



## AGENDA

# REGULAR MEETING OF THE ENGINEERING AND OPERATIONS COMMITTEE

December 6, 2021

3:30 PM

### Call to Order

### Public Comments

Members of the public may make comments in-person, virtually, or submit a Public Comment Request Form located at <https://www.evmwd.com/evmwd-publiccomment>, prior to the close of Public Comments. Please note, individuals have a limit of three (3) minutes to make comments and will have the opportunity when called upon by the presiding officer.

### Discussion Items:

1. Amendment No. 2 to the Contract Services Agreement with Advanced Chemical Transport, Inc. for Hazardous Waste Collection, Transport, and Disposal
2. Contract Services Agreement with Weber Water Resources, LLC For Permanent Equipment Installation at Diamond Well
3. Engineering Department Quarterly Performance Measures and Project Updates
4. Consider Items for Board Review
5. Discuss Future Agenda Items
6. Other
7. Adjourn

*In the interest of public health and safety, this meeting will be conducted in accordance with provisions of the Brown Act and Assembly Bill 361. Participants who would like to join this meeting remotely can do so in one of the following ways:*

#### **For Online Participation:**

Go to: [www.zoom.us](https://www.zoom.us)  
Select Join a Meeting  
Enter Meeting ID: 861 0907 2045  
Meeting Password: 92530

#### **For Call-in Only:**

Call: (720) 707 2699  
Enter Meeting ID: 861 0907 2045  
Meeting Password: 92530



**ENGINEERING AND  
OPERATIONS COMMITTEE**

*DISCUSSION OUTLINE*

---

**Date:** December 6, 2021

**Originator:** Jessie Arellano - Operations

**Subject:** **AMENDMENT NO. 2 TO THE CONTRACT SERVICES AGREEMENT WITH ADVANCED CHEMICAL TRANSPORT, INC. FOR HAZARDOUS WASTE COLLECTION, TRANSPORT, AND DISPOSAL**

---

**BACKGROUND AND RECOMMENDATION**

EVMWD routinely generates hazardous waste materials, including but not limited to used oil, corrosive liquids, corrosive solids, flammable liquids, and universal waste. As a result, the EPA has categorized EVMWD as a large quantity generator and under the EPA definition of a large quantity generator, hazardous waste materials may only be collected on-site for a maximum of 90 days before they are required to be disposed of.

On January 9, 2020, the Board approved a two-year Contract Services Agreement including three one-year optional extensions with Advanced Chemical Transport, Inc., in the amount of \$125,000. On January 4, 2021, under the General Manager's authority, staff added additional services to the scope of work and an additional \$50,000 as Amendment No. 1.

During the past year additional departments have begun to utilize the hazardous waste removal services. In addition, several atypical situations occurred, which required non-routine hazardous collection and disposal. As a result, the initial estimated amount of \$25,000 per year is found to no longer be sufficient for this contract agreement. Staff is requesting an increase in the annual amount for Hazardous Waste Collection, Transport, and Disposal Services from \$25,000 to \$50,000.

Staff plans to present this item at the December 16, 2021 Board meeting to request approval of an Amendment to the Contract Services Agreement with Advanced Chemical Transport, Inc. in the amount of \$50,000. In addition, staff requests that the Board approve two one-year optional contract extensions, each in the amount of \$50,000, for a total contract amount of \$250,000.

**ENVIRONMENTAL WORK STATUS**

Not applicable.

**FISCAL IMPACT**

Within Budget – Yes.

Attachments:

None



**Date:** December 6, 2021

**Originator:** David Smith - Operations

**Subject:** **CONTRACT SERVICES AGREEMENT WITH WEBER WATER RESOURCES, LLC. FOR PERMANENT EQUIPMENT INSTALLATION AT DIAMOND WELL**

---

**BACKGROUND AND RECOMMENDATION**

Diamond Well underwent complete rehabilitation during the period June 2018 to May 2019, and startup was conducted in June 2019. Following rehabilitation, the well suffered from vibration issues which limited steady-state operation and production capability. Further, in early 2020 the production rate began to decline. In partnership with the rehabilitation contractor, multiple attempts were made to isolate and eliminate the source of the vibration issue. Ultimately, the down-hole pump equipment was removed in March 2021 for inspection and analysis to determine the cause of vibration and loss in production.

Inspection revealed progressive wear to most of the pump bowls, which is indicative of damage caused by cavitation over time.

Following extensive discussions and close coordination between the District's hydrogeologist, Engineering, and Operations, staff has determined the well itself remains in serviceable condition and recommend replacement of the pump and associated column piping and hardware. The scope of work also includes minor modifications to the well head to facilitate improved access for down-hole water level measurements. It is anticipated that these improvements and modifications will keep the well in service for the next five to eight years.

On August 23, 2021, the District posted an Invitation for Bid for Permanent Equipment Installation at Diamond Well. Four bids were received by the deadline with Weber Water Resources, Inc. being the sole responsive and responsible bidder at \$225,023.

Staff plans to present this item at the December 16, 2021 Board meeting to recommend approval of a Contract Services Agreement with Weber Water Resources, Inc. in the amount of \$225,023 for permanent equipment installation at Diamond Well.

**ENVIRONMENTAL WORK STATUS**

CEQA NOE required for this project.

**FISCAL IMPACT**

Within Budget – No. An appropriation of funds is being requested in the amount of \$225,023 with funding provided by the Elsinore Water Replacement Program.

Attachments:

Weber Water Resources, Inc. Bid

**BID FORMS**

1.1 Bid Acknowledgement.

Name of Bidder: Weber Water Resources CA, LLC

Contact Person: Don Rice

Business Mailing Address: 1785 Container Circle, Riverside CA 92509

Business Street Address: 1785 Container Circle, Riverside CA 92509

Telephone: (909) 361-2014 Fax: ( )

- 1.1 In response to the Notice Inviting Bids for the services described in the Scope of Work and in accordance with the accompanying Instructions to Bidders, the undersigned hereby proposes to furnish all labor, technical and professional services, supervision, materials and equipment, and to perform all operations necessary and required to complete the Project in accordance with the provisions of the Contract Documents and any addenda thereto, and at the prices set forth in the Bid Schedule.
- 1.2 This Bid constitutes a firm offer to the Elsinore Valley Municipal Water District which cannot be withdrawn for 120 days after the date set for opening of Bids, or until a Contract is executed by the District and a third party, whichever is earlier.
- 1.3 The undersigned certifies that it has examined and is fully familiar with all of the provisions of the Contract Documents and any addenda thereto; that it has carefully checked all of the figures shown in its Bid Schedule; that it has carefully reviewed the accuracy of all statements in this Bid and attachments hereto; and that it understands and agrees that the District will not be responsible for any errors or omissions on the part of the undersigned in preparing this Bid.
- 1.4 If awarded a Contract, the undersigned agrees to execute and deliver to the District within 15 days after date of receipt of Notice of Award, a signed Contract in duplicate and the necessary Performance Bond, Payment Bond, and certificates of insurance and endorsements, as required.
- 1.5 Incorporated herein by this reference and made a part of this Bid are the following forms which have been completed and submitted by undersigned Bidder:

<u>Item</u>	<u>Completed</u>
1. Bid Acknowledgement	X
2. Bid Schedule	X
3. Experience Statement	X
4. Public Works Contractor Registration Certification	X
5. Bid Bond or other security	N/A

- 1.6 Undersigned also acknowledges receipt, understanding, and full consideration of all addenda to the Contract Documents in preparing its bid.
- 1.7 The undersigned is hereby representing that it is and will be properly licensed both at the time that it submits a Bid as well as at the time the Contract is awarded, if the Contract is awarded to the undersigned.
- 1.8 Undersigned acknowledges that the representations made herein are made under penalty of perjury.

Executed at Orange County, on this 7th day of September, 2021.

Weber Water Resources CA, LLC  
(Contractor Name )

Don Rice - General Manager  
(Name and Title)

(Corporate Seal)

  
(Signature)

1.3 Bidder Experience Statement

Bidder submits, as a part of its Bid, the following statements as to its experience qualifications. Bidder certifies that all statements and information set forth below are true and accurate. Bidder hereby authorizes the District to make inquiry as appropriate regarding its experience.

- (a) Bidder has been engaged in business under its present business name for 9 years.
- (b) Bidder's experience in the services described in the Scope of Work of a similar magnitude to that set forth in the Contract Documents extends over a period of 9 years.
- (c) Bidder has satisfactorily completed all contracts awarded to it, except as follows:  
  
(Please use your own document using as many pages as needed: Name any and all exceptions and reasons therefor.) Yes. No exceptions.
- (d) Within the last three years Bidder has satisfactorily completed the following contracts covering the same or similar scope of work and similar magnitude to that set forth in the Contract Documents.

Please Use your own document including only the following fields:

Owner's Name, Address & Telephone/Email	Name of Owner's Representative	Description of Work and Year	Contract Amount (rounded to closest thousand dollars)
---	--------------------------------	------------------------------	---

\*See attached



1.5 Public Works Contractor Registration Certification

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for additional information.

No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Bidder hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.

Name of Bidder: Weber Water Resources CA, LLC

DIR Registration Number: 1000006548

DIR Registration Expiration: 6/2023

Bidder further acknowledges:

1. Bidder shall maintain a current DIR registration for the duration of the project.
2. Bidder shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
3. Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Name of Bidder Weber Water Resources

Signature 

Name and Title Don Rice - General Manager

Dated 9/7/21

## Bid Results

### Bidder Details

**Vendor Name** Weber Water Resources CA LLC  
**Address** 1785 Container Circle  
Riverside, California 92509  
United States  
**Respondee** Don Rice  
**Respondee Title** GM  
**Phone** 909-361-2014  
**Email** drice@WeberWaterResources.com  
**Vendor Type** CADIR  
**License #** 970199  
CADIR

### Bid Detail

**Bid Format** Electronic  
**Submitted** 09/07/2021 3:38 PM (PDT)  
**Delivery Method**  
**Bid Responsive** Yes  
**Bid Status** Submitted  
**Confirmation #** 265735

### Respondee Comment

### Buyer Comment

### Attachments

File Title	File Name	File Type
Elsinore Diamond Well References_Prelim Sched_Bid Docs_Bowl Data_Final.pdf	Elsinore Diamond Well References_Prelim Sched_Bid Docs_Bowl Data_Final.pdf	General Attachment

## Line Items

Discount Terms No Discount

Item #	Item Code	Type	Item Description	UOM	QTY	Unit Price	Line Total	Response	Comment
Section 1							\$225,023.00		
1			MOBILIZATION, BONDS, PERMITS, SITE CLEANUP, SITE SECURITY, SITE RESTORATION, AND DEMOBILIZATION	LS	1	\$18,361.00	\$18,361.00	Yes	
2			TEMPORARY EROSION CONTROL MEASURES, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT DISCHARGE COMPLIANCE, REPORTING AND LEGAL DISPOSAL	LS	1	\$8,125.00	\$8,125.00	Yes	
3			PRE/POST-CONSTRUCTION VIDEOTAPES AND PHOTOGRAPHS	LS	1	\$1,250.00	\$1,250.00	Yes	
4			INSTALL VERTICAL TURBINE PUMP, COLUMN PIPING (INCLUDING TUBE AND SHAFT), MOTOR, AND ASSOCIATED EQUIPMENT (EXISTING MOTOR SHALL BE REUSED)	LS	1	\$23,000.00	\$23,000.00	Yes	
5			FURNISH NEW PUMP BOWL ASSEMBLY	LS	1	\$26,196.00	\$26,196.00	Yes	
6			FURNISH NEW COLUMN PIPE	LS	1	\$79,300.00	\$79,300.00	Yes	.279 wall NSF61 6233 Epoxy Lined/Coated
7			FURNISH NEW PUMP TUBE AND SHAFT	LS	1	\$49,400.00	\$49,400.00	Yes	3" X 1-15/16" X 20' NSF61 6233 Epoxy Coated
8			FURNISH NEW PRESSURE TRANSDUCER	LS	1	\$4,667.00	\$4,667.00	Yes	
9			PERFORM MODIFICATIONS TO WELL HEAD TO PROVIDE AND INSTALL AN ADDITIONAL AIRLINE AND SOUNDING TUBE	LS	1	\$7,249.00	\$7,249.00	Yes	
10			PERFORM FINAL DISINFECTION	LS	1	\$5,125.00	\$5,125.00	Yes	
11			PERFORM EQUIPMENT STARTUP, COMMISSIONING AND TRAINING	LS	1	\$2,350.00	\$2,350.00	Yes	

## Line Item Subtotals

Section Title	Line Total
Section 1	\$225,023.00
Grand Total	\$225,023.00

## Well Rehabilitation References

1. Cal Am Water
  - a. Berwick Well No 8
  - b. Alissa Kispersky
  - c. (831) 241-3162
  - d. \$168,144
  - e. Removed pumping equipment and performed well video. Video showed bio-fouling and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters
2. Lake Elsinore Valley Municipal Water
  - a. Cereal No 1
  - b. Bill Graham
  - c. (951) 367-8453
  - d. \$758,032
  - e. Removed pumping equipment and performed well video. Video showed encrustation and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.
3. Lake Elsinore Valley Municipal Water
  - a. Cereal No 3
  - b. Bill Graham
  - c. (951) 367-8453
  - d. \$727,784
  - e. Removed pumping equipment and performed well video. Video showed encrustation and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.
4. Golden State Water Company
  - a. Oak Well
  - b. Justin Brown
  - c. (805) 260-0870
  - d. \$186,755
  - e. Removed pumping equipment and performed well video. Video showed bio-fouling and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.

5. Golden State Water Company
  - a. Crescent Well
  - b. Justin Brown
  - c. (805) 260-0870
  - d. \$213,318G
  - e. Removed pumping equipment and performed well video. Video showed bio-fouling and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.
6. Cal Am Water
  - a. Berwick No 9
  - b. Alissa Kispersky
  - c. (831) 646-3226
  - d. \$165,251
  - e. Removed pumping equipment and performed well video. Video showed bio-fouling and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.
7. Cal Am Water
  - a. Crenshaw Well
  - b. Matthew Lasecki
  - c. (916) 275-4740
  - d. \$181,259
  - e. Removed pumping equipment and performed well video. Video showed bio-fouling and plugged perforations. Performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.
8. Cal Am Water
  - a. Grand Well
  - b. Matthew Lasecki
  - c. (916) 275-4740
  - d. \$342,089
  - e. Removed pumping equipment and performed well video. Video showed deterioration of the casing. Installed liner and performed chemical rehabilitation. Redeveloped well and re-equipped well with new improved pumping parameters.

9. Riverside Public Utilities

- a. Raub No 8
- b. Adam Keeline
- c. (951) 237-1342
- d. \$312,443
- e. Removed pumping equipment and performed a well video. The well video showed scaling and bio build-up. Weber performed a chemical rehabilitation following by installation of a test pump. New pumping equipment was purchased and installed to accommodate increased capacity and improved efficiencies.

10. Riverside Public Utilities

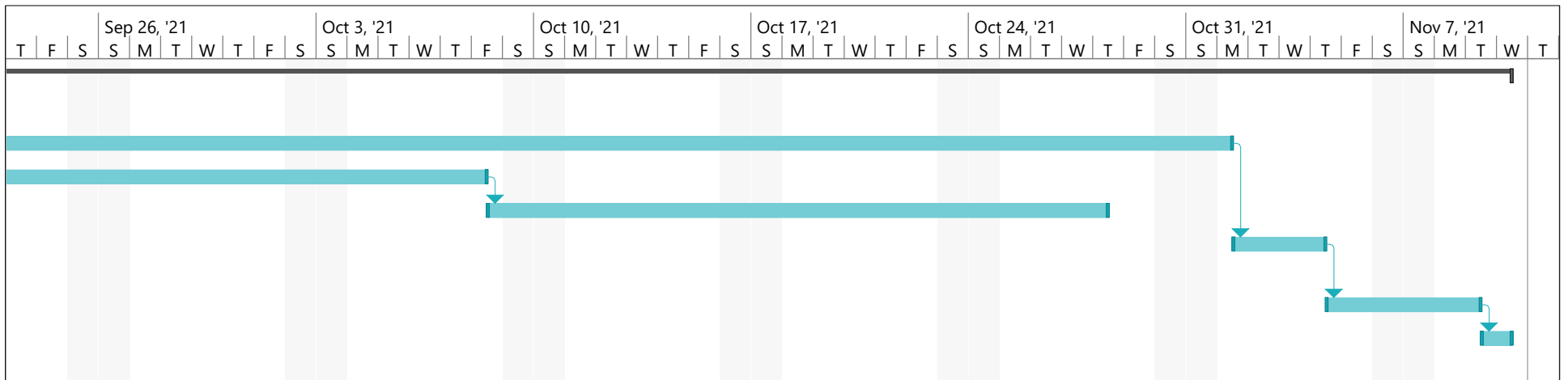
- a. Garner No 7
- b. Adam Keeline
- c. (951) 237-1342
- d. \$312,443
- e. Removed pumping equipment and performed a well video. The well video showed scaling and bio build-up. Weber performed a chemical rehabilitation following by installation of a test pump. New pumping equipment was purchased and installed to accommodate increased capacity and improved efficiencies.

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Sep 5, '21							Sep 12, '21							Sep 19, '21															
							M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T												
1		<b>Diamond Well</b>	<b>37.5 days</b>	<b>Mon 9/20/21</b>	<b>Wed 11/10/21</b>																															
2		NTP	0.5 days	Mon 9/20/21	Mon 9/20/21																															
3		Order Material	30 days	Mon 9/20/21	Mon 11/1/21																															
4		Head Modification:	14 days	Mon 9/20/21	Fri 10/8/21	2																														
5		Coat Head	14 days	Fri 10/8/21	Thu 10/28/21	4																														
6		Install Permanent Equip	3 days	Mon 11/1/21	Thu 11/4/21	3																														
7		Disinfection	3 days	Thu 11/4/21	Tue 11/9/21	6																														
8		Perform Startup & Training	1 day	Tue 11/9/21	Wed 11/10/21	7																														

Project: Elsinore Diamond Well  
Date: Tue 9/7/21

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			





Project: Elsinore Diamond Well Date: Tue 9/7/21	Task		Inactive Summary		External Tasks	
	Split		Manual Task		External Milestone	
	Milestone		Duration-only		Deadline	
	Summary		Manual Summary Rollup		Progress	
	Project Summary		Manual Summary		Manual Progress	
	Inactive Task		Start-only			
	Inactive Milestone		Finish-only			

### Pump Performance Datasheet

Customer :	Quote Number / ID :	9321 Weber Elsinore Diamond Well
Customer ref. / PO :	Bowl :	
Tag Number : 001	Peerless Model :	GL12ME/HC-QS
Service :	Stages :	10
Quantity : 1	Based on curve number :	GL12MEHC4606116 Rev Jul2020
	Date last saved :	03 Sep 2021 6:14 PM

Operating Conditions		Liquid	
Flow, rated	: 1,500 USgpm	Liquid type	: Cold Water
Differential head / pressure, rated (requested)	: 658.00 ft	Additional liquid description	:
Differential head / pressure, rated (actual)	: 660.13 ft	Solids diameter, max	: 0.00 in
Suction pressure, rated / max	: 0.00 / 0.00 psi.g	Solids concentration, by volume	: 0.00 %
NPSH available, rated	: Ample	Temperature, max	: 68.00 deg F
Site Supply Frequency	: 60 Hz	Fluid density, rated / max	: 1.000 / 1.000 SG

Performance		Material	
Speed, rated	: 1780 rpm	Material selected	: Material Group, Standard
Impeller diameter, rated	: 8.81 / 9.30 in		
Impeller diameter, maximum	: 8.90 / 9.66 in		
Impeller diameter, minimum	: 7.86 / 7.86 in		
Efficiency (bowl / pump)	: 81.30 / - %		
NPSH required / margin required	: 22.6 / 0.0 ft		
Ns (imp. eye flow) / Nss (imp. eye flow)	: 2,525 / 7,048 US Units		
MCSF	: 508 USgpm		
Head, maximum, rated diameter	: 878.79 ft		
Head rise to shutoff (bowl / pump)	: 31.75 / - %		
Flow, best eff. point (bowl / pump)	: 1,287 / - USgpm		
Flow ratio, rated / BEP (bowl / pump)	: 116.57 / - %		
Diameter ratio (rated / max)	: 97.52 %		
Head ratio (rated dia / max dia)	: 90.61 %		
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00		
Selection status	: Acceptable		

Pressure Data	
Maximum working pressure	: See the Additional Data page
Maximum allowable working pressure	: See the Additional Data page
Maximum allowable suction pressure	: N/A
Hydrostatic test pressure	: See the Additional Data page

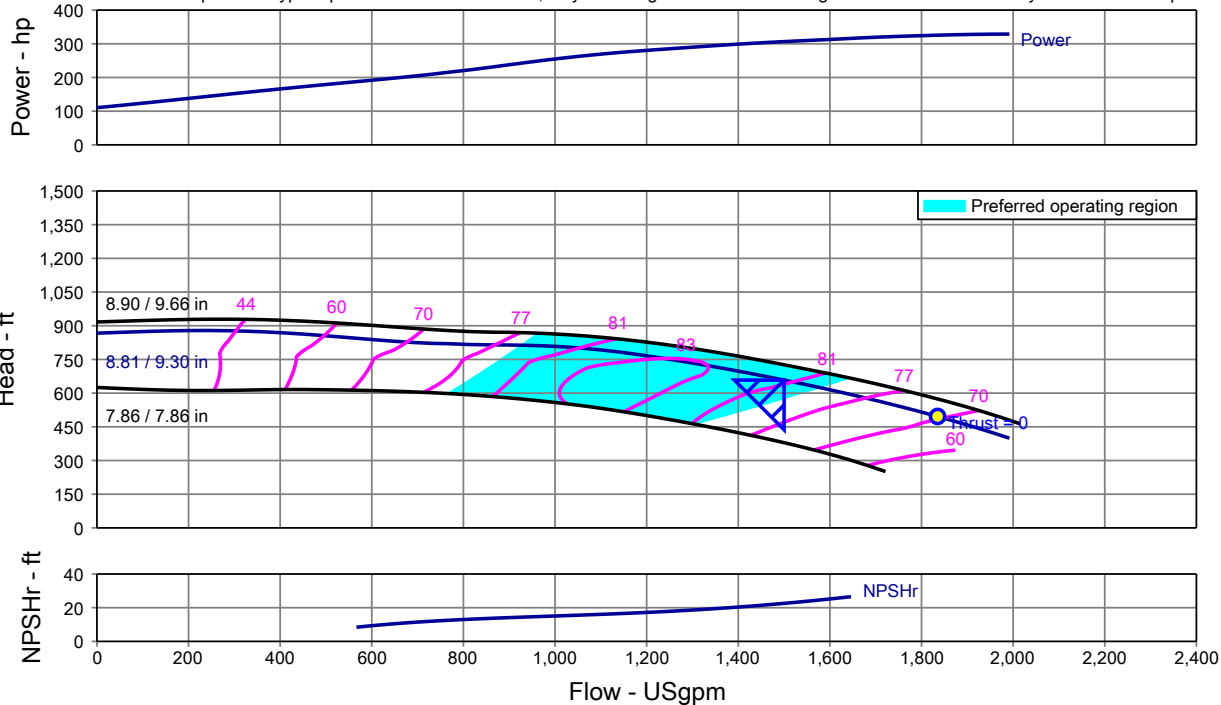
Driver & Power Data (@Max density)	
Motor sizing specification	: Max power (non-overloading)
Margin over specification	: 0.00 %
Service factor	: 1.15
Power, hydraulic	: 249.2 hp
Power (bowl / pump)	: 306.5 / - hp
Max power (non-overloading)	: 328.8 hp
Nameplate motor rating	: 350.0 hp / 261.0 kW

Bowl performance. Adjusted for construction and viscosity.

The duty point represents the head at the bowl.

Performance based on test acceptance - Hyd Ins 14.6 Bilateral (1B)

Performance curve represents typical performance. When tested, only the design flow and head are guaranteed. Contact factory for additional requirements.



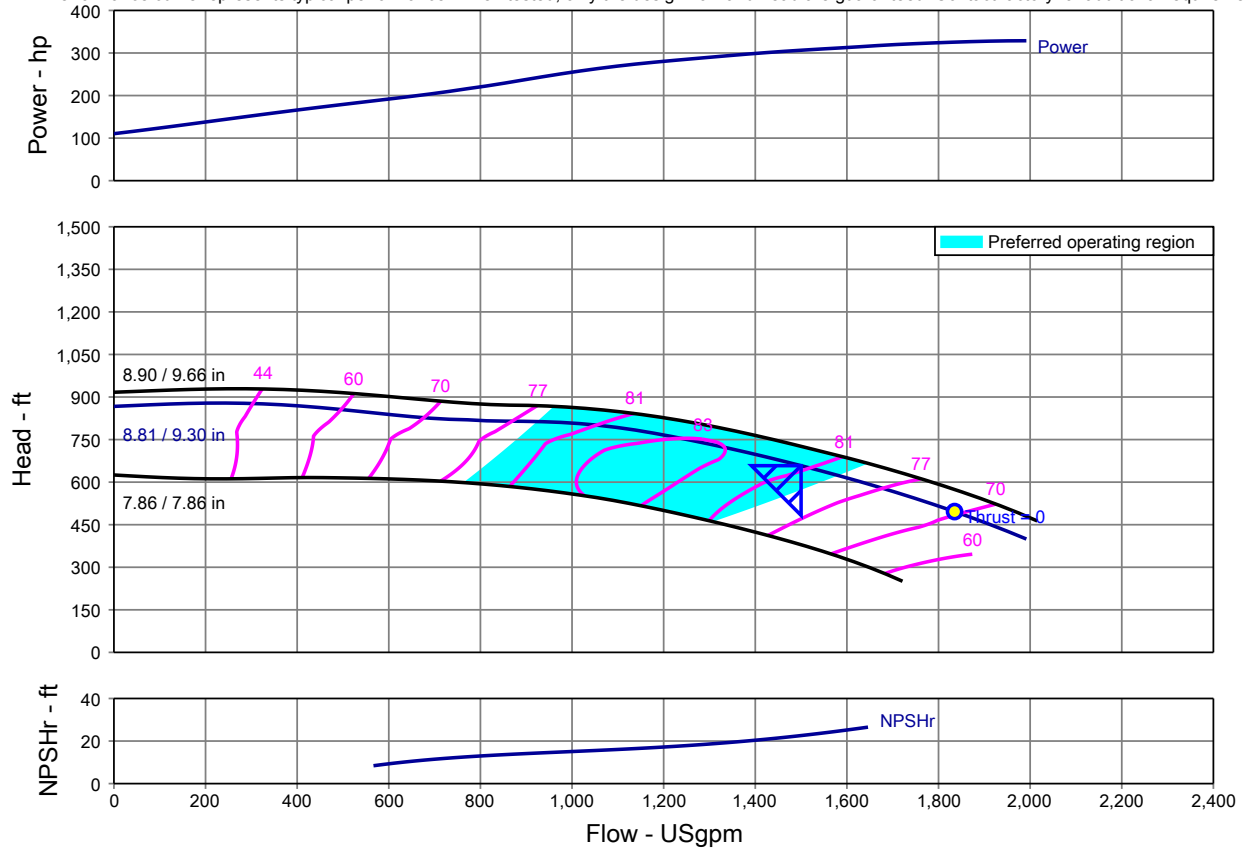
## Pump Performance Curve

Bowl performance. Adjusted for construction and viscosity.

The duty point represents the head at the bowl.

Performance based on test acceptance - Hyd Ins 14.6 Bilateral (1B)

Performance curve represents typical performance. When tested, only the design flow and head are guaranteed. Contact factory for additional requirements.



Customer :	Peerless Model : GL12ME/HC-QS
Customer ref. / PO :	Stages : 10
Tag Number : 001	Speed, rated : 1780 rpm
Service :	Based on curve number : GL12MEHC4606116 Rev Jul2020
Quantity : 1	Efficiency (bowl / pump) : 81.30 / - %
Quote Number / ID : 9321 Weber Elsinore Diamond Well Bowl	Power (bowl / pump) : 306.5 / - hp
Date last saved : 03 Sep 2021 6:14 PM	Max power (non-overloading) : 328.8 hp
Flow, rated : 1,500 USgpm	NPSH required : 22.6 ft
Differential head / pressure, rated : 658.00 ft	Viscosity : 1.00 cP
Fluid density, rated / max : 1.000 / 1.000 SG	Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010] : 1.00 / 1.00 / 1.00 / 1.00

Flow (USgpm)	Head (ft)	Efficiency (%)	Power (hp)	NPSHr (ft)	Thrust, total (lbf)
0	866.95	0.00	110.4	-	7,741
221	878.75	34.84	140.9	-	7,057
443	863.84	56.22	171.7	-	6,213
664	828.74	69.42	200.1	10.8	5,316
885	814.54	77.43	235.1	14.0	4,609
1,107	790.98	81.80	270.1	16.1	3,832
1,328	724.37	83.02	292.5	19.1	2,792
1,549	637.35	80.49	309.7	23.8	1,613
1,770	531.48	73.57	322.9	-	359
1,992	399.45	61.09	328.8	-	-



"Construction Datasheet"			
Customer	:	Quote Number	: 9321 Weber Elsinore Diamond Well Bowl
Customer Reference	:	Service	:
Item Number	: 001	Date Last Saved	: 03 Sep 2021 6:14 PM
Pump Size - Stages	: GL12ME/HC-QS - 10	Quantity of Pumps	: 1
Construction		Motor Information	
Bowl construction	: Discharge Case	Manufacturer	: -
Impeller type	: Static (single plane) Balance	Vertical shaft type	: -
Impeller fastening	: Carbon Steel (lock collets)	Full load speed	: 0 rpm
Strainer	: N/A	Power	: 0.00 hp
Column construction	: -	Service Factor	: 1.15
Column dia (nominal)	: -	Volts / Phase / Hz	: 460 V / 3 / 0 Hz
Column pipe length	: 0.00 in	Frame size / Base diameter	: 0.00 in
Max column length	: 0.00 in	Enclosure	: WP1
Lineshaft diameter	: 1.94 in	Duty Type	: Continuous duty
Lineshaft construction	: ELS	Inverter Duty Rated	: 0
Lineshaft lubrication	: -	Efficiency Class, 100%/75%/50%	: Premium, 0.00 % / 0.00 % / 0.00 %
Discharge	: -	Power factor	: 0 / 0 / 0
Materials		Driver amp full load	: 0.000 A
Bowl	: Cast iron	NEMA design	: 0
Impeller	: 316LSS	Motor starting	: -
Bowl bearing	: Standard (Bronze/Rubber)	Insulation	: 0
Bowl shaft	: 416 Stainless Steel	Ambient temperature	: 32.00 deg F
Bowl wear ring	: None	Max altitude	: 0
Impeller wear ring	: None	Thrust rating	: Standard High Thrust
Strainer	: -	Additional information	
Column	: Steel	Pit / sump depth	: 360 in
Lineshaft	: 416 SS	Pump length	: 0.00 in
Bearing retainer / ELS Tube	: Steel	Max pump dia below mounting surface	: 13.50 in
Lineshaft bearing	: -	Max sphere size	: 0.88 in
Discharge head	: -	Total / best lateral setting	: 150 in
Sole plate	: None	Max suction pressure**	: 0.00 psi.g
Paint	: Class III	Testing	
Approximate Weights		Hydraulic performance test	: None
Complete pump	: 1,314 lb	Hydrostatic test	: None
Driver	: 0 lb	Curve approval	: No
		NPSH test	: None
		String test	: None
		Test w/ motor	: None



### Pump Performance - Additional Data

Project name : Weber Elsinore Diamond Well Bowl	Tag Number : 001
Commissioned :	Service :
Representative :	Model : GL12ME/HC-QS
Customer :	Quantity : 1
Customer ref. / PO :	Quoted By (Sales Office) : Indianapolis (default)
Quote Number / ID : 9321 Weber Elsinore Diamond Well Bowl	Quoted By (Sales Engineer) : Gary Holt
Date last saved : 03 Sep 2021 6:14 PM	Speed, rated : 1780 rpm
Stages : 10	

Performance Data	Stage, Speed and Solids Limits
Head, maximum diameter, rated flow : 726.19 ft	Stages, maximum : 22
Head, minimum diameter, rated flow : 379.44 ft	Stages, minimum : 1
Head, maximum, rated diameter : 878.79 ft	Pump speed limit, maximum : 3000 rpm
Efficiency adjustment factor, total : 0.98	Pump speed limit, minimum : 1 rpm
Power adjustment, total : 7.20 hp	Curve speed limit, maximum : 2975 rpm
Head adjustment factor, total : 1.00	Curve speed limit, minimum : 1 rpm
Flow adjustment factor, total : 1.00	Variable speed limit, maximum : -
NPSHR adjustment factor, total : 1.00	Variable speed limit, minimum : -
NPSH margin dictated by pump supplier : 0.0 ft	Solids diameter limit : 0.88 in
NPSH margin dictated by user : 0.0 ft	
NPSH margin used (added to 'required' values) : 0.0 ft	

Mechanical Limits	Typical Driver Data
Torque, rated power, rated speed : 17.22 hp/100 rpm	Driver speed, full load : 1780 rpm
Torque, maximum power, rated speed : 18.47 hp/100 rpm	Driver speed, rated load : 1782 rpm
Torque, driver power, full load speed : 19.66 hp/100 rpm	Driver efficiency, 100% load : N/A
Torque, driver power, rated speed : 19.66 hp/100 rpm	Driver efficiency, 75% load : N/A
Torque, pump shaft limit :-	Driver efficiency, 50% load : N/A
Radial load, worst case :-	
Radial load limit :-	
Impeller peripheral speed, rated :-	
Impeller peripheral speed limit :-	

Various Performance Data	Flow (USgpm)	Head (ft)	Efficiency (%)	NPSHr (ft)	Power (hp)
Shutoff, rated diameter	0	866.95	-	-	110.4
Shutoff, maximum diameter	0	916.80	-	-	127.7
MCSF	508	854.02	60.78	6.5	180.1
Rated flow, minimum diameter	1,500	379.44	73.74	-	194.8
Rated flow, maximum diameter	1,500	726.19	82.06	-	335.1
BEP flow, rated diameter	1,287	738.46	83.11	18.4	288.7
120% rated flow, rated diameter	1,800	515.63	72.28	31.6	324.2
End of curve, rated diameter	1,992	399.45	61.09	38.7	328.8
End of curve, minimum diameter	1,721	250.72	55.47	29.8	196.4
End of curve, maximum diameter	2,016	463.28	64.40	39.3	366.0
Maximum value, rated diameter	-	878.79	83.11	-	328.8
Maximum value, maximum diameter	-	-	82.57	-	366.0

System differential pressure	@ Density, rated	@ Density, max
Differential pressure, rated flow, rated diameter (psi)	284.8	284.8
Differential pressure, shutoff, rated diameter (psi)	375.2	375.2
Differential pressure, shutoff, maximum diameter (psi)	396.8	396.8

Discharge pressure	@ Suction pressure, rated	@ Suction pressure, max	@ Suction pressure, rated	@ Suction pressure, max
Discharge pressure, rated flow, rated diameter (psi.g)	284.8	284.8	284.8	284.8
Discharge pressure, shutoff, rated diameter (psi.g)	375.2	375.2	375.2	375.2
Discharge pressure, shutoff, maximum diameter (psi.g)	396.8	396.8	396.8	396.8

Ratios	
Maximum flow / rated flow, rated diameter : 132.79 %	Head rated diameter / head minimum diameter, rated flow : 173.41 %



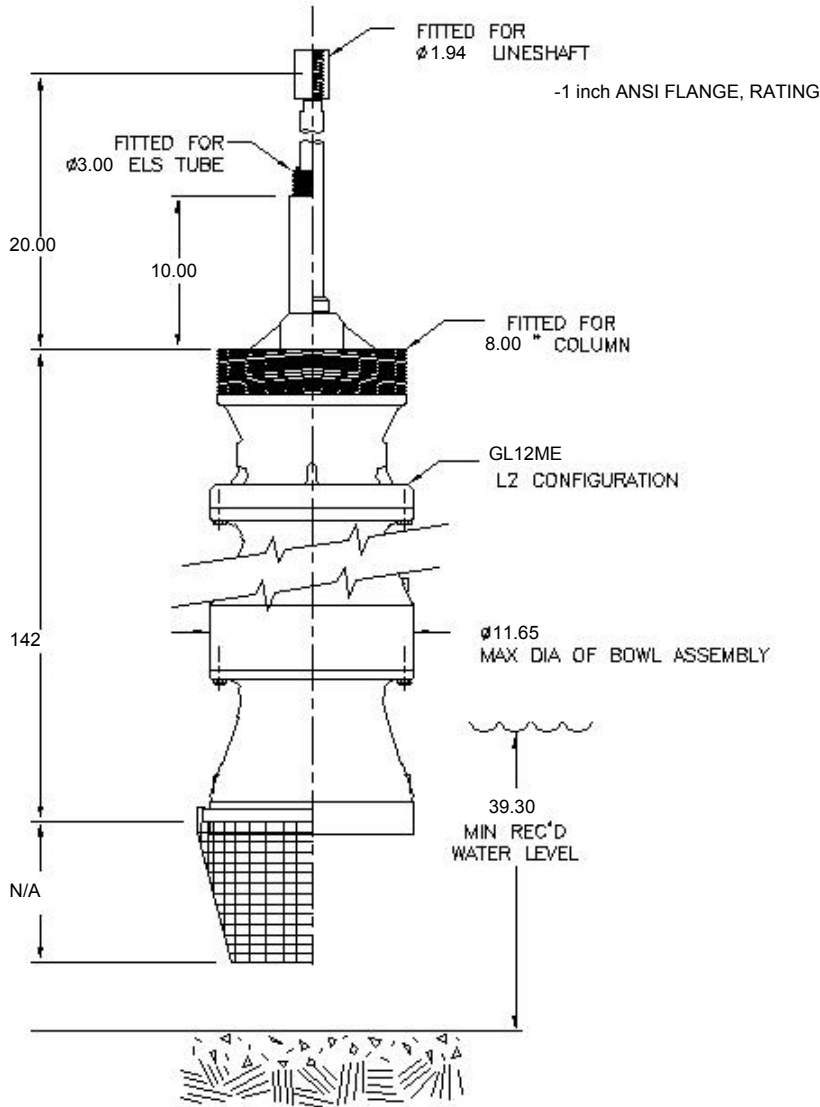
### Pump Performance - Additional Data

Head and Power Losses				Dimensions	
Friction loss rate, column	:-			Minimum clearance below suction bell lip/case	: 6.00 in
Friction loss, column	:-			Minimum well diameter	: 11.96 in
Friction loss, discharge head	:-			Suction nozzle centerline height	: -
Friction loss, can/barrel	:-			Suction to first stage impeller centerline	: -
Friction loss, suction bell and strainer	: 0.00 ft			Bowl assembly length, first stage	: 31.25 in
Friction loss, bowl/column adaptor	:-			Bowl assembly length, upper stage	: 12.25 in
Friction loss, total	:-			Bowl assembly length, total	: 142 in
Power loss, lineshaft bearings	:-			Suction bearing hub length	: 0.00 in
Power loss, thrust bearing	:-			Strainer length	: 0.00 in
Power loss, total	:-			Bowl to column adaptor length	: -
Bowl vs. Pump Performance				Discharge head stick-down	: -
Head (bowl / pump)	: 658.00 ft / -			Submersible motor adaptor length	: -
Efficiency (bowl / pump)	: 81.30 % / -			Submersible motor length	: -
Power (bowl / pump)	: 306.5 hp / -			Column length	: -
NPSH required at first stage impeller eye	: 22.6 ft			Total pump length	: -
Weights and Down Thrust				Can / barrel length	: -
Weight, lineshaft	:-			Stuffing box sleeve diameter	: -
Weight, bowl assembly rotating element	: 1,355 lb			Suction bell diameter	: -
Thrust factor	: 2.87 lb/ft			Minimum submergence to prevent vortexing	: 0.00 in
Thrust, hydraulic (rated / max)	: 1,884 / 2,516 lbf			Discharge head height	: -
Thrust, bowl shaft end (rated / max)	: 0 / 0 lbf			Discharge nozzle centerline height	: -
Thrust, shaft step (rated / max)	: - / -			Min distance discharge nozzle centerline to suction bell	: 0.00
Thrust, stuffing box sleeve (rated / max)	: - / -			Lineshaft length	: -
Thrust, total (rated / max)	: 3,239 / 3,871 lbf			Bowl shaft diameter	: 1.50 in
Thrust bearing capacity	:-			Bowl diameter, outside	: 11.65 in
* Rated thrust @ rated head, density, and suction pressure where applicable				Bowl diameter, exit	: 5.69 in
* Max thrust @ max head, density, and suction pressure where applicable				Column diameter, inside	: -
Pressure Data	Maximum working pressure ( psi.g )	Maximum allowable working pressure ( psi.g )	Hydrostatic test pressure ( psi.g )	Column internal obstruction diameter	: -
Bowl	284.8	360.0	N/A	Can/barrel diameter, inside	: -
Column	-	-	-	Can/barrel obstruction diameter	: -
Discharge head	-	-	-	NPSH	
Can/Barrel	-	-	-	NPSH at bowl (available / required)	: Ample / 22.6 ft
				NPSH at low liquid level (available / required)	: - / -
				NPSH at suction flange (available / required)	: - / -
Torque Limits				Liquid Velocities	
Torque, lineshaft limit	:-			Column liquid velocity	: -
				Discharge head liquid velocity	: -
				Can liquid velocity	: -
				Suction nozzle liquid velocity	: -



Pump Performance - Additional Data					
Mixed Stage Performance	Set #1	Set #2	Set #3	Set #4	Alternate First Stage
Model	GL12ME/HC-QS	-	-	-	-
Stages	10	-	-	-	-
Based on curve number	GL12MEHC4606116	-	-	-	-
Impeller diameter, rated	9.05 in	-	-	-	-
Impeller diameter, maximum	9.28 in	-	-	-	-
Impeller diameter, minimum	7.86 in	-	-	-	-
Limitations					
Tolerance Type	: Hyd Ins 14.6 Bilateral (1B)	NPSHa measured at		: Low liquid level	
Head measured at	: Bowl	Well inside diameter (Enter a value >0 if a diameter check is required)		: in	
Pump type	: Bowl only	Maximum working pressure strategy		: Rated head, rated diameter	
Product Line Options					
Suction type	: Threaded Case	Column construction		: Threaded	
Bowl discharge type	: Discharge case	Suction accessory		: None	
Bowl shaft material	: 416 SS	Lineshaft material		: 416 SS	
Bowl shaft diameter	: 1 1/2 inch	Lineshaft diameter		: 1 15/16 inch	
Impeller connection type	: Standard (Taper lock or keyed)	Lineshaft lubrication		: Enclosed Lineshaft	
Column diameter	: 6 inch				
Performance Adjustment Options					
Impeller polished	: Polished	Effective impeller material for galling		: 316SS	
Impeller wear ring	: None	Effective bowl material for galling		: Cast/Ductile Iron	
Bowl wear ring	: None	Effective impeller material for polishing		: 316SS	

# General Arrangement Drawing



APPROXIMATE DRY WEIGHT	
Bowl Assembly	1,315 lb

GENERAL DATA			
Capacity	1,500 USgpm	Liquid	Cold Water
Head	658.00 ft	Specific Gravity	1.000 SG
Pump Speed	1780 rpm		
Customer Name			
Quote No	0		
Item No.	001		
Project	Weber Elsinore Diamond Well Bowl		
Date	03 Sep 2021 6:05 PM		

- Notes
1. Unless otherwise specified, dimensions are in
  2. Read instructions before beginning pump assembly or installation
  3. Drawing is preliminary until certified by factory.



0-001





**ENGINEERING AND  
OPERATIONS COMMITTEE**

*DISCUSSION OUTLINE*

---

**Date:** December 6, 2021

**Originator:** Matthew Bates - Engineering

**Subject:** **ENGINEERING DEPARTMENT QUARTERLY PERFORMANCE MEASURES AND PROJECT UPDATES**

---

**BACKGROUND AND RECOMMENDATION**

Staff will provide an update to the department's performance measures and present project updates for Development, the Capital Improvement Program, and the Integrated Resources Plan Program.

**ENVIRONMENTAL WORK STATUS**

Not applicable.

**FISCAL IMPACT**

Not applicable.

Attachments:

- PowerPoint Presentation
- With the implementation of the web-based maps, the following websites have been provided in-lieu of attachments:
  - [Developer Map](#)
  - [Capital Improvement Program Map](#)

# Project Updates

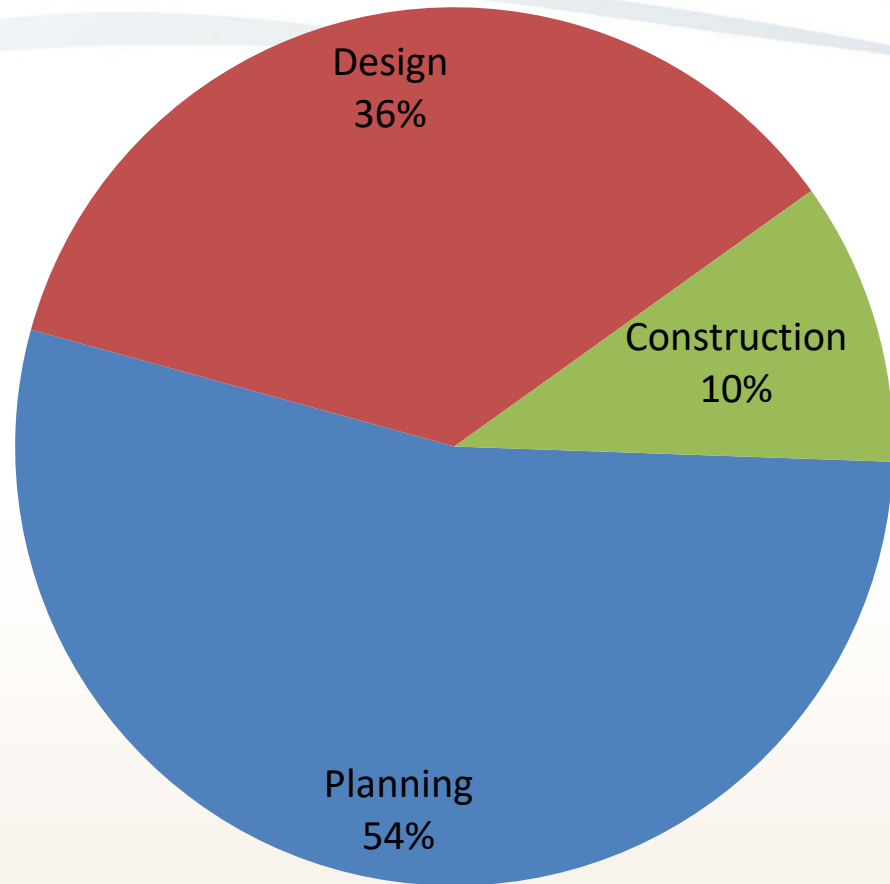
**April 2021 – September 2021**

**EOC – December 6, 2021**



# CIP Performance Measures Financial Report

# Capital Improvement Projects



Phase	# of Projects
Planning	36
Design	24
Construction	7
<b>Total Projects</b>	<b>67</b>

# Canyon Lake WTP Phase 1 Improvements

## Project Highlights

- Pilot Plant – Fully operational starting in August 2021
- Data gathering and tracking of PFAS/PFOA removal for 8 weeks
- Results show complete removal following IX
- Waiting for “break point” to occur
- Planned operations through April 2022



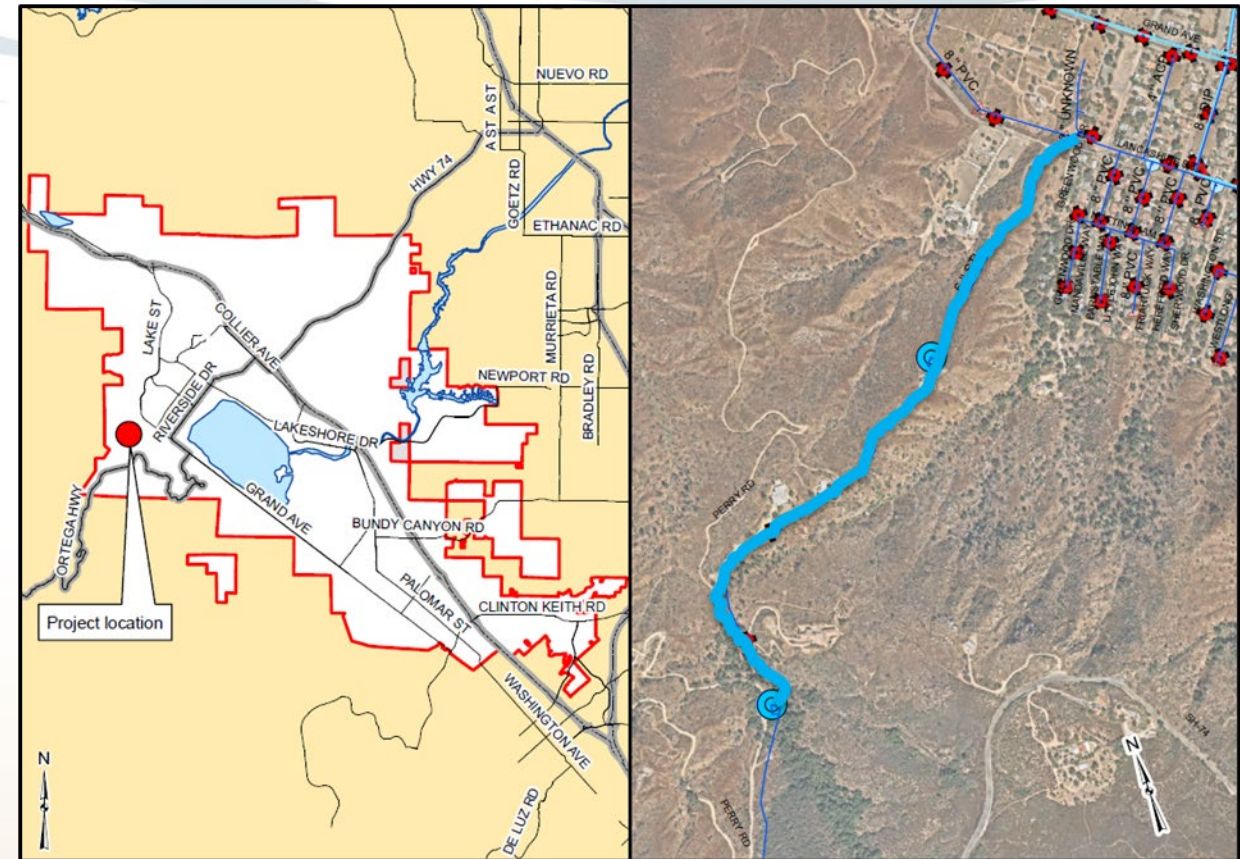


**Canyon Lake WTP Phase 1 Improvements**  
**PFAS/PFOA Pilot Plant**

# Tomlin Pipeline Replacement Project

## Project Highlights

- Geotechnical Investigations are complete
  - Borings
  - Seismic Refraction Lines
  - Slope Log Mapping
- Biological Resources Report complete within USFS Property
- Draft Preliminary Design Report (PDR) complete
- 30% Plan Submittal complete
- Consultant finalizing PDR and beginning preparation of 60% Submittal

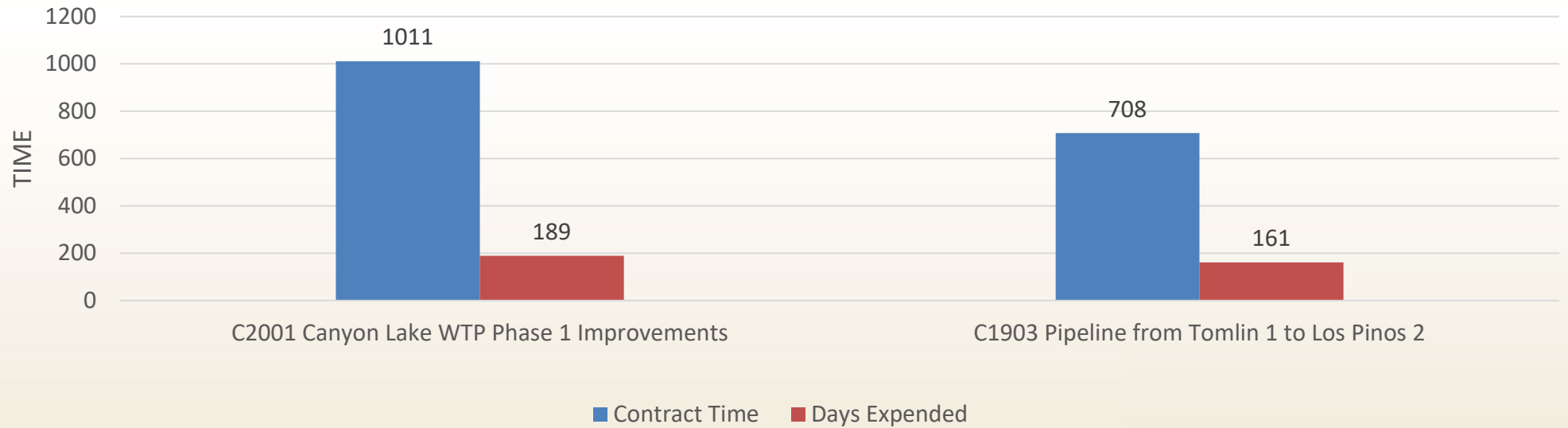
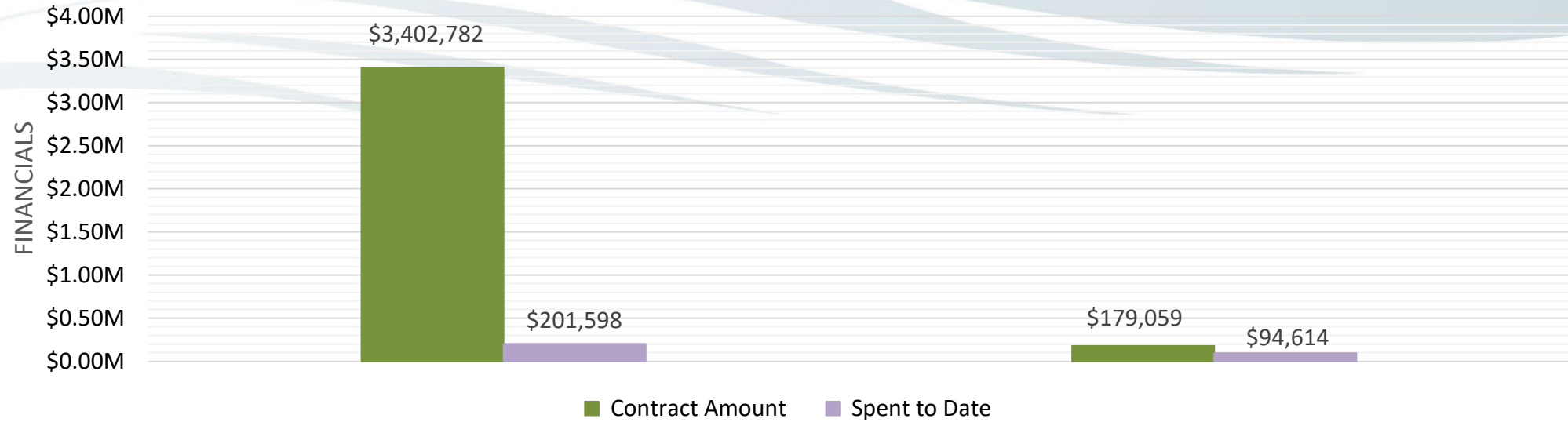




## Tomlin Pipeline Replacement Project

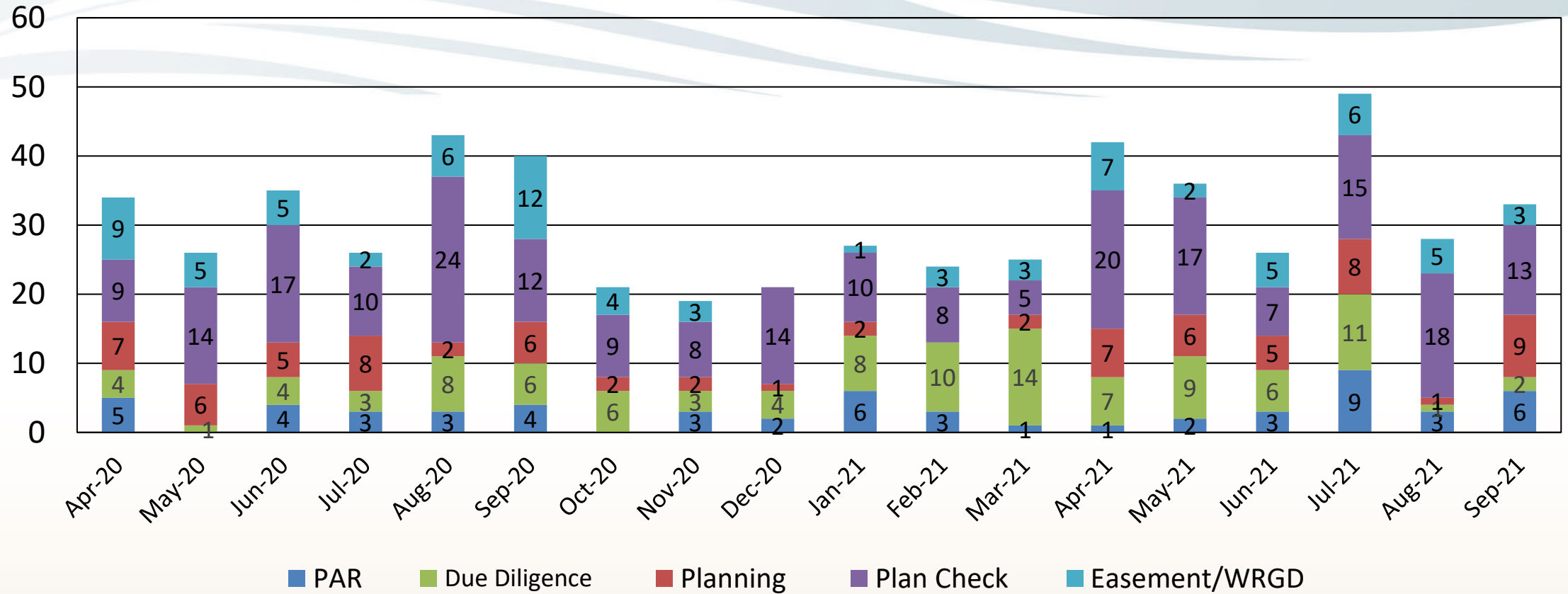


# Featured Projects: CIP Projects



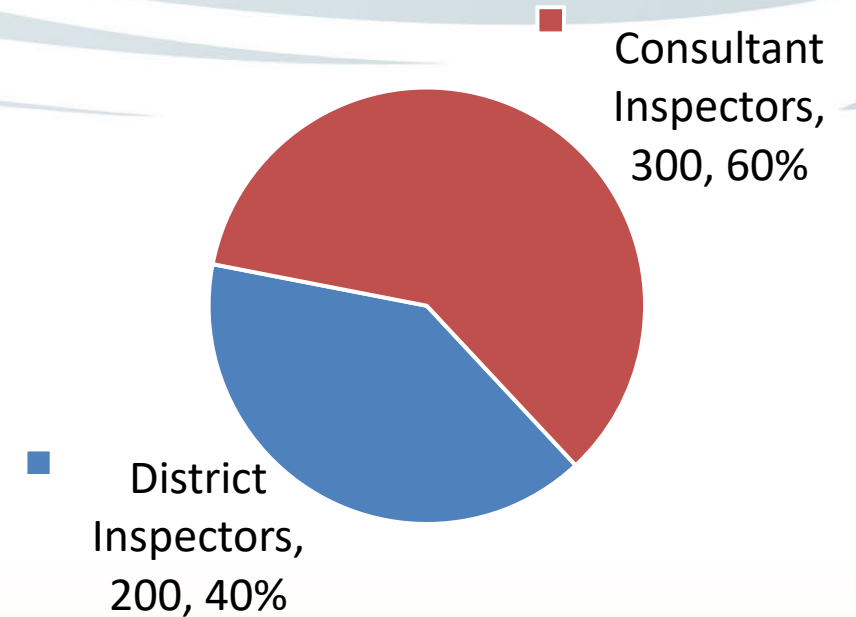
# Development Performance Measures Financial Report

# Plan Check Submittals – 2020-2021 18-Months



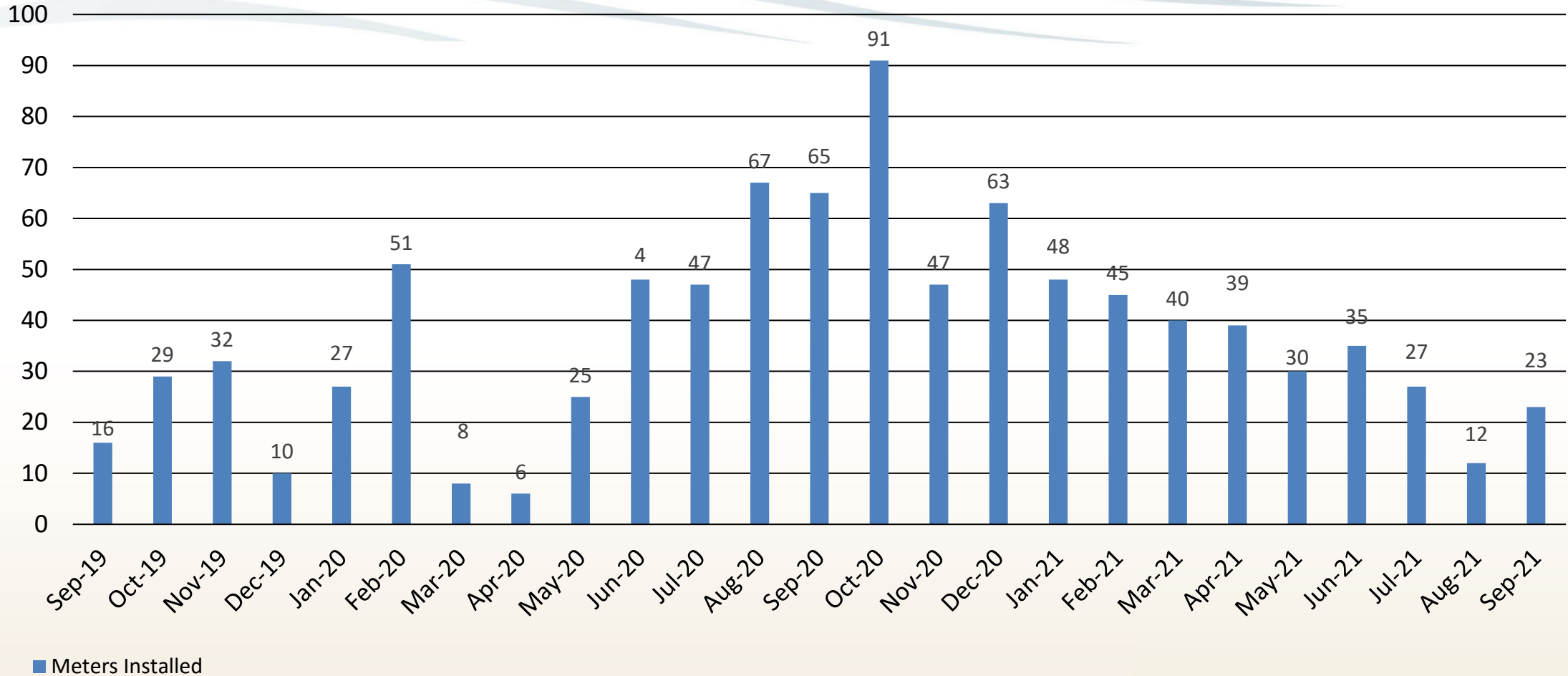
# Inspections Performed (Hours)

	District Inspectors	Consultant Inspectors
Hours of Inspection	200	300
Total Inspections Performed	381	290
Active Construction Projects	2,593	

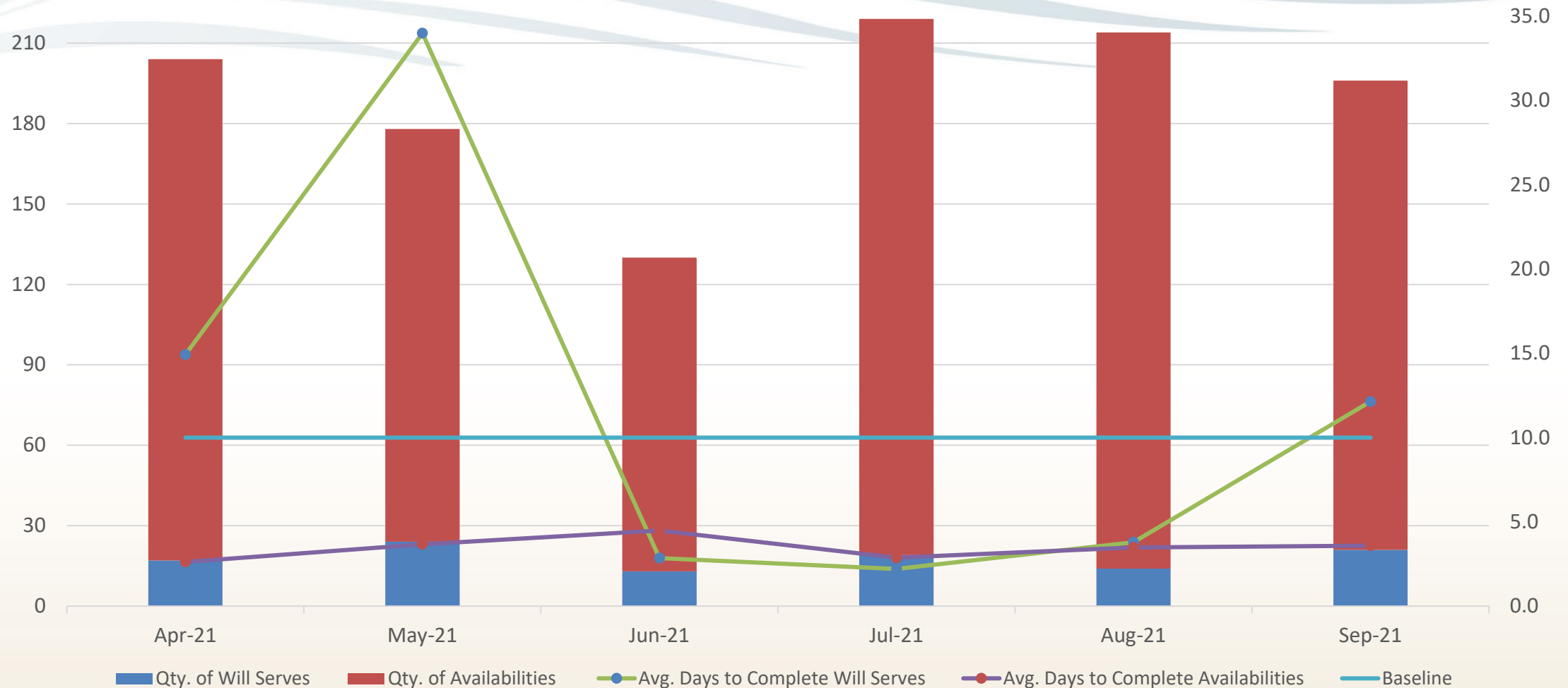


Contract Amount	On Call Consultant	Amount Used	Remaining Balance	Contract Deadline
\$ 500,000.00	Albert A. Webb	\$ 94,294.00	\$ 285,012.50	9/30/2021
	Wallace & Assoc.	\$ 120,693.50		

# Water Meter Installations 2019-2021



# Development Services (Past 6 Months)



# QUESTIONS?