

*1. 2016 Report to FWS on the
2015 Annual Report
11/1/15*

Operation and Maintenance Report

COLORADO RIVER RECOVERY PROGRAM
FY 2016 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.

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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 2016 Tasks and Deliverables, Discussion of Initial Findings and shortcomings:**

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

October, 2015

1. Work on Annual Report for FWS.
2. Normal maintenance on fish screen and pre-cleaner.
3. Raised and lowered Obermeyer Gate for low flows in River.

November, 2015

1. Work on Annual Report for FWS.
2. Contracted Kissner Construction for replacing cables on brush arms and air hoses.
3. GVIC removed gear box for brush arm system.

December, 2015

1. Replaced all gears in gear box. (GVIC)

January, 2016

1. Replaced cable sheaves and bearing on outside of gear box.
2. Reinstalled gear box while cables were off system.
3. Kissner Construction replaced air hoses on festoon system and cables on brush arms.

February, 2016

1. Install guide/wear blocks on bottom end of brush arms.
2. Mountain Peaks controls replaced PLC screen.

March, 2016

1. Run screens, check brush arm, check generator, check compressor.
2. Air Compressor Service did routine service on air compressor.
3. Lowered all screens; ran fish screen; checked Obermeyer operation, fish passage.

April, 2016

1. Started canal water April 4.
2. River debris on brush arms cleaned off, kept fish screens operational during early runoff.
3. Normal maintenance, greasing, clean trash rack.

May, 2016

1. Raise screens, excessive river debris.
2. Cleaned sonar boxes; fixed #3 brush arm airline; started headgate keepers lap top.
3. Work on work plan for FWS.
4. Lowered screens for back in service.
5. Worked on trolleys for festoon system.

June, 2016

1. Shot grades at by-pass at canal and river exit of by-pass, .4 ft. difference.
2. Inspect all aspects of fishscreen and prevention.

July, 2016

1. Worked on Annual Workplan.
2. Wagner Equipment repair functions on backup generator.

August, 2016

1. Raised and lowered fishscreen due to excessive river debris.
2. Ridge Runner Electric replaced breaker on air compressor.
3. Reinstall top lid air compressor; cleaned radiator, fishscreen.

September, 2016

1. Annual operations of fishscreen.
2. Raised screens, excessive river debris.

End FY2016

VI.

The fish screen was operated during the following periods:

FISHSCREEN OPERATIONS – 2016 On-Off

Lowered On Date/Time	Raised Off Date/Time	Days On	Days Off	Shutdown Reason
04/04/16	05/06/16	33	12	Excessive moss/algae/river debris
05/18/16	05/27/16	9	4	Excessive river debris
05/31/16	06/06/16	6	9	River elevation too high for by-pass pipe to function properly
07/05/16	08/07/16	33	2	Excessive river debris due to thunder storms in area
08/09/16	08/14/16	5	9	Excessive algae in river and air compressor electrical breaker non-functioning
08/23/16	10/23/16	61	8	Festoon lead trolley pull arm broke frost brush arm pulleys #2 failed
TOTAL RUN	211 DAYS	165	46	

Percentages

78 % on
22 % off

VII.

FISH PASSAGE

OBERMEYER OPERATIONS - 2016 Gate Lowered as Normal Positions	Raised	Lowered	Days Raised	Days Lowered	Reason
			04/14/16		117
	07/29/16		9		Low river water
		08/18/16		11	Adequate water in river
	08/19/16		14		Low river water
		09/02/16		60	Adequate water in river
		10/31/16			Water out of canal
			23	188	
TOTAL					

211 Days

Total Run
11% Raised-Closed
89% Lowered-Open

VIII. Expenditures FY 2016:

Total fiscal period October 1, 2015 – October 31, 2016

Screen/Passage
\$46,970.82

Break Down of Expenses

Administration	<u>\$ 387.45</u>
Labor Screens -	<u>\$16,055.56</u>
Electrical Screens -	<u>\$16,175.77</u>
Phone Screens -	<u>\$ 731.70</u>
Material Screens -	<u>\$ 13,297.81</u>
Equipment Screens -	<u>\$ 0</u>

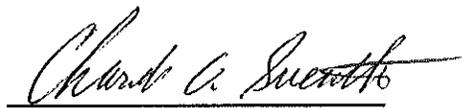
Labor Passage -	<u>\$ 0</u>
Electrical Passage -	<u>\$ 322.52</u>
Material Passage -	<u>\$ 0</u>
Equipment Passage -	<u>\$ 0</u>

TOTAL \$46,970.82

IX. Recommendations:

1. Replace rollers on 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. Clean out pools in fish passage.
7. Replace brushes on brush arms for two year rotation.

X. Signed:



Charles D. Guenther
Assistant Superintendent

11/11/16

Date