered-Open

**VII. Expenditures FY 2015:**

Total fiscal period October 1, 2014 – October 31, 2015

Screen/Passage  
\$40,780.05

Break Down of Expenses

Administration	<u>\$ 455.80</u>
Labor Screens -	<u>\$14,599.73</u>
Electrical Screens -	<u>\$17,576.18</u>
Phone Screens -	<u>\$ 732.71</u>
Material Screens -	<u>\$ 5,255.55</u>
Equipment Screens -	<u>\$ 1,671.25</u>
Labor Passage -	<u>\$ 136.74</u>
Electrical Passage -	<u>\$ 202.09</u>
Material Passage -	<u>\$ -0-</u>
Equipment Passage -	<u>\$ 150.00</u>

TOTAL \$40,780.05

**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.
6. Replace all rubber air hoses on brush arms 1,2,&3 due to cracking and breaking due to age, normal wear.
7. Fix stand by generator or have a maintenance contract with a reputable dealer.
8. Need to have Brian, Mountain Peaks control, to fix signal from fish screen touch screen to operate Obermeyer gate from fish screen.

**IX. Signed:**

  
Charles D. Guenther  
Assistant Superintendent

11/02/15

Date