

**RECOVERY PROGRAM
FY 2020-2021 SCOPE OF WORK for:**

Project Numbers: C-5, C-23, C-29, C-33/116

Fish Screen and Passage Operation and Maintenance in the Colorado River Basin
(C-Umbrella)

Project #	Contract Number	Description	Term (years)	Expiration
C-5	05-WC-40-440	Price-Stubb Fish Passage O&M	25	May 3, 2030
C-23	08-WC-40-313	Grand Valley Project Fish Screen & Passage O&M	25	June 5, 2033
C-29	01-WC-40-7050	Grand Valley Irrigation District (GVIC) Fish Screen & Passage O&M	25	September 4, 2026
C-33/116	04-WC-40-040	Redlands Fish Screen & Passage O&M	25	June 3, 2029

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Date Last Modified: April 22, 2019

Category:

- Ongoing project
 Ongoing-revised project
 Requested new project
 Unsolicited proposal

Expected Funding Source:

- Annual funds
 Capital funds
 Other *[explain]*

I. Title of Proposal: Fish Screen and Passage Operation and Maintenance in the Colorado River Basin

II. Relationship to RIPRAP:

Colorado River Action Plan:

- Task II.B.2.a(4), Operate and Maintain Price-Stubb Fish Passage
Task II.B.3.a(3), Operate and Maintain GVP Fish Passage
Task II.B.3.b(3), Operate and Maintain GVP Fish Screen
Task II.B.1.a(4), Operate and Maintain GVIC Fish Passage
Task II.B.1.b(3), Operate and Maintain GVIC Fish Screen

Gunnison River Action Plan:

- Task II.B.1.c, Operate and Maintain Redlands Fish Passage
Task II.B.1.h, Operate and Maintain Redlands Fish Screen

III. Study Background/Rationale and Hypotheses: NA

IV. Study Goals, Objectives, End Product(s): Operate and maintain fish passages and screens to provide fish passage and avoid entrainment in canals along the Colorado River and Gunnison River from Rifle and Delta, Colorado to Lake Powell, Utah.

V. Study Areas: Price-Stubb Diversion Dam, Grand Valley Diversion Dam, Grand Valley Irrigation District Diversion Dam, Redlands Water & Power Diversion Dam

VI. Study Methods/Approach: Operate and maintain the fish passages and screens pursuant to the associated O&M contracts.

VII. Task Description and Schedule:

Item includes various OM&R activities, as anticipated, at each passage/screen facility that will be performed throughout the year. More detailed task descriptions are included in the tables in the following section below.

VIII. Itemized Tasks and Budget by Fiscal Year:

Price-Stubb Fish Passage O&M Workplans:

WORK PROGRAM

O & M AGREEMENT NO. 05-WC-40-440. OM&R for Price/Stubb Diversion Dam Fish Passage Facilities
 Operation, Maintenance and Repair of Price/Stubb Diversion Dam Fish Passage

WORK PROGRAM NO.

FY2020

DATES COVERED

10/1/19

to

9/30/20

ITEM OR FEATURE	NO. OF UNITS	UNIT	UNIT COST	EQUIPMENT	MATERIALS	LABOR	OTHER	TOTAL
Operation and Maintenance Costs								
Labor								
Laborer(s)	16	Hr	\$21.00			\$336.00		\$336.00
Foreman	8	Hr	\$27.00			\$216.00		\$216.00
Manager	8	Hr	\$30.00			\$240.00		\$240.00
Mileage	160	miles	\$0.54				\$86.40	\$86.40
Administrative Costs								
Bookkeeping	4	Hr	\$19.00			\$76.00		\$76.00
Office Overhead	4	Hr	\$12.00				\$48.00	\$48.00
Equipment and Operator								
Debris and silt removal as necessary	1	LS	\$3,800.00	\$3,040.00		\$760.00		\$3,800.00
Filling any large holes in the riprap (Labor & Equipment)	1	LS	\$4,000.00	\$3,200.00		\$800.00		\$4,000.00
Materials					\$3,000.00			\$3,000.00
Total Operation and Maintenance								
								\$11,802.40
Fish Passage Additions/Improvements (None Anticipated in 2019)								
Total Fish Passage Additions/Improvements								
				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Fish Passage Costs								
				\$6,240.00	\$3,000.00	\$2,428.00	\$134.40	\$11,802.40

WORK PROGRAM

O & M AGREEMENT NO. 05-WC-40-440, OM&R for Price/Stubb Diversion Dam Fish Passage Facilities
 Operation, Maintenance and Repair of Price/Stubb Diversion Dam Fish Passage

WORK PROGRAM NO.

FY2021

DATES COVERED

10/1/20

to

9/30/21

ITEM OR FEATURE	NO. OF UNITS	UNIT	UNIT COST	EQUIPMENT	MATERIALS	LABOR	OTHER	TOTAL
Operation and Maintenance Costs								
Labor								
Laborer(s)	16	Hr	\$21.00			\$336.00		\$336.00
Foreman	8	Hr	\$27.00			\$216.00		\$216.00
Manager	8	Hr	\$30.00			\$240.00		\$240.00
Mileage	160	miles	\$0.54				\$86.40	\$86.40
Administrative Costs								
Bookkeeping	4	Hr	\$19.00			\$76.00		\$76.00
Office Overhead	4	Hr	\$12.00				\$48.00	\$48.00
Equipment and Operator								
Debris and silt removal as necessary	1	LS	\$3,800.00	\$3,040.00		\$760.00		\$3,800.00
Filling any large holes in the riprap (Labor & Equipment)	1	LS	\$4,000.00	\$3,200.00		\$800.00		\$4,000.00
Materials					\$3,000.00			\$3,000.00
Total Operation and Maintenance								\$11,802.40
Fish Passage Additions/Improvements (None Anticipated in 2019)								\$0.00
Total Fish Passage Additions/Improvements				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Fish Passage Costs				\$6,240.00	\$3,000.00	\$2,428.00	\$134.40	\$11,802.40

Grand Valley Project Fish Screen and Passage O&M Workplans:

DRAFT WORK PLAN FOR FY 2020

O & M AGREEMENT NO. 08-WC-40-313, OM&R for Grand Valley Water Users' Association **Fish Screen & Fish Passage** Facilities

WORK PROGRAM NO. **FY2020**

DESCRIPTION OF WORK

Operation, Maintenance and Repair of GVVUA's Fish Screen & Maintenance and Modification of Fish Passage

DATES COVERED **01-Oct-2019 to 30-Sep 2020**

ITEM OR FEATURE	NO. OF UNITS	UNIT	UNIT COST	EQUIPMENT	MATERIALS	LABOR	OTHER	TOTAL
<i>Fish Screen Facility O & M</i>								
LABOR								
O&M Crew	500	Hr	46.46			23,230.00		23,230.00
Trash Screen Operator	216	Hr	35.13			7,588.08		7,588.08
Contract Labor	40	Hr	103.00			4,120.00		4,120.00
EQUIPMENT								
Pickups, Trucks, Loaders, Excavators, Trailers, Gradall, Backhoe, Other Misc. Machines & Tools	1	LS	Varies	12,236.40				12,236.40
Mini Excavator	7	Month	2,781.00	19,467.00				19,467.00
FUEL								
Dible Oil		LS	4,449.60	4,449.60				4,449.60
UTILITIES								
Monthly Phone Bill	12	Month	-				0.00	-
MATERIALS								
Various (Estimate Based on Previous Years)		LS	19,158.00		19,158.00			19,158.00
MAINTENANCE								
Yearly - Generator & Compressor		LS	2,945.80	2,945.80				2,945.80
ADMINISTRATIVE COSTS								
Manager (20 hrs/mo for 7 months)	140	Hr	81.58			11,421.20		11,421.20
Bookkeeper (3 hrs/mon 7 mos & 1 hr/mo 5 mos)	26	Hr	45.74			1,189.24		1,189.24
Field Supervisor (10 hrs/mon for 7 mos)	70.00	Hr	70.25			4,917.50		4,917.50
Total Fish Screen O & M								110,722.82
Total Fish Screen Additions/Improvements								
2 Pressure Transducers with 2 Sonic Water Level Sensors to be replaced if current sensors fail		LS	2,060.00				2,060.00	2,060.00
Total Fish Screen Costs								\$ 112,782.82

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DRAFT WORK PLAN FOR FY 2021

O & M AGREEMENT NO. 08-WC-40-313, OM&R for Grand Valley Water Users' Association **Fish Screen & Fish Passage** Facilities

WORK PROGRAM NO. **FY2021 - 06/25/18**

DESCRIPTION OF WORK

Operation, Maintenance and Repair of GVWUA's Fish Screen & Maintenance and Modification of Fish Passage

DATES COVERED **01-Oct-2020 to 30-Sep 2021**

ITEM OR FEATURE	NO. OF UNITS	UNIT	UNIT COST	EQUIPMENT	MATERIALS	LABOR	OTHER	TOTAL
Fish Screen Facility O & M								
LABOR								
O&M Crew	500	Hr	46.46			23,230.00		23,230.00
Trash Screen Operator	216	Hr	35.13			7,588.08		7,588.08
Contract Labor	40	Hr	103.00			4,120.00		4,120.00
EQUIPMENT								
Pickups, Trucks, Loaders, Excavators, Trailers, Gradall, Backhoe, Other Misc. Machines & Tools	1	LS	Varies	12,236.40				12,236.40
Mini Excavator	7	Month	2,781.00	19,467.00				19,467.00
FUEL								
Dible Oil		LS	4,449.60	4,449.60				4,449.60
UTILITIES								
Monthly Phone Bill	12	Month	-				0.00	-
MATERIALS								
Various (Estimate Based on Previous Years)		LS	19,158.00		19,158.00			19,158.00
MAINTENANCE								
Yearly - Generator & Compressor		LS	2,945.80	2,945.80				2,945.80
ADMINISTRATIVE COSTS								
Manager (20 hrs/mo for 7 months)	140	Hr	81.58			11,421.20		11,421.20
Bookkeeper (3 hrs/mon 7 mos & 1 hr/mo 5 mos)	26	Hr	45.74			1,189.24		1,189.24
Field Supervisor (10 hrs/mon for 7 mos)	70.00	Hr	70.25			4,917.50		4,917.50
Total Fish Screen O & M								110,722.82
Total Fish Screen Additions/Improvements								
2 Pressure Transducers with 2 Sonic Water Level Sensors to be replaced if current sensors fail		LS	2,060.00				2,060.00	2,060.00
Total Fish Screen Costs								\$ 112,782.82

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Grand Valley Irrigation Company (GVIC) Fish Screen & Passage O&M Workplans:

**FY2020 and FY2021 Budgets are expected to be the same as was provided in FY2019*

OPERATION & MAINTENANCE AGREEMENT NO 01-WC-40-7050. O&M for GVIC Fish Screen Facility & GVIC Fish Passage								
WORK PROGRAM NO.	FY 2020	DESCRIPTION OF WORK						
Dates Covered: October 1, 2019-September 30, 2020		Operation, Maintenance and Repair of GVIC Fish Screen and Fish Passage						
ITEM OR FEATURE	# OF UNITS	UNIT	UNIT COST	EQUIPMENT	MATERIALS	LABOR	OTHER	TOTAL
Fish Screen Facility								
O&M								
Routine Site Maintenance & Inspections								
Labor B (Attendant)	250	Hrs	\$45.58			\$11,395.00		\$ 11,395.00
Labor A (Maintenance)	290	Hrs	\$45.58			\$13,218.20		\$ 13,218.20
Outside Mtce; Air compressor/Generator/PLC	20	Hrs	\$135.00				\$2,700.00	\$ 2,700.00
Equipment								
Backhoe/Excavator	20	Hrs	\$ 45.00	\$ 900.00				\$ 900.00
Dump Truck	10	Hrs	\$ 50.00	\$ 500.00				\$ 500.00
Pumps, Generators, misc	10	Hrs	\$ 80.00	\$ 800.00				\$ 800.00
								\$ -
Materials (gravel, grease, tools, misc)	1		\$ 2,000.00		\$ 2,000.00			\$ 2,000.00
								\$ -
Administrative Costs								
Salaries & Associated costs	25	Hrs	\$45.58				\$ 1,139.50	\$ 1,139.50
Utilities								
Electric	12	Mos	\$ 1,400.00				\$ 16,800.00	\$ 16,800.00
Telephone/Fishscreen	12	Mos	\$ 67.00				\$ 756.00	\$ 756.00
Contingencies								
Total Fish Screen O & M				\$ 2,200.00	\$ 2,000.00	\$ 24,613.20	\$ 21,395.50	\$ 50,208.70
Construction Additions/Improvements								
1. Phase II Dam Feasibility Study	1						\$ 6,800.00	\$ 6,800.00
								\$ -
								\$ -
								\$ -
								\$ -
								\$ -
				\$ -	\$ -	\$ -	\$ 6,800.00	\$ 6,800.00
Total Fish Screen Projected Costs				\$ 2,200.00	\$ 2,000.00	\$ 24,613.20	\$ 28,195.50	\$ 57,008.70
Fish Passage Facility FY 20								
O&M								
Routine Site Maintenance, Operations & Inspections								
Labor B (Attendant)	5	Hrs	\$ 45.58			\$ 227.90		\$ 227.90
Labor A (Maintenance)	20	Hrs	\$ 45.58			\$ 911.60		\$ 911.60
Outside Maintenance, AirCompressor Serv	1	Unit	\$ 400.00				\$ 400.00	\$ 400.00
Equipment								
Backhoe/Excavator	8	Hrs	\$ 45.00	\$ 360.00				\$ 360.00
Misc Equipment	8	Hrs	\$ 20.00	\$ 160.00				\$ 160.00
Materials (gravel, paint, tools, misc)	1	Unit	\$ 400.00		\$ 400.00			\$ 400.00
Administrative Costs	5	Hrs	\$ 45.58			\$ 227.90		\$ 227.90
								\$ -
Utilities								
Electric	12	Mos	\$ 35.00				\$ 420.00	\$ 420.00
Telephone								\$ -
Contingencies								
Total Fish Passage O & M				\$ 520.00	\$ 400.00	\$ 1,367.40	\$ 820.00	\$ 3,107.40
Construction Additions/Improvements								
								\$ -
								\$ -
								\$ -
								\$ -
								\$ -
Additions/Improvements								\$ -
Total Fish Passage Costs					\$ -		\$ -	\$ 3,107.40
TOTAL FISHSCREEN/PASSAGE PROJECTED COSTS FY 2020				\$ 2,720.00	\$ 2,400.00	\$ 25,980.60	\$ 29,015.50	\$ 60,116.10

Redlands Fish Screen & Passage O&M Workplans:

Currently do not have workplans from Redlands Water and Power. Estimates are made based on average O&M payment of the last 5 years.

IX. Budget Summary:

Project #	Description	FY2020	FY2021	FY2022	FY2023	FY2024
C-5	Price-Stubbs Fish Passage O&M	\$11,802	\$11,802	\$11,802	\$11,802	\$11,802
C-23	Grand Valley Project Fish Screen & Passage O&M	\$112,783	\$116,166	\$119,651	\$123,241	\$126,938
C-29	Grand Valley Irrigation Company (GVIC) Fish Screen & Passage O&M	\$60,116	\$61,920	\$63,777	\$65,690	\$67,661
C-33/116	Redlands Fish Screen & Passage O&M	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964
SUBTOTAL		\$236,201	\$242,933	\$249,867	\$257,009	\$264,365
TOTAL*	Estimate based on 5yr trend & current est.+ 10%	\$208,457	\$208,864	\$247,388	\$263,505	\$269,270

*The subtotal in the table above is simply the sum of each estimated annual budget for each project. This value has historically been overestimated, so for FY2020, an estimated total is provided using the median of last 5 years of actual O&M payments made and the next 2-year workplan estimates, plus 10%. FY2021 uses the last 4 years of actual O&M payments made and the next 3-year workplan estimates, plus 10%. This provides a conservative, yet more realistic estimate of total annual O&M costs that are anticipated under this Scope of Work.

X. Reviewers: Program Director's Office and Water Acquisition Committee.

XI. References: NA