

**GVIC FISHSCREEN/PASSAGE
OPERATION AND MAINTENANCE REPORT**

COLORADO RIVER RECOVERY PROGRAM
FY 2022 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER C-29

- I.** Project Title: Operation and Maintenance of the Fish Screen and Fish Passage Facility at the Grand Valley Irrigation Company Diversion in Palisade Colorado.
- II.** Bureau of Reclamation Agreement Number: 01-WC-40-7050
Project/Grant Period: Start date: 04/01/2002
End date: Ongoing
Reporting period end date: 09/30/2022
Is this the final report? Yes No
- III.** Prepared by: Charles D. Guenther
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- IV. Project Summary:**
The Grand Valley Irrigation Company (GVIC) diversion is located on the Colorado River (River) near Palisade Colorado and 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 river diversion gates in 2002. This fish passage and fish screen is owned by the Bureau of Reclamation. GVIC operates and maintains the fish screen and the fish passage through a cooperative agreement with the United States.
- V. Study Schedule:**
GVIC makes every effort to operate the fish screen and passage whenever diverting water into the GVIC canal from the Colorado River and adequate supply allows for GVIC's decreed diversion amount and needed fish screen by-pass pipe flows. Maintenance of the fish screen/passage is performed following the US Fish and Wildlife Service (FWS), the Bureau of Reclamation (BOR) and GVIC completing an annual inspection and submittal and approval of an Annual Work Plan by GVIC.
- VI. Relationship to RIPRAP:**
Colorado River – II. B.1.a. (4) Operate and maintain fish passage at GVIC
Colorado River – II.B.1.b. (3) Operate and maintain fish screen at GVIC

VII. Accomplishments of FY 2022 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

1. Low river year caused for increased Obermeyer Gate up time due to OMID checking back for GVIC diversion from August 9th to October 31st.

The following maintenance and activities were completed on the GVIC/screen/passage

October, 2021

1. October 08, 2021 Mountain Peak Controls found failed PLC not transmitting real time data to caretaker house. Ordered and installed new PLC.
2. October 29, 2021 power wash behind Obermeyer Gate prior to lowering for season end.
3. October 29, 2021 Cleaned pre-cleaner rack and shut down canal end 2021 season.

November, 2021

1. Charlie, worked on annual O + M report for FY21 submitted November 20, 2021.
2. Charlie, drain filters on air compressor fish passage.

December, 2021

1. No Activity

January 2022

1. No Activity

February, 2022

1. February 23, 2022, VIC Staff meet with BOR & FWS on GVIC fish screens retrofit.

March, 2022

1. March 10, 2022 GVIC Staff meet with BOR on GVIC fish screens retrofit.
2. March 30, 2022, Vickie lowered baffles, greased trolleys on fishscreens.
3. March 31, 2022, Vickie, Kevin lowered screens and test run brusharm and air festoon system.

April, 2022

1. April 4, 2022, GVIC started canal system fish screens down and operable.
2. April 5, 2022, Vickie greased brusharm and, Brian Mountain Peaks Controls fixed PLC for brusharm function set alarms and dates on PLC
3. April 15, 2022 By-Pass gate plugged raised six screens.
4. April 18, 2022, Lowered screens, adjust baffles.
5. April 23, 2022, raised screen evening, excessive river debris.
6. April 25, 2022 Cleaned Screens, Lowered, adjust by-pass gate.
7. April 29, 2022, Air Compressor Service, serviced air compressor at fish screen.

May, 2022

1. May 3, 2022, Raised screens 11:30pm, excessive river debris. Cameo 3,100 cfs
2. May 4, 2022, Lowered screens, adjusted lower check gates.
3. May 8, 2022, Raised screens, excessive river debris. Cameo 4,250 cfs, stayed raised till June 15, 2022 due to high river runoff period.

June, 2022

1. June 13, 2022, GVIC painted fish passage air compressor shed.
2. June 15, 2022, Lowered screens, river clear but still high. Cameo 8,080 cfs.
3. June 22, 2022, Contractor hauled debris stockpile to Mesa County landfill.

July, 2022

1. July 8, 2022, V-belt on drive pulley failed, raised screens. Cameo 3,510 cfs
2. July 9, 2022 closed by-pass gate pulling on #3 stuck brusharm.
3. July 11, 2022, Replaced V-belt lowered screens. Cameo 3,150 cfs

August, 2022

1. August 9, 2022 Raised Obermeyer gate at fishpassage. Cameo 2,020 cfs OMID checking back.
2. August 15, 2022 Raised fish screens low river. Cameo 2,370 cfs. Palisade Weir 88 cfs down to 568 cfs
3. August 24, 2022 Lowered fishscreens, Cameo 2,310 cfs Palisade weir 862.
4. August 30, 2022 Air Compressor Service added oil, blew cooler out, checked scavenge system on fishscreen air compressor.

September 2022

1. September 1, 2022, GVIC replaced all light bulbs on fish screens with LED.

October 2022

1. October 2, 2022, Raised fishscreens due to brusharm travel failure.
2. October 3, 2022 Marty ran brusharms but kept failing.
3. October 6, 2022 Mountain Peak Control out on 10/06/22 to trouble shoot no problem found could have been muddy travel area on bottom.
4. October 7, 2022, Lowered fish screens, Marty and Vickie 11:30 am.
5. October 23, 2022 Vickie raised screens, rain event excessive debris.
6. October 24, 2022 Marty raised screens on upper end to flush out silt loading behind screens.
7. October 31, 2022 GVIC System turned off

END 2022 Operating Season

VIII.

The fish screen was operated during the following periods: Not based on Fiscal Year

FISHSCREEN OPERATIONS – 2022 On-Off

Lowered On Date/Time	Raised Off Date/Time	Operable Days On	Inoperable Days Off	Shutdown Reason
04/04/22	04/04/22	1	1	Lot of debris, fish by-pass plugged
04/15/22	04/15/22	10	3	Excessive debris, by-pass plugged
04/18/22	04/23/22	5	2	Excessive river debris
04/25/22	05/03/22	9	1	Excessive river debris
05/04/22	05/08/22	4	38	Excessive river debris, high runoff
06/15/22	07/08/22	23	3	V-belt on drive pulley failed, Cameo 3,510 cfs
07/11/22	08/15/22	37	9	Low river Cameo 2,370 cfs Palisade Weir 880 cfs 10:00am
08/24/22	10/02/22	38	5	Brush arm travel failure
10/07/22	10/23/22	16	8	Rain Event excessive muddy river
10/31/22				Closed down system
TOTAL RUN	211 DAYS	143	68	
Percentages		68%	32%	
Lowered=Operable Raised=Inoperable				

IX

The fish passage was operated during the following periods: Not Based on Fiscal Year

	FISH PASSAGE		Inoperable	Operable	Reason
	Gate Raised	Gate Lowered	Days	Days	
			Raised	Lowered	
OBERMEYER OPERATIONS - 2022					
Gate Lowered is					
Normal Position					
Fish Passage Operable					
GVIC Irrigation Start		04/04/22		127	Adequate flow in river, water in Canal
Raised Gate	08/09/22		84		Low River OMID Checking Cameo 2,020 cfs
Lowered Gate					
GVIC Irrigation End		10/31/2022			GVIC Shut Down
TOTAL	211 Days	2022	84	127	
Percentage			40%	60%	

Lowered=Operable
 Raised=Inoperable

X. Expenditures FY 2022: Fishscreen/Passage
Funds requested/budgeted for FY22 N/A

Funds Expended FY22 **\$29,313.07**

Fishscreen/Passage

Total fiscal period October 1, 2021 – September 30, 2022

Break Down of Expenses

Administration	<u>\$ 1,640.88</u>
Labor Screens -	<u>\$ 7,361.19</u>
Electrical Screens -	<u>\$11,920.94</u>
Phone Screens -	<u>\$ 988.10</u>
Material Screens -	<u>\$ 4,792.65</u>
Equipment Screens -	<u>\$ 0.00</u>

Labor Passage -	<u>\$ 569.75</u>
Electrical Passage -	<u>\$ 745.40</u>
Material Passage -	<u>\$ 1,294.16</u>
Equipment Passage -	<u>\$ 0.00</u>

TOTAL **FY22** **\$29,313.07**

Notes:

1. Section VII. Accomplishments includes October 2022 FY23 activity however is part of 2022 water
2. Section VIII & IX Operations, include October 2022 for a understandable water season Operations Report
3. See attached photos

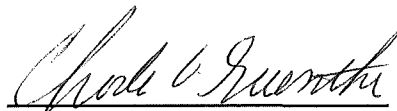
XI. Recommendations:

1. Continue evaluating replacing of some wedge wire screens with travelling screens. Price, engineering, operations, installing, etc.
2. Video camera by-pass pipeline, have had no internal inspection on by-pass pipe since 2002.
3. Place concrete raise on diversion to allow screens to perform during lower water in river through assistance from Applegate Group.
4. Look at cone/drum system of diversion in Price Utah. Possible retrofit to GVIC fish screen.
5. Increase surface area of screens by additional screen system.

Non GVIC fish screen/passage recommendation:

New Colorado River gauging station at end of 15 mile reach upstream of the confluence of the Gunnison River. To reflect return flows from the Grand Valley within the 15 mile reach.

X. Signed:

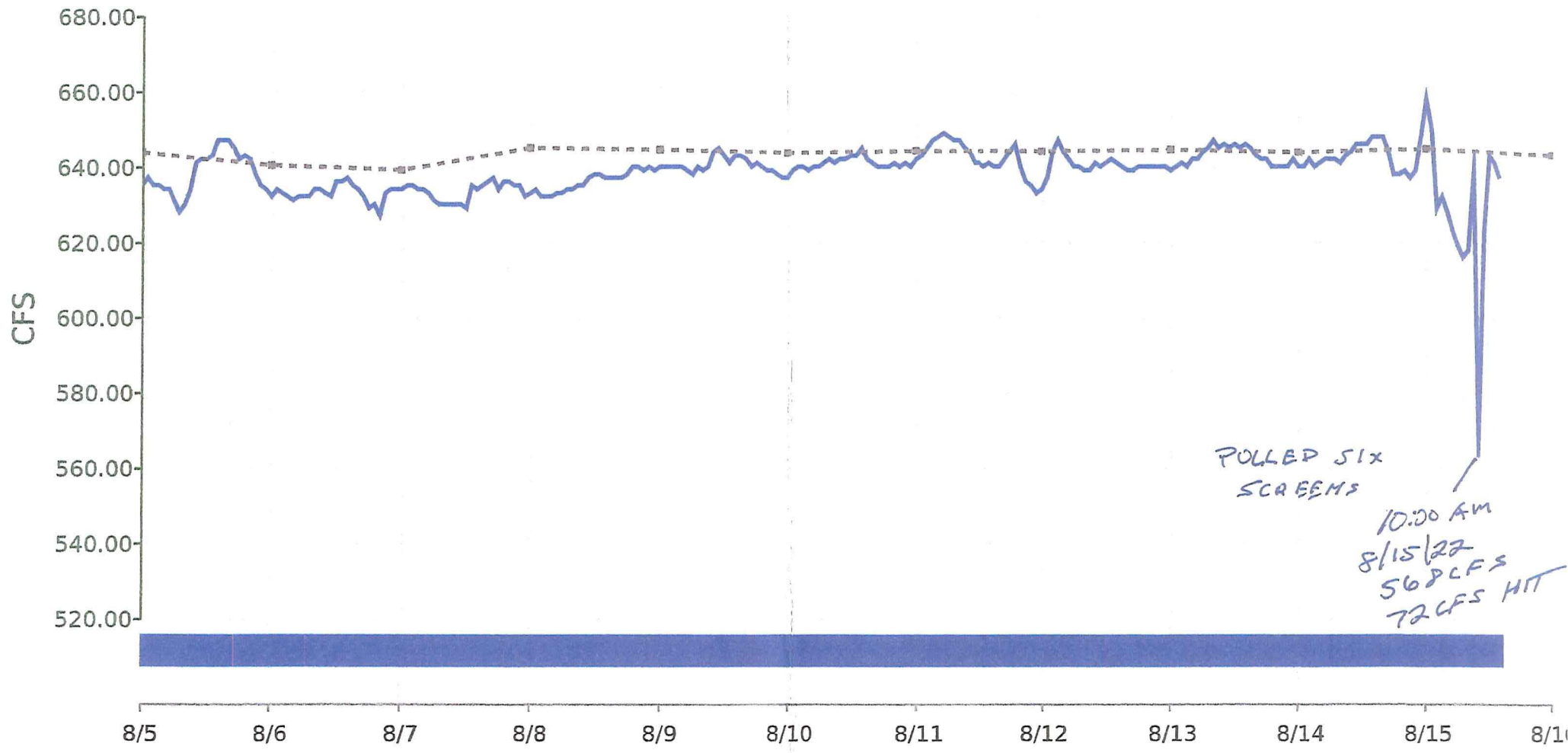


Charles D. Guenther
Assistant Superintendent

12/14/2022
Date

8/15/22

GRDVALCO - GRAND VALLEY CANAL NEAR PALISADE, CO



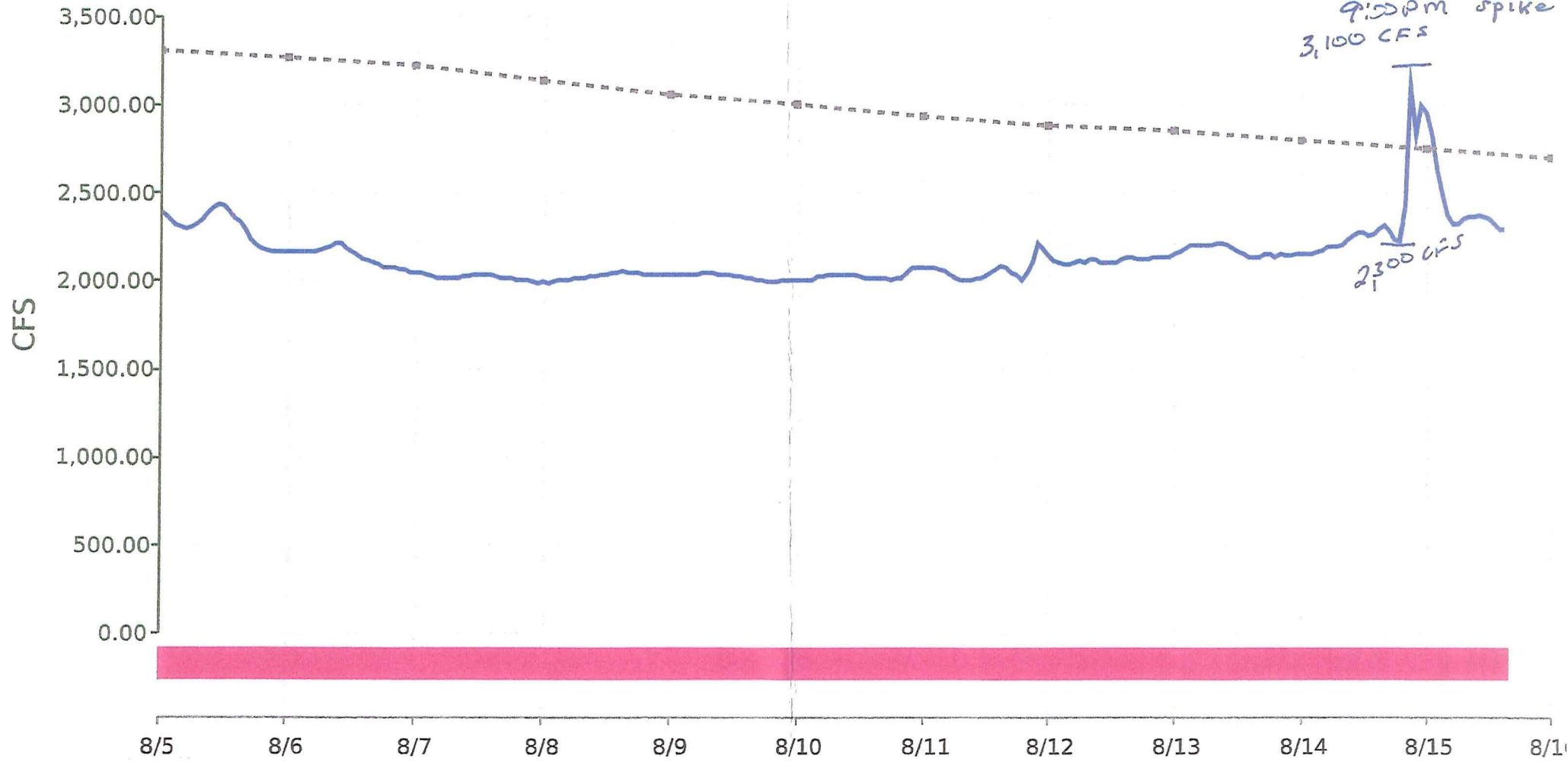
Legend

Flags

■ 0 - Original data as collected by the data collection platform

8/14/22

COLCAMCO - COLORADO RIVER NEAR CAMEO, CO.



Legend

Flags

■ U - 3rd Party Data - Original data as collected by DWR; Reliability unknown