

Operation and Maintenance Report

COLORADO RIVER RECOVERY PROGRAM
FY 2012 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. 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 2012 Tasks and Deliverables, Discussion of Initial Findings and shortcomings:**

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

October, 2011

1. Adjust air supply lines to all three brush arms with air on.
2. Flush behind gates 1,2,3,&4. Shut off brush arms to see if we can get a better flush next day.
3. Flush behind gate 1, restart brushes.
4. Raised six screens due to excessive muddy water in River at 6:00 AM. (Oct 26, 2011)

5. Lowered six screens, flushed screen #1 again, started brush arms. (Oct 27, 2011)
6. Shut off main GVIC headgates on October 31, 2011 at 8:00 AM.

November, 2011

1. Washed screen, baffles; pulled screens and baffles; wash channels and floor area with water truck and fire hose.

March, 2012

1. Grease trolleys on brush arm, check pulleys, hoses on airburst system.
2. Lowered screens, baffles, adjust baffles, run airburst and check operations of brush arms.

April, 2012

1. Closed by-pass pipe to .80 opening; Cameo (weir gauge in Colorado River) reading @ 1860 cfs.
2. Raised 6 screens and closed by-pass pipe. Cameo reading @ 1750 cfs, (GVIC canal 570 cfs) at 7:00 AM. (Apr 18, 2012)
3. Lowered 6 screens at 8:00 AM, opened fish by-pass pipe. Cameo @ 3,300 cfs. (Apr 27, 2012)

June, 2012

1. Inspect air compressor, needs cleaning, check out backup generator, unit is not starting.
2. Copied model & serial numbers from fishscreen backup generator.
3. Cleaned precleaner of algae, doing so increased flow to canal. Cameo reading @ 2250 cfs. Talk to gate keeper on fish screen operations.
4. Raised 7 screens at 9:00 AM. (Jun 14, 2012) Cameo @ 2250 cfs; raised 3 more gates and shut off by-pass at 2:00 PM; worked on back up generator, install new battery and add anti-freeze to radiator. Still have problem with shutting off. Cameo @ 2160 cfs.
5. Cleaned fish screens, air compressor filters and cooling coils.
6. Cleaned pre-cleaner; River moss bad; greased trolleys on brush arms. Work on back-up generator, oil pressure, block heater, trickle charger. Put new reset switch, reset weekly maintenance run time.

7. Cleaned pre-cleaner again; River moss or algae bad.
8. Cleaned pre-cleaner again, pulled circulator heater on backup generator.
9. Worked on generator, test new pressure gauge, tested emergency function, replaced charger switch & fuse. Left block heater off for thermostat repairs, found oil sending unit and installed new backup generator. Functional now for emergency use.
10. Washed the screens and baffles that were raised on June 14, raised 8 screens and baffles; GVIC placed call on River at 8:00 AM
11. Pulled remaining screens, continued cleaning screens and baffles. Removed pre-cleaner from channel and cleaned. (Jun 22, 2012)
12. Finished cleaning screens and baffles, de-scaling and cleaning algae.
13. Help set test time on backup generator.

July, 2012

1. Check backup generator, alarm sounding with hazard code on display.

September, 2012

1. BoR acquired CEC to enter Colorado River with equipment.
2. Haul trackhoe to bypass pipe discharge area, start cleaning out pit run gravel in area of discharge, haul to GVIC storage area. Shoot elevations for same. Clean up screen area.
3. Continue cleaning bypass pipe discharge area. Haul to GVIC stockpile.
4. Continue to clean bypass area, haul to GVIC stockpile.
5. Finish digging out bypass discharge area, move equipment, flushed bypass pipe. Removed 53 tandem dump loads, estimated 530 cubic yards material.
6. Estimate flow through screen area for potential screen retrofit with travelling screens.

October, 2012

1. Shut main headgate off October 25, 2012 at 8:45 AM. End of 2012 irrigation season.

3. Fix strap on Obermeyer gate, tighten all related bolts, cleaned pool #1 & flat approach and riffle approach to gate. Cleaned behind Obermeyer gate of gravel & debris. Moved 30 yds. Of material from pool & riffle.
4. Opened Obermeyer gate April 27 at 8:00 AM.

May, 2012

1. Checked fish passage for flows, etc.
2. Applied aquatic herbicide to plant growth in fish passage surface area..

June, 2012

1. Raised Obermeyer gate June 11 at 8:00 AM. Cameo reading 2600 cfs, discussed operations of Obermeyer gate with headgate attendant.
2. Checked Obermeyer gate function.
3. Checked fish passage and Obermeyer gate. No work performed.

September, 2012

1. Clean out pool and riffles at fish passage below Obermeyer gate, haul material out to GVIC stock pile. Eight tandem loads approximately 80 cubic yards material.
2. Transport equipment back to GVIC shop.

October, 2012

1. Opened Obermeyer gate at passage October 25 at 11:00 AM.

OBERMEYER OPERATIONS -2012

Gate Lowered as Normal Positions	Raised	Lowered	Days Raised	Days Lowered	Reason
	4/06 – 10:00 am	4/27 - 8:00 am	21		Low water in River
	6/11 - 8:00 am	10/25 -11:00 a	137	50	Low water in River
TOTAL			158	50	

Total day run – 208
 76% Raised
 24% Lowered

VII. Expenditures FY 2012:

Total fiscal period October 1, 2011 – October 31, 2012

Screen/Passage.

\$38,483.43

Funds Initially provided per Work Plan

\$88,653.03

Break Down of Expenses

Labor Screens - \$17,667.60

Electrical Screens - \$12,481.58

Phone Screens - \$ 645.95

Material Screens - \$ 1,792.28

Equipment Screens - \$ 3,125.75

Labor Passage - \$ 1,481.35

Electrical Passage - \$ 204.85

Material Passage - \$ 41.82

Equipment Passage - \$ 686.00

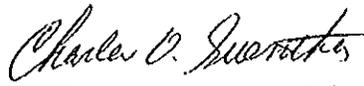
Administration - \$ 353.25

TOTAL \$38,483.43

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. Replace pre-cleaner trash rack with stainless steel or galvanized steel.

IX. Signed:



Charles D. Guenther
Assistant Superintendent

11/12/12

Date