

FOWLER CITY COUNCIL MEETING AGENDA MAY 4, 2021 7:00 P.M. CITY COUNCIL CHAMBER 128 S. 5TH STREET FOWLER, CA 93625

This meeting will be conducted pursuant to the previsions of Paragraph 11 of the Governor's Executive Order N-25-20 which suspends certain requirements of the Ralph M. Brown Act, and as a response to mitigating the spread of COVID-19, the meeting will not be open to the public. The telephone number listed below will provide access to the City Council meeting via teleconference.

Please note: when joining the meeting you will be asked your name which will be used to identify you during any public comment period.

Telephone Number: 978-990-5175 Meeting ID: 494026#

It is requested that any member of the public attending while on the teleconference to have his/her/their phone set on "mute" to eliminate background noise or other interference from telephonic participation.

Any writing or document that is a public record and provided to a majority of the City Council regarding an open session item on the agenda will be made available for public inspection at City Hall, in the City Clerk's office, during normal business hours. In addition, such writings and documents may be posted on the City's website at www.fowlercity.org.

- Meeting called to order
- Roll call
- 3. Public Presentations (This portion of the meeting reserved for persons desiring to address the Council on any matter not described on this agenda. Presentations are limited to 5 minutes per person and no more than 15 minutes per topic.)

With respect to the approval of resolutions and ordinances, the reading of the title thereto shall be deemed a motion to waive a reading of the complete resolution or ordinance and unless there is a request by a Councilmember that the resolution or ordinance be read in full, further reading of the resolution or ordinance shall be deemed waived by unanimous consent of the Council.

4. Presentation re: State Physical Activity Nutrition Program – Susie Rico-Vasquez

- 5. Communications
- 6. Staff Reports
 - A) City Planner's Report
 - B) City Engineer's Report
 - Approve Resolution No. 2501 Approving the 2021 Hydraulic Water Model and 2021 Water Model Report.
 - C) City Manager's Report
 - ♦ COVID-19 Update
 - D) Public Works Director's Report
 - Approval of Resolution No. 2499, a Resolution of the City of Fowler Approving Agreements with Sitelogiq, Inc. and Advanced Lighting Services, Inc. for energy conservation improvements pursuant to Government Code Section 4217.10, et. seq. (Item to be Continued to May 18, 2021 City Council Meeting)
 - E) Finance Department Report
 - F) Police Department Report
 - G) Fire Department Report
- 7. City Attorney's Report
 - Discuss and consider Potential Removal of Planning Commissioner Cesar Rodriguez.
- 8. Consent Calendar Items on the Consent Calendar are considered routine and shall be approved by one motion of the Council. If a Councilmember requests additional information or wants to comment on an item, the vote should be held until the questions or comments are made, and then a single vote should be taken. If a Councilmember objects to an item, then it should be removed and acted upon as a separate item.
 - A) Ratification of Warrants May 4, 2021
 - B) Approve Minutes of the City Council Special Meeting April 20, 2021, and City Council Meeting April 20, 2021
 - C) Award the Adams Avenue Reconstruction Phase II & III project to Don Berry Construction in the amount of \$1,198,278.00, and authorize the City Manager to sign the project construction contract.

- D) Approve and Authorize the City Manager to sign the Well 7 TCP Treatment Project Consultant Services Agreement with Provost and Pritchard in the amount of \$269,000.
- 9. Committee Reports (No action except where a specific report is on the agenda)

Mayor Cardenas Mayor Pro-Tem Rodriquez Councilmember Kazarian Councilmember Mejia Councilmember Parra

10. Adjournment

Next Ordinance No. 2021-02

Next Resolution No. 2502

CERTIFICATION: I, Angela Vasquez, Deputy City Clerk of the City of Fowler, California, hereby certify that the foregoing agenda was posted for public review on Friday, April 30, 2021.

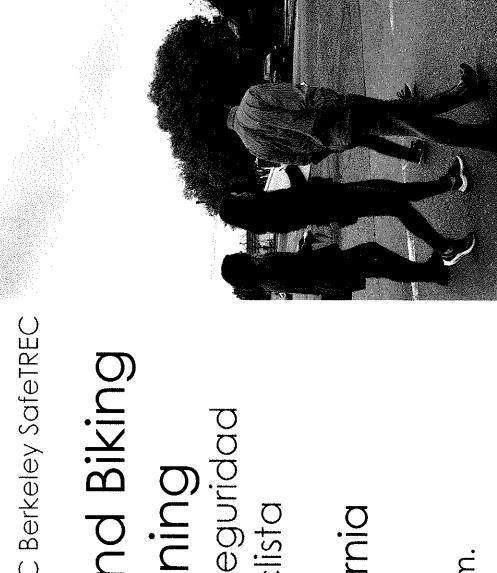
Angela Vasquez Deputy City Clerk

State Physical Activity Nutrition Program Susie A. Rico-Vasquez, MPH

1221 Fulton Street, 3rd floor, Fresno, CA 93721 Fresno County Department of Public Health sricovasquez@fresnocountyca.gov (559) 600-6407

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Walking and Biking Safety Training

Taller para la Seguridad Peatonal y Ciclista

Fowler, California

June 30, 2020 3:00 p.m. – 5:00 p.m.



Project Team

California Walks

UC Berkeley SafeTREC

Garrett Fortin fortinga@berkeley.edu

Alma Leyva Orozco alma@calwalks.org Kaori Kuroda kkuroda@berkeley.edu

> Caro Jauregui caro@calwalks.org

areli@calwalks.org

Areli Morales



Planning Committee

Susie Rico- Vasquez Fresno County Department of Public Health

Danielle Claybon Public Health Advocates Lourdez Perez Public Health Advocates

Dawn Marple City of Fowler Planning Department Yvonne Hemandez City of Fowler Recreation Department

Jamaica Gentry District 6 Caltrans Monique Narciso Fresno Housing Authority

Laura Gromis Transformative Climate Communities Bicycle Outreach

Gloria Regier Fowler Unified School District Kristina Pasma Valley Children's Healthcare, Safe Kids Central California Rudy Alcaraz Fowler Police Department

Dario Dominguez City of Fowler Public Works Department Cyndi Dean Fresno County School District





Metas del Taller

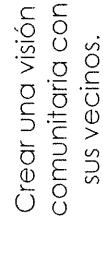


Improve walking and biking in Fowler

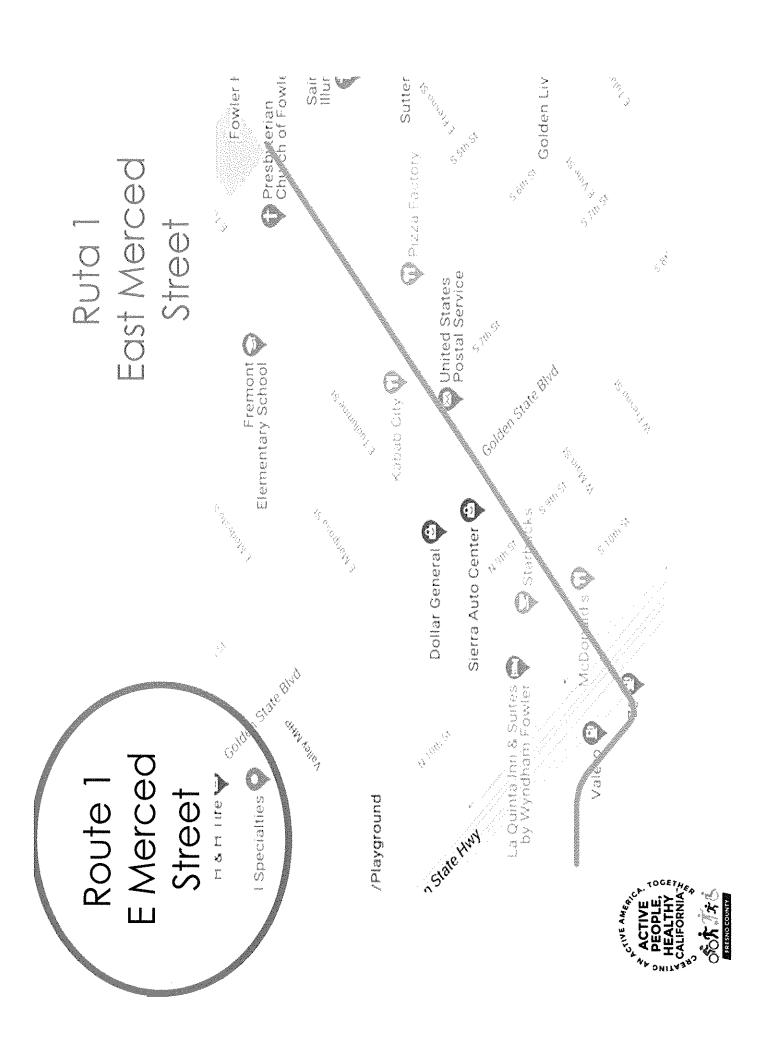
Mejorar las condiciones para caminar y andar en bicicleta

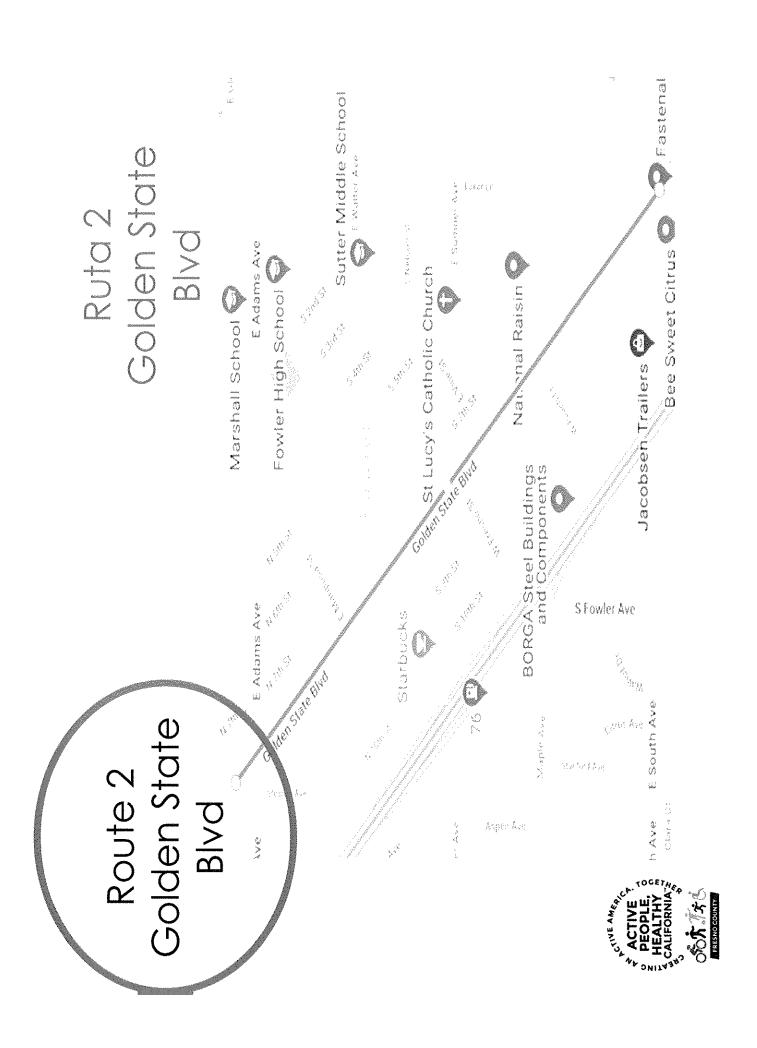


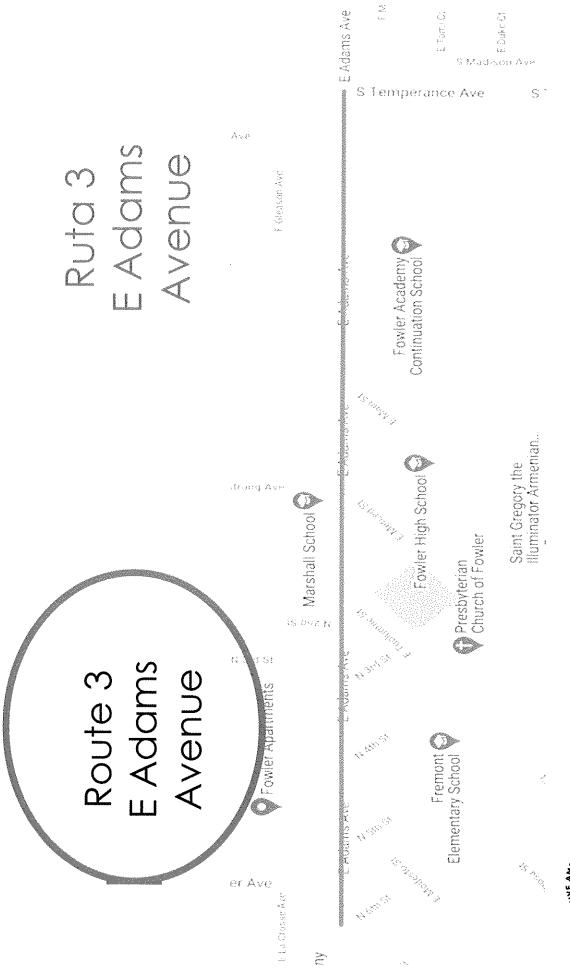
Create a community vision with neighbors













Lack of Signage

Visibility Challenges

Sidewalk Conditions

Missing curb ramps

Participant

Concerns

City connectivity

Uncontrolled Crossings

Lack of Bike Lanes

Speeding



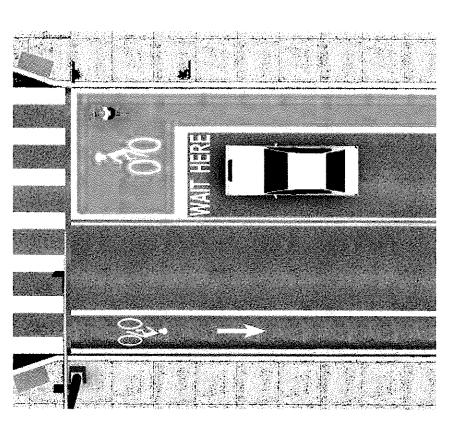
CPBST Recommendations

- Install High Visability Crosswalks & Advance Yield lines(Golden State & Merced St.)
- Install pedestrian signage and Rectangular Rapid Flashing Beacons (Adams & Golden State/Vine & Golden State)
- Install Rectangular Rapid Flashing Beacons (5th & Adams, near Fremont EI.)





CPBST Recommendations



Acrive Ac

- Install bike lanes & Bike Boxes at all legs at
- Golden State
- Merced Street
- Install high visability crosswalks and flashing crosswalks by Sutter Middle School
 - East Fresno Street & East Walter Ave



CPBST Recommendations

- Bike safety and ridership education
- Promote helment use
- Sharing road with bicyclist
- Couple with driver's training
- Walking/Biking School Events
- October 2021 or May 2022
 - Partner with Fremont Elementary
- Explore bike share programs





Next Steps

Follow-Up Planning Meetings and Support

- Focus on Bike and Pedestrian signage and striping
- Awarded funds California Department of Public Health
- Awarded funds SPAN Program AT Enhancement Fund Bike safety and ridership education event
- Help City Apply for ATP Cycle 6 Funds



Thank You

State Physical Activity Nutrition Program Susie A. Rico-Vasquez, MPH

1221 Fulton Street, 3rd floor, Fresno, CA 93721 Fresno County Department of Public Health sricovasquez@fresnocountyca.gov (559) 600-6407

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П	Consent
_	Regular Item
	Workshop
	•
П	Closed Session
_	Public Hearing
ΪΤ	EM NO: 6-B1

REPORT TO THE CITY COUNCIL

April 28, 2021

FROM: David Peters, City Engineer

SUBJECT

Actions pertaining to development of a hydraulic water model for the City's municipal water system.

 Adopt Resolution No. 2501 approving the 2021 hydraulic water model and associated 2021 Water Model Report.

RECOMMENDATION

Staff recommends that Council approve the 2021 hydraulic water model and associated 2021 Water Model Report such that the model can be utilized in future evaluations of the water system and to determine improvements necessary to maintain satisfactory system operations.

BACKGROUND

The City of Fowler maintains a municipal water system consisting of six wells located throughout the City with distributes water to approximately 2,100 customers through approximately 200,000 lineal feet of distribution pipelines. To establish a better understanding of the hydraulic performance of the system during various demand scenarios, the City authorized development of a computerized hydraulic water model.

The water model has been completed and has determined that the system currently has deficiencies related to water production on the west side of Highway 99 as well as insufficient waterline capacity for pipelines crossing the freeway. The Water Model Report presents the finding of the hydraulic water model and the following recommendations:

- Construct a new municipal well west of State Route 99 having a minimum output of 1,200 gallons per minute.
- Construct a new pipeline connection crossing State Route 99 connecting the west and east portions of the water system to provide additional interconnectivity.
- Install backup generators on wells not so equipped to ensure availability during power outages.

- · Adjust SCADA settings to account for ground elevation differences within the system.
- Continue to monitor addition water demands as new development occurs and add additional wells as necessary to provide sufficient fire flows throughout the City.
- Construct 12-inch diameter waterlines in a quarter-mile spaced transmission grid main system.

In addition to these recommendations, the hydraulic water model will provide staff a tool to analyze future proposed expansion or changes to the system in order to determine system performance under these analysis scenarios.

FISCAL IMPACT

The project was funded through water enterprise funds as identified in the 2020-21 Budget.

Attachments:

- 2021 Water Model Report

City of Fowler 2021 Water Model Report





Table of Contents

Executiv	ve Sumr	nary	i
Analy	ysis		i
Reco	mmendat	ions	i
Chapter	1 Back	ground and Purpose	1
1.1	Backg	round and Purpose	1
1.2	Design	n Criteria	2
Chapter	2 Syste	em Data Collection	3
2.1	Existi	ng System	3
	2.1.1	Water Storage	
	2.1.2	Emergency Backup	
	2.1.3	Pipe Network	4
	2.1.4	Wells	5
	2.1.5	Water Supply	5
	2.1.6	SCADA and Logic Controls	6
2.2	Existin	ng System Demands	7
	2.2.1	Water Production	8
	2.2.2	Well Usage	8
Chapter	3 Existi	ing Water System Simulations	9
3.1	Introd	uction	9
3.2	Existi	ng System – Average Day Analysis	10
	3.2.1	Existing System Deficiencies	11
3.3	Existin	ng – Maximum Day Demands	11
	3.3.1	Maximum Day Simulation	12
	3.3.2	Maximum Day + Fire Flow Simulation	13
	3.3.3	Maximum Day – Well #8 Out of Service	15
	3.3.4	Maximum Day - Well #8 Out of Service (with South Avenue Interconnect)	16
Chapter	4 Reco	mmendations	17
4.1	Water	Model Summary & Recommendations	17
Appendi	х А		19

Executive Summary

Analysis

The City of Fowler (City) water system is supplied by six groundwater wells feeding into a single pressure zone. System pressures are approximately 50 - 55 psi. The system does not include any surface water storage other than small hydropneumatic tanks located at each well site.

The water model and analysis was evaluated under the following criteria:

- A total, system-wide average day demand of 1.6 mgd and a maximum day demand of 2.9 mgd based on current water production data.
- A maximum day peaking factor of 1.8

It was determined that city water wells are adequate for average day and maximum day demands, however, due to undersized pipe sizing and limited interconnection, only partial fire flows can be supplied during a maximum day demand. Additionally, the City would not be able to supply the west half of the system during a maximum day demand if Well #8 should become non-operational.

Recommendations

In order to correct these deficiencies and provide for future water system demands, the following improvements should be pursued:

- Construction of a new municipal well west of State Route 99 having a minimum output of 1,200 gallons per minute.
- Construct a new pipeline connection crossing State Route 99 connecting the west and east portions of the water system to provide additional interconnectivity.
- Install backup generators on wells not so equipped to ensure availability during power outages.
- Adjust SCADA settings to account for ground elevation differences within the system.
- Continue to monitor addition water demands as new development occurs and add additional
 wells as necessary to provide sufficient fire flows throughout the City.
- Construct 12-inch diameter waterlines in a quarter-mile spaced transmission grid main system.

Chapter 1 Background and Purpose

1.1 Background and Purpose

The City of Fowler (City) is located in central Fresno County, approximately twelve miles southeast of Fresno, California. Incorporated in 1908, the City had a 2010 census population of 5,570 citizens (see Figure 1). The City water system has approximately 1,800 service connections and is supplied by six (6) groundwater wells which pump into a single hydraulic pressure zone.

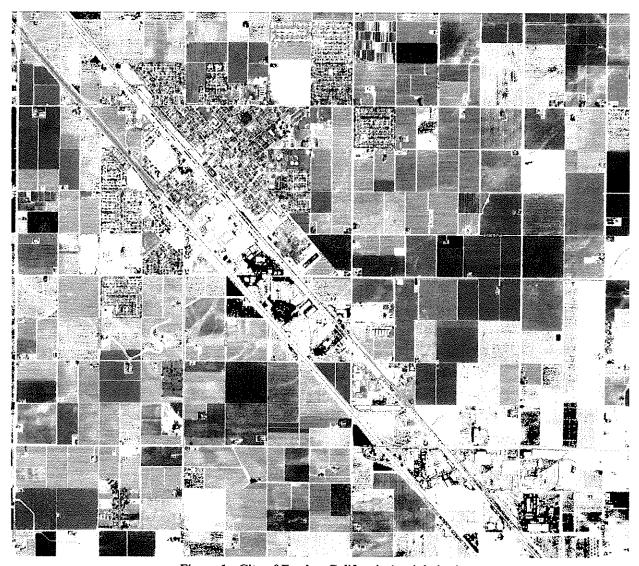


Figure 1 - City of Fowler, California (aerial view)

The purpose of developing the water model is to obtain an understanding of the operational characteristic of the water system, determine any immediate deficiencies in the current system, and identify improvements to correct these deficiencies.



1.2 Design Criteria

The water system was evaluated per the design criteria as provided in Table 1. These data points can be considered as generally accepted modeling criteria and were used as the basis in evaluating pipe flow, fire flow and low pressures within the water distribution system.

System Pressures

Minimum

40 psi - maximum day demand 20 psi - maximum day + fire flow

Fire Flow Requirements

Flow Rate and Duration		
Land Use	Flow	Duration
Residential (Low to Medium)	1,500	2 hours
Residential (High), Schools	2,000	3 hours
Office, Commercial, Industrial	2,500	4 hours

Pipeline Sizing

Maximum Velocity 10 fps - maximum day demand Maximum Headloss 10 ft/1,000 feet - maximum day demand

Emergency Requirements

Wells with Backup Power 50% of maximum day demand

Pumping Capacity

All wells must satisfy the entire system maximum day demand

Extended Period Simulation

System to be evaluated at no less than one week of Extended Period Simulations to determine system operational supply and demand

Table 1 - Water System Design Criteria



Chapter 2 System Data Collection

2.1 Existing System

The City's water distribution network is a single pressure zone system. Shown in Figure 2, this zone is relatively flat with elevations ranging from 320' in the northeast quadrant of the City to approximately 300' is the southwest quadrant. All sources of water (6 wells) for the City are fed into this singular pressure zone. At present, all wells are operational with well pumping capacities as shown in Table 2.

City of Fowler Existing Well Capacities

Well ID	Operational Flow (gpm)	Motor Type	Horse Power (HP)	Voltage	Amps	Ground Elev (ft)	Depth of Drawdown (ft)	Pressure Tank (gal)
2	310	Static	25	230	63	306	75	2,000
4	475	Static	50	460	64	312	79	2,000
5A	1,100	VFD	100	460	120	312	103	15,000
6	1,250	VFD	125	460	144	307	88	15,000
7	1,700	VFD	125	460	142	317	81	Surge
8A	1,100	VFD	125	460	142	301	73	Surge
	5,935			•				

Table 2 - Water Model Nodes (By Pressure Zone)

2.1.1 Water Storage

The City does not utilize any water storage tanks. The existing elevated water storage tank has been taken out of service. All city water storage is provided by the relatively shallow groundwater table which contains a sufficient volume of water to satisfy all operational and emergency water requirements. This type of system is considered a 'pumped zone' as it relies entirely upon electricity in providing water service pressure to all end users.

2.1.2 Emergency Backup

During times of emergency when the electrical power grid is shut off and unavailable, it is critical for a pumped water system to have electrical backup in the form of diesel powered generators. In such instances, generators can be designed to either start automatically or be turned on manually. Emergency diesel generators are installed at Well #7 (1,700 gallons per minute (gpm)) and Well #8 (1,100 gpm), allowing for a total emergency water delivery of approximately 2,800 gpm, sufficient to provide adequate fire flows during an emergency event.



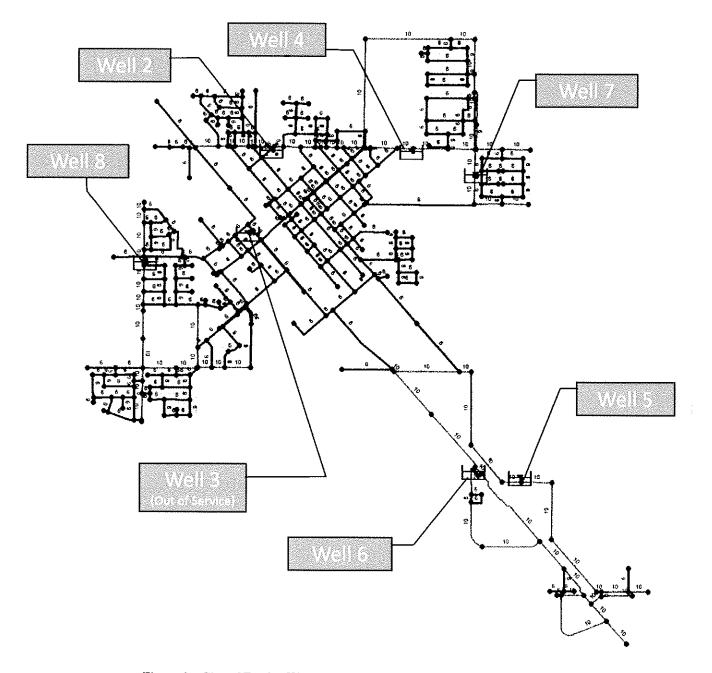


Figure 2 - City of Fowler Water Distribution System and Pipe Sizes

2.1.3 Pipe Network

Table 3 presents the overall lengths and sizes of pipe within the City water system. Using an effective replacement cost for each pipe diameter, the City has approximately \$20.6 million in existing pipeline infrastructure contained within approximately 200,000 linear feet of pipe capable of storing 433,000 gallons of water within the water distribution system at any given time.



City of Fowler Existing Pipe Lengths and Sizes

		Replacement	Total Capital	Existing Volume	
Diameter (in.)	Length (ft.)	Cost/Ft	Cost (GASB)	in System (gal)	% of Total
6	145,128	\$90	\$13,061,500	213,148	72.9%
10	53,985	\$140	\$7,557,917	220,243	27.1%
	199.113		\$20,619,417	433.391	

Table 3 - Existing Water Distribution Pipes

2.1.4 Wells

As illustrated in Figure 2, existing wells provide water pressure and supply for the City. As provided in Table 2, the overall combined pumping capacity of the well system is approximately 5,935 gpm (~8.5 mgd). Well #2 and Well #4 are controlled with static motors while Wells #5A, #6, #7 and #8A are controlled by variable frequency drive (VFD) motors.

Each well is equipped with a pressure tank or surge tank in order to diminish transient water hammer effects that could be experienced in a smaller water distribution system with multiple VFD's operating at the same time. Pictures for each well site are included in Appendix A of this report.

2.1.5 Water Supply

The City water system is supplied entirely by groundwater. As shown in Figure 3, the City of Fowler is an independent water utility and is a member of the South Kings Groundwater Sustainability Agency (SKGSA) as mapped by the Sustainable Groundwater Management Act (SGMA). A total, maximum day pumping capacity of the six (6) city wells is approximately 8.5 million gallons per day (assuming all wells run continually for 24 hours). Presently, the City consumes approximately 1.6 million gallons per day on an average day and approximately 2.5 million gallons on a maximum day. The ability of the City to utilize wells to meet daily peak demand is dependent upon the ability of the distribution system to deliver the water within the system. Well supply as well as the distribution system capacity will determine the system's ability to service a new growth area for operational and fire flows.



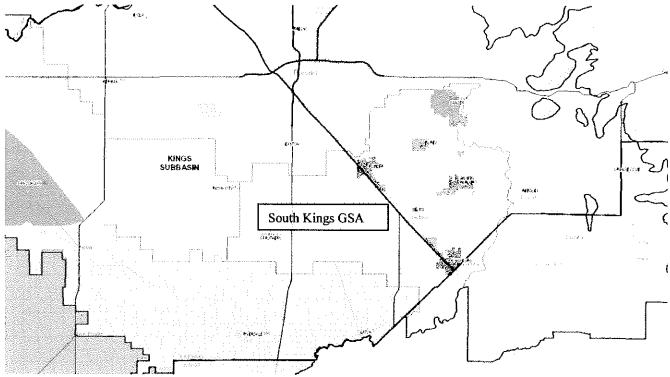


Figure 3 - Boundary of the South Kings Groundwater Sustainability Agency (GSA)

2.1.6 SCADA and Logic Controls

The City utilizes an advanced Supervisory Control and Data Acquisition (SCADA) system to assist in management and control of the water system. The SCADA system is capable of gathering and recording system data in order to quickly evaluate and mitigate any mechanical and/or operational malfunctions within the water distribution system. The SCADA system is also used to change pump 'on and off' pressure settings and is able to be adjusted as necessary to cycle pump usage and frequency of pumping in order to better balance the operational usage and mechanical life cycle of all pumps in the water distribution system.

SCADA controls for each well site are as shown in Table 4.

City of Fowler Existing Well Sites - Operational Statements

Pump	Pump Design Data	Pump Turns On (psi)	Pump Turns Off (psi)	Set Point (psl)	Diameter (in)
2	3: Multiple Point Curve	Manual On	Manual Off	•,	6
4	3: Multiple Point Curve	Manual On	Manual Off		6
5A	1: Design Point Curve	Below 40	Above 55	50	10
6	1: Design Point Curve	Below 46	Above 60	50	10
7	1: Design Point Curve	Below 48	Above 65	55	10
8A	1: Design Point Curve	Below 46	Above 60	50	10

Table 4 - Existing SCADA Control Settings for City Wells



2.2 Existing System Demands

According to SCADA and other data provided by City staff, monthly water production is provided in Table 5.

City of Fowler Well Production History

	Motor Type	Static	Static	VFD	VFD	VFD	VFD					
Oper	rational GPM	310	475	1100	1250	1700	1100					
Year	Month	Wall 2	Well 4	Well 5	Well 6	Well 7	Well 8	Total	No. Days	MGD	Population	GPCD
2018	January	46,000	9,000	0	43,000	824,000	35,772,000	36,694,000	31	1.184	6781	175
	February	185,000	294,000	0	178,000	7,370,000	29,913,000	37,940,000	28	1.355	6805	199
	March	5,000	9,000	0	27,000	35,868,000	49,000	35,958,000	31	1.160	6829	170
	April	5,000	5,000	0	118,000	48,779,000	2,183,000	51,090,000	30	1.703	6853	249
	May	0	2,000	0	7,000	43,689,000	9,113,000	52,811,000	31	1,704	6877	248
	June	7,000	8,000	0	14,000	51,906,000	14,079,000	66,014,000	30	2.200	6901	319
	July	1,091,000	5,394,000	0	8,163,000	40,771,000	12,055,000	67,474,000	31	2.177	6925	314
	August	702,000	431,000	0	31,000	49,703,000	13,837,000	64,704,000	31	2.087	6949	300
	September	1,000	2,000	0	11,000	44,749,000	10,566,000	55,329,000	30	1.844	6973	264
	October	473,000	2,191,000	0	3,003,000	42,714,000	2,446,000	50,827,000	31	1.640	6997	234
	November	o	2,000	0	74,000	39,239,000	0	39,315,000	30	1.311	7021	187
	December	4,614,000	1,952,000	0	7,000	18,112,000	3,868,000	28,553,000	31	0.921	7045	131
2019	January	9,869,000	0	0	0	16,214,000	21,000	26,104,000	31	0.842	7066	119
	February	9,950,000	0	0	0	14,853,000	389,000	25,192,000	31	0.813	7090	115
	March	13,077,000	0	0	0	26,152,000	398,000	39,627,000	28	1.415	7114	199
	April	11,898,000	12,000	0	0	38,464,000	1,320,000	51,694,000	31	1.668	7138	234
	May	524,000	16,544,000	0	0	39,035,000	1,930,000	58,033,000	30	1.934	7162	270
	July	3,997,000	233,000	0	0	49,909,000	8,815,000	62,954,000	30	2.098	7210	291
	August	11,490,000	4,563,000	0	407,000	45,801,000	7,787,000	70,048,000	31	2.260	7234	312
	October	8,590,000	12,000	0	23,000	42,973,000	1,626,000	53,224,000	30	1.774	7282	244
	December	3,000	4,000	2,000	16,000	29,776,000	34,000	29,835,000	30	0.995	7330	136
2020	January	18,000	19,000	0	12,000	33,353,000	0	33,402,000	31	1.077	7354	147

 Monthly
 Daily
 GPM

 Average Day Gallons
 48,892,417
 1,629,747
 1,132

 Maximum Day Gallons
 88,006,350
 2,933,545
 2,037
 Peaking Factor = 1.8

221

Average Monthly Demand (Winter) 31,709,750
Average Monthly Demand (Summer) 66,238,800

Table 5 - Monthly, Annual and Per Capita Water Consumption

2.2.1 Water Production

The average monthly water production in the winter months is approximately 31.7 million gallons while the average water production in the summer months is roughly 66.3 million gallons. During a 12 month period, the average monthly production is approximately 48.9 million gallons. This monthly value translates to an average day demand of 1,629,727 gallons per day (or 1,132 gpm).

Over the two year reporting period (2018-2020), the overall usage on a gallon per capita day (gpcd) basis ranged from a low of 115 gpcd to a high of 319 gpcd (almost a 200% increase). This large swing is indicative of the amount of water that is traditionally used for landscaping and irrigation during the summer months.

2.2.2 Well Usage

While the City operates 6 wells, cycling between these wells is necessary to provide adequate excising of the wells and to meet water demands in various parts of the city.

Figure 4 below illustrates the amount of water produced by each well over the 2 year reporting period and the total production (by month). As this figure illustrates, Well #7 is producing the large majority of potable water for the City.

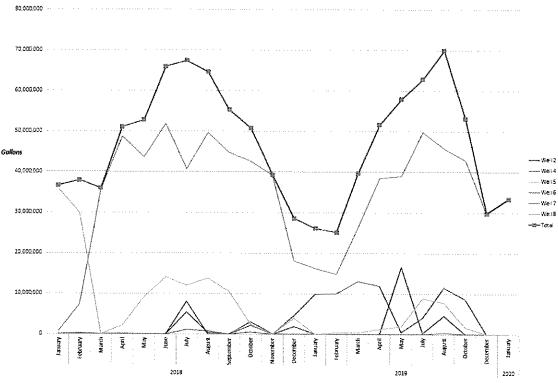


Figure 4 - Monthly Water Production



Chapter 3 Existing Water System Simulations

3.1 Introduction

The hydraulic water model was initially calibrated to existing conditions under an average day demand. Once calibrated, the model was then placed under two operational scenarios. The first scenario was Existing-Average Day Demands while the second scenario evaluated Existing-Maximum Day Demands. Each analysis and relevant hydraulic information is provided herein.

Since the City is relatively small in size, demands were allocated in the hydraulic model by uniformly applying the average day demand to each analysis node. For example, the existing system hydraulic model consists of approximately 345 analysis nodes with an average daily flow rate of 1,132 gallons per minute (as shown in Table 5). Thus, each analysis node was populated with an average day demand of 3.28 gallons per minute.

As shown in Table 5, the total average day demand applied to the model was approximately 1.629 mgd while the maximum day demand was 2.933 mgd, which was established by using a peaking factor of 1.8 on top of the average day demands. The average day demand relates to a population of approximately 7,000 citizens consuming roughly 221 gpcd.

Both the Average Day and the Maximum Day models were analyzed under a 24-hour extended period simulation, applying the diurnal curve as provided in Figure 5. This curve represents how system demands rise and fall throughout a 24-hour day.

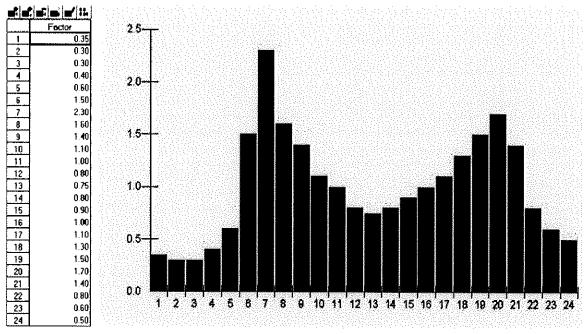


Figure 5 - City of Fowler Diurnal Curve (Hourly Water Use)



3.2 Existing System – Average Day Analysis

The analysis of this scenario determined that the system operates efficiently under normal conditions (~1,132 gpm). During the Average Day, Well #7 can provide most, if not all, of the daily supply required by the City. Figure 6 illustrates how Well #7 (5007), Well #2 (5002) and Well #8 (5008) would operate during a normal 24 hour period.

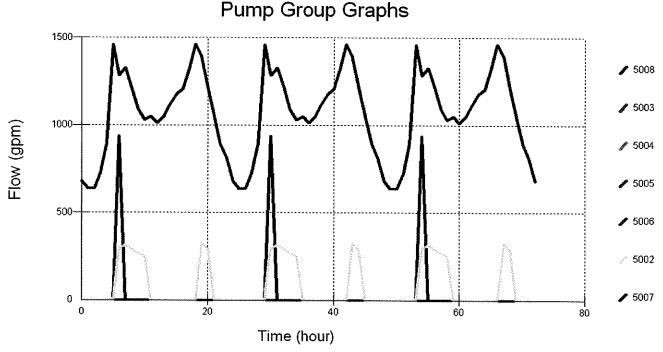


Figure 6 - Average Day Pumping Operation

The analysis showed that larger pressure variations could occur in the southern region of the City as it is both distant from the primary wells and the area does not contain a large amount of looping and network intertie to the rest of the water system.

Transient Flows and Variable Frequency Drives

The current SCADA configuration for the City operates Well #7 as the primary and then calls on Well #8 to cycle on as the secondary. Since both wells are VFD operated this can result in transient waves propagating across the system:

- O Considering that Well #7 and Well #8 are located on opposite sides of the City, as Well #8 experiences a lower pressure setting and turns on, it will begin to push a higher pressure wave back across the city. This wave would take many minutes before Well #7 would experience this higher pressure wave and begin to slow down its motor.
- As Well #8 speeds up, it would push a stronger wave across the system. As Well #7 experiences this higher wave, it will slow down many minutes later after Well #8 has increased its speed. Well #7 could continue to slow down and Well #8 could speed up to such a point that Well #7 begins to experience a lower pressure and then speeds up to compensate for its lower pressure, thus creating a back and forth cycle where both wells are reacting to each other.



The City operates 4 VFD wells and 2 Static wells. Referring back to Table 5, the City has a combined Static Well capacity of 785 gpm and a combined VFD capacity of 5,150 gpm. In a closed water system with no elevated water storage tank or pressure relief valves, it is important for operations staff to ensure that future well cycling takes into consideration the relationship between Static and VFD operated wells and how to best modify SCADA operations accordingly.

3.2.1 Existing System Deficiencies

Under a normal, average day demand, no deficiencies were evident. However, upon review of the overall system, the following long term planning issues should be considered:

- Currently only 3 6" water lines cross State Route 99 as interconnect between the east half and the west half of the City water system (Figure 7).
- Well #8 is the only well located on the west side of State Route 99, serving the west half of the City.
- Due to their geographic location, Well #5 and Well #6 disproportionately serve the southeastern portion of the water system.
- A large fire demand could cause transient and pressure issues during fire suppression.

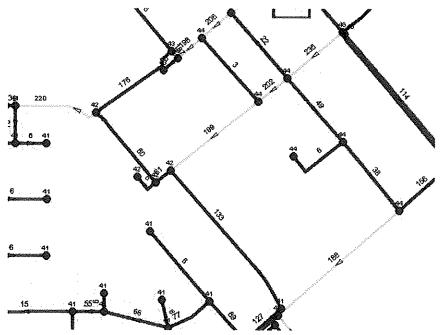


Figure 7 - Interconnect Piping Across State Route 99

3.3 Existing – Maximum Day Demands

The maximum day demand represents peak water usage, most usually during the summer months. It is also during this time of year that the likelihood of fire is increased due to dry, arid conditions. Thus, while the results of a maximum day demand are informative, it is the fire flow simulation which illustrates the ability of the water system to provide for both the maximum day demand plus fire flow.



3.3.1 Maximum Day Simulation

Analysis of this scenaro determined that the system operates efficiently under maximum day conditions (2,036 gpm). This simulation assumed that during a maximum day, both Well #7 and Well #4 would be continuously operational and that Wells #8, #6, #5 and #4 would have SCADA settings that would turn pumps on and off, dependent upon system demands increasing and decreasing throughout the day. Figure 8 illustrates how each well would turn on and off during a maximum day event.

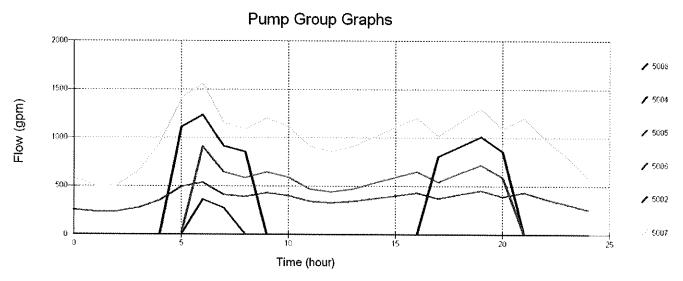


Figure 8- Maximum Day Pump Operation

This simulation was conducted by modifying the existing SCADA operations as provided in Table 4 of this report. The current SCADA settings utilized by City staff for well set points and pressure ranges do not take into account the ground elevation differences across the system. Table 6 illustrates what the static pressures would be at each well when the discharge pressure at Well #7 is set at 55 psi. For example, there is a 16 foot vertical difference between Well #8 and Well #7, translating into a nearly 7 psi static pressure increase at Well #8 versus Well #7. Referring to Table 4, the current SCADA set point for Well #8 is 50 psi which, when is actually 12 psi lower than Well #7 when accounting for the difference in ground elevations.

City of Fowler Existing Well Capacities

Weli ID	Operationa I Flow (gpm)	Motor Type	Horse Power (HP)	Voltage	Amps	Ground Elev (ft)	Depth of Drawdown (ft)	Pressure Tank (gal)	Pressure Setting	Discharge HGL (ft)
2	310	Static	25	230	63	306	75	2,000	59.77	213
4	475	Static	50	460	64	312	79	2,000	57.17	211
5A	1,100	VFD	100	460	120	312	103	15,000	57.17	235
6	1,250	VFD	125	460	144	307	88	15,000	59,33	225
7	1,700	VFD	125	460	142	317	81		55.00	208
A8	1,100	VFD	125	460	142	301	73		61.93	216
	5,935					· · · · · · · · · · · · · · · · · · ·				

Table 6 - Ground Elevations and Static Pressure Differences (Well 7 @ 55 psi)



3.3.2 Maximum Day + Fire Flow Simulation

Fire flows requirements vary from one community to another. Flow requirements are dictated by the underlying land use – which can vary from 1,500 gpm for single family residential housing to 2,500 gpm for commercial and industrial land uses. Flow rates, if not determined by the local fire service provider, can be determined by the International Services Organization (ISO) or the American Water Works Association (AWWA) Manual M31 – Distribution System Requirements for Fire Protection. Required fire flows for the various land uses within the City can be found in Table 1 of this report.

The software utilized in this modeling provides for a fireflow analysis. This analysis allows for each node in the water distribution system to be given a fireflow demand and modeled accordingly. The resulting analysis output report determines which nodes in the system dropped below optimal pressures when a fire demand was applied. Such an analysis is useful in the identification of system deficiencies such as undersized pipes or insufficient looping and pipe networking.

Table 7 presents the 'worst case' output of a fireflow analysis which was conducted on a 'node by node' basis across the entire water distribution system at a clock time of 4 pm (which is not the peak hour on a max day). The data indicates that the City does not possess a sufficient water distribution system which allows for at least 1,000 gpm at every pipe or portion of the water distribution system.

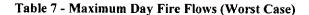
For example, when the simulation attempted to deliver 1,500 gpm to Node 170, the residual pressure recorded at this node dropped to -120.34 psi (theoretical). The simulation indicates that in order to maintain a residual pressure of 20 psi at Node 170, the maximum water volume that could theoretically be delivered would be approximately 647 gpm. Fire nodes which could not deliver at least 1,000 gpm at a residual pressure of 20 psi are shown in Figure 9.

In most instances of 'worst case' fire flows, the fire demand was applied at the end of a long, 6" dead-end pipe, with the exception being the subdivision located near the intersection of Sumner Avenue and Laker Lane (see Figure 10) which appears to be served by a singular 6" pipe under Sumner Ave. This condition could be corrected by constructing (or verifying presence) of a second point of connection along the intersection of Nelson Avenue and Laker Lane.



City of Fowler **Maximum Day Fire Flows - Worst Case**

				Actual
	Static		Residual	Flow 🖗
Node	Pressure	Modeled Flow	Pressure	20 psi
170	55.84	1,500.00	120.34	647.18
172	55.84	1,500.00	-118.23	651.25
166	55.84	1,500.00	113.93	659.74
540	51.99	1,500.00	120.81	683.99
168	55.84	1,500.00	-100.8	687.49
264	55.85	1,500.00	100.45	689.37
448	57.76	1,500.00	101.83	715.47
266	55.85	1,500.00	-87.51	719.96
262	55.85	1,500.00	87.04	721.03
268	55.85	1,500.00	79.49	741.04
272	55.85	1,500.00	79.05	742.54
270	55.85	1,500.00	76.84	748.51
214	56.80	1,500.00	·76.8	763.34
174	55.86	1,500.00	-69.16	771.45
216	56.80	1,500.00	-73.81	771.8
346	56.37	1,500.00	79.72	774.52
470	57.53	1,500.00	-82.82	781.82
274	55.87	1,500.00	-64.21	787.68
466	64.67	1,500.00	83.05	799.3
566	47.95	1,500.00	67.88	816.96
396	56.02	1,500.00	-62.2	842.37
260	56.24	1,500.00	-50.94	855.49
452	57.74	1,500.00	56.98	874.84
290	67.36	1,500.00	-40.33	889.98
474	49.20	1,500.00	47.5	891.68
684	49.76	1,500.00	51.14	900.45
280	56.09	1,500.00	40.89	903.99
658	57.75	1,500.00	49.64	906.79
212	56.80	1,500.00	44.33	913.06
344	55.97	1,500.00	·38.56	913.75
676	49.75	1,500.00	44.18	926.99
292	67.36	1,500.00	-29.36	932.91
372	56.52	1,500.00	-40.1	940.57
222	56.81	1,500.00	-37.29	949.08
220	56.81	1,500.00	34.34	964.49
554	46	1,500.00	-31.06	967.77
376	55.01	1,500.00	32.95	973. 9 1
635	45.56	1,500.00	31.47	975.34



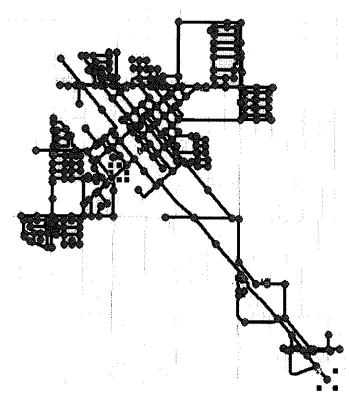


Figure 9 - Maximum Day Fire Flows (Worst Case)

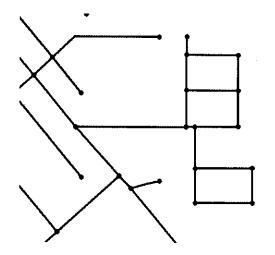


Figure 10 - Maximum Day Fire Flows (Sumner and Laker)

Some nodes provide less than the 1,500 gpm stipulated by the City of Fowler for residential land uses. This is typical in any community water distribution system, particularly in older parts of town with 6" distribution mains installed in long cul-de-sac streets. Such data does not always imply that a fire could not be adequately suppressed. The data simply indicate that the desired flow of 1,500 gpm, in these instances, is not achievable during a maximum day water demand.



While the City may possess a sufficient water supply in the form of wells and pumping capacity, the City does not retain a high degree of interconnection and pipe sizing between these wells in providing a sufficient degree of water protection during maximum day fire flow events. This condition is discussed further as provided in Section 3.3.3 of this report.

3.3.3 Maximum Day - Well #8 Out of Service

As Well #8 is the only well servicing the west half of the city, this simulation was conducted in order to evaluate a sudden non-operational status of Well #8 – forcing all water supply for western Fowler through the 3-6° water lines crossing State Route 99.

The results indicate that the City would not be able to provide sufficient water pressure to the entire west half of the City during the peak hours of a maximum day with Well #8 non-operational. As shown in Figure 11, pressures during the peak hours would drop below the minimum pressure of 20 psi.

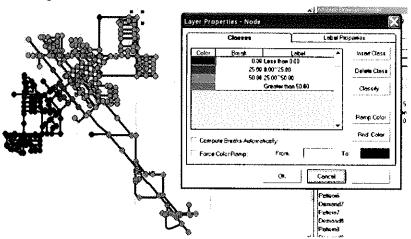


Figure 11-System Pressures without Well #8

Well #8 has a backup diesel generator to ensure that the well remains operational during power outages; however, sudden mechanical and/or equipment failure cannot always be prevented. As a result, the City should pursue installation of another well site in the western half of its system. Additionally, the City should also pursue constructing a new 12" water line under State Route 99 in the approximate alignment of South Avenue as well as Adams Avenue, connecting to the water transmission main in Sunnyside Avenue.

This simulation also indicates Wells #5 and #6 are too distant from the 6" lines crossing State Route 99; and the pipe network connecting these wells to the rest of the water distribution system are presently undersized for these two wells to be effective mitigating a low pressure condition in the west half of the City.

In effect, the City can be considered a bifurcated water system, consisting of a South Zone (Well #5 and Well #6), a West Zone (Well #8) and an East Zone (Well #7, Well #2 and Well #4). Under normal, average day operational parameters, these regions can share water with one another with little pressure drop or reduction in water supply, but during significant fire flow events or well outages, these areas are not readily able to serve another portion of the system given the sub-standard interconnecting piping layout of primarily 6" transmission mains within the existing water system.



3.3.4 Maximum Day – Well #8 Out of Service (with South Avenue Interconnect)

A simulation was additionally conducted to determine the effects of Well #8 being out of service and the benefits of installing 3,400 linear feet of 12" water main under State Route 99 along the South Avenue alignment from Golden State Boulevard to Fowler Ave.

The simulation determined that this pipe would remedy the absence of Well #8 during both a maximum day event as well as provide sufficient fire flow demands. Figure 12 illustrates the volume of flow along this future pipe during a Maximum Day + Fire flow simulation.

To mitigate the deficiencies in this scenario, the South Avenue pipeline could be constructed as shown in Figure 12 or a new well can be constructed in the west quadrant as an interim solution. As a long term solution, both solutions should be pursued.

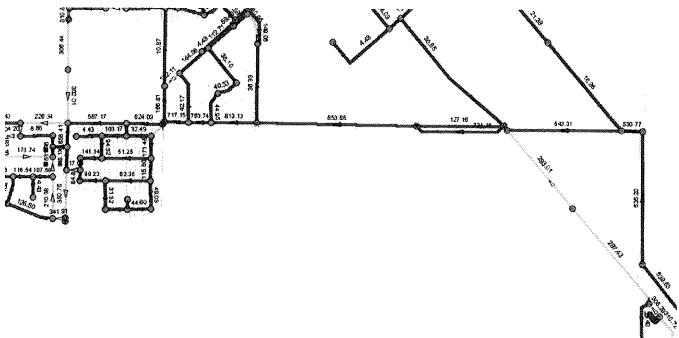


Figure 12 - Maximum Day + Fire Flow in Future South Ave. Trunk (w/ Well #8 Out of Service)

Chapter 4 Recommendations

4.1 Water Model Summary & Recommendations

The development of the hydraulic water model identified deficiencies in the water system related to providing fire flows during the maximum daily demand scenario. In order to correct these deficiencies and provide for future water system demands, the following improvements should be pursued:

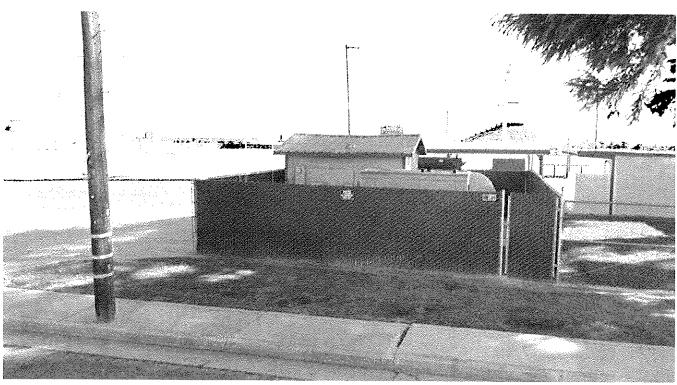
- Construction of a new municipal well west of State Route 99 having a minimum output of 1,200 gallons per minute.
- Construct a new pipeline connection crossing State Route 99 connecting the west and east portions of the water system to provide additional interconnectivity.
- Install backup generators on wells not so equipped to ensure availability during power outages.
- Adjust SCADA settings to account for ground elevation differences within the system.
- Continue to monitor addition water demands as new development occurs and add additional wells as necessary to provide sufficient fire flows throughout the City.
- Construct 12-inch diameter waterlines in a quarter-mile spaced transmission grid main system.



Appendix A

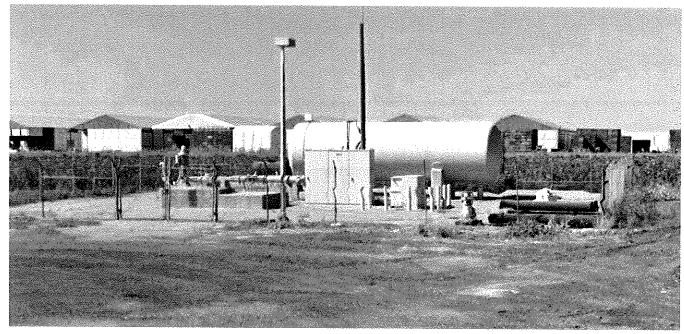


Well 2

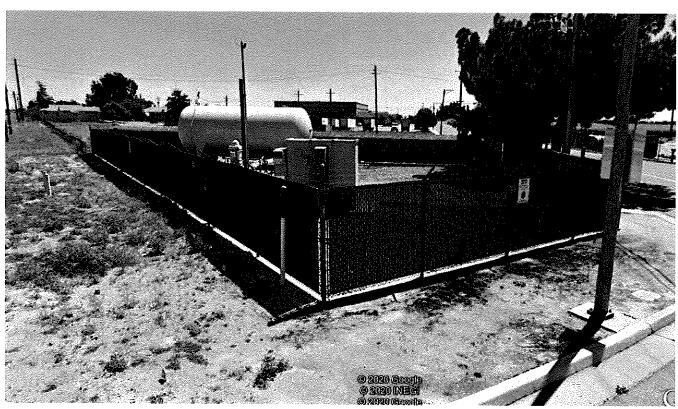


Well 4

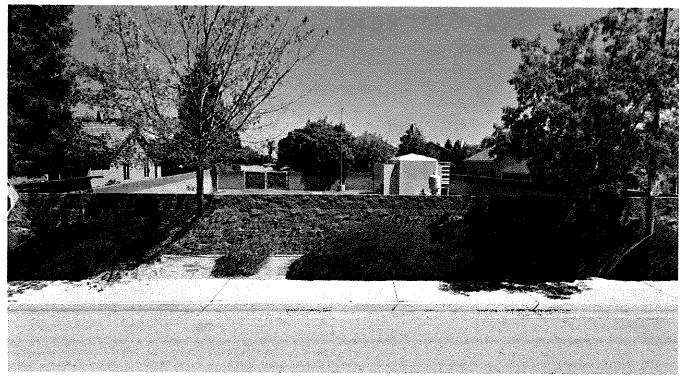




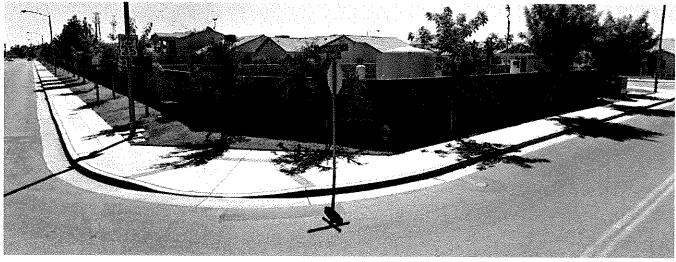
Well 5



Well 6



Well 7



Well 8

ITEM

CITY OF FOWLER WARRANTS LIST May 4, 2021

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CITY OF FOWLER
CHECK REGISTER - DISBURSEMENT FUND

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CITY OF FOWLER
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MINUTES OF THE FOWLER CITY COUNCIL SPECIAL MEETING APRIL 20, 2021

Mayor Cardenas called the meeting to order at 6:01 p. m. Roll call was taken.

Councilmembers Present: Cardenas, Rodriquez, Kazarian, Mejia, Parra

City Staff Present: City Manager Quan, City Attorney Cross

PUBLIC PRESENTATIONS

There were no public presentations.

CLOSED SESSION

Government Code Section 54957
 Public Employees Appointment/Employment
 Title: Finance Director

The Council, on a motion by Mayor Pro-Tem Rodriquez, seconded by Councilmember Parra, and approved 5-0, approved the City Manager's recommendation to appoint Margarita "Maggie" Moreno as the City's Finance Director, and authorized to begin at the E step in the City's Salary Schedule (approximately \$115,000 annually) with a \$500 per month car allowance consistent with other directors.

The meeting reconvened to open session at 7:01 p.m.

ADJOURNMENT

Having no further business, the meeting adjourned at 6:58 p.m.

MINUTES OF THE FOWLER CITY COUNCIL MEETING April 20, 2021

Mayor Cardenas called the meeting to order at 7:01 p. m. Roll call was taken.

Councilmembers Present: Cardenas, Rodriquez, Kazarian, Mejia, and Parra

City Staff Present: City Manager Quan, City Attorney Cross, Police Chief Alcaraz,

Public Works Director Dominguez, Fire Chief Lopez, Assistant Fire Chief Hernandez, City Planner Marple, Deputy City Clerk

Vasquez, Rebecca Molina

PUBLIC PRESENTATIONS

There were no public presentations.

COMMUNICATIONS

Approve Proclamation "Day of Remembrance of the Armenian Genocide" - Coucilmember Kazarian. There was a moment of silence.

A motion was made by Councilmember Parra to approve Proclamation "Day of Remembrance of the Armenian Genocide," seconded by Mayor Pro-Tem Rodriquez. The motion carried by roll call vote: Ayes: Parra, Rodriquez, Cardenas, Kazarian, and Mejia. Noes: None. Abstain: None. Absent: None.

STAFF REPORTS

CITY PLANNER'S REPORT

City Planner Marple updated the council on a number of items. Staff will be conducting a General Plan update workshop via Zoom Wednesday, April 28, 2021 from 6:00 p.m. – 7:00 p.m. The Zoom link will be posted on the city's website tomorrow, mailers are being sent out, and flyers will be passed out to local residents. Staff will be utilizing the feedback from the workshop to present the alternatives to the Planning Commission the first week of June and to council on June 15, 2021, and will be looking for recommendations on the preferred alternative.

Ms. Marple reported staff has been conducting stakeholder interviews for the zoning code audit. A summary of the feedback will be shared with the council. Ms. Marple also reported on the regional housing needs allocation; the Fresno COG is beginning the process for our next allocation of housing needs. A meeting was held last week with all of the member agencies that will be participating in the housing element update for 2023. The state has given us preliminary numbers and we're looking at how the money will be distributed amongst the member agencies of Fresno County.

City Planner Marple reported she, City Manager Quan, and other staff visited Bee Sweet earlier in the month for a tour of their plant. Bee Sweet submitted a new building for their mandarin line processing; staff is looking forward to assisting them through the process. Mayor Pro-Tem Rodriquez inquired when Bee Sweet planned on doing the upscale mandarin line. Ms. Marple explained they have to go through the site plan review process and the CEQA process; approval will possibly be within the next month so they can move forward with building permits and construction.

CITY MANAGER'S REPORT

COVID-19 Update

City Manager Quan reported the City is currently at 1,000 total positive cases and 20 deaths to date. Vaccines are open to everyone over age 16. The vaccination rate amongst Fowler residents is 43%. Because of that, Fresno County Department of Public Health (FCDPH) is no longer looking at Fowler as a permanent vaccination site, but as a one day mobile walk up clinic with a target of 200 vaccinations. Once we have more information, it will be posted on the city's website and shared with the council to assist with getting the word out.

Ms. Quan also reported staff is working with FCDPH on opening city hall; their recommendation is to wait until June 15, 2021 with a transitional opening, i.e. possibly a few days a week or in the morning to reduce the amount of exposure to everyone. Staff will keep council updated. Ms. Quan announced FEMA is now accepting applications for funeral expenses for anyone that has a COVID related death that occurred after January 20, 2020. Once staff has more information on the application process it will be posted on the city's website.

Ms. Quan stated staff continues to monitor the American Rescue Plan. Ms. Quan attended the League of CA Cities meeting last week as well as Councilmember Parra. Staff has ensured we are registered with System for Award Management so funds can be distributed once the funding process is established.

City Manager Quan reported Recreation Coordinator, Yvonne Hernandez, is working to contract this year with America's Kids in Motion for swim lessons. The price is \$105 for ten, 30-minute sessions over a two week period. Staff is looking for donations to help off-set costs to our residents. The councilmembers were asked to share any donor recommendations with staff. Ms. Quan announced the fireworks contract was signed yesterday for the July 4th fireworks show. The show will take place at 9:15 p.m. in two different locations; it's a dual show this year that is 18 minutes long. Staff will share with the community where the best locations are to watch the fireworks. Councilmember Parra requested a flyer for the swim lessons donation request.

PUBLIC WORKS REPORT

Approval of Resolution No. 2499, a Resolution of the City of Fowler Approving Agreements with Sitelogiq, Inc. and Advanced Lighting Services, Inc. for energy conservation improvements pursuant to Government Code Section 4217.10, et. seq. (Item to be Continued to May 4, 2021 City Council Meeting)"

Public Works Director Dominguez requested Approval of Resolution No. 2499 item to be continued to May 4, 2021 City Council meeting. Staff is currently working on finalizing the agreements.

A motion was made by Mayor Pro-Tem Rodriquez to continue approval of Resolution No. 2499, a Resolution of the City of Fowler Approving Agreements with Sitelogiq, Inc. and Advanced Lighting Services, Inc. for energy conservation improvements pursuant to Government Code Section 4217.10, et. seq. to May 4, 2021 City Council Meeting seconded by Councilmember Kazarian. The motion carried by roll call vote: Ayes: Rodriquez, Kazarian, Cardenas, Mejia, and Parra. Noes: None. Abstain: None. Absent: None.

Mr. Dominguez reported due to the recent rise of catalytic converter theft, the Prius' have been relocated to the new fire station. Councilmember Mejia suggested it may be a good idea to look into purchasing a catalytic converter guard as an additional safeguard. Staff will research further. Mr. Dominguez announced one of our water meter data collectors is currently down which reads approximately 500 meters. Staff shipped to the manufacturer for repairs and expects it back within two weeks. Staff will use the previous month's water usage to determine the next billing cycle. Mr. Dominguez stated staff will mail a letter to the residents affected explaining the matter.

FINANCE DIRECTOR'S REPORT

City Manager Quan shared HDL's quarterly newsletter for Fowler's sales tax. The report showed improvement from 2019 to 2020. Staff will continue to monitor and will meet with HDL quarterly.

POLICE DEPARTMENT REPORT

Police Chief Alcaraz handed out DOJ crime stats for the month of March 2021. There was a dramatic increase in citations. Officers will be more active in traffic enforcement as there is an increase in pedestrian traffic as well. Chief Alcaraz shared the Virtual Business Awareness Discussion flyer with the council; the date is Wednesday, May 12, 2021 at 1:30 p.m. via Zoom. Council is welcome to attend and invite guests. The event is also on the Fowler PD app calendar.

Chief Alcaraz reported there have been a few vehicle burglaries recently. Staff has been working on this diligently and has come up with a few investigative leads. Chief Alcaraz asked the council to encourage constituents to use the Fowler PD app for helpful tips. Staff will continue to work on improving response times. Chief Alcaraz also stated he and Councilmember Mejia are working with Travis Feaver of Young Life to organize a graffiti clean-up community event possibly on May 1, 2021.

Mayor Pro-Tem Rodriquez notified Chief Alcaraz there has been discussion in the Ahronian neighborhood of petitioning to have a gated community. Chief Alcaraz noted the more accessibility the officers have the easier it is for them to patrol. Police Chief Alcaraz stated some criminals are tracking the number of officers on the street, have police scanners, and phone apps; officers are doing their best to mitigate the counter procedures the criminals are using. Chief Alcaraz suggested we look into installing cameras.

Councilmember Mejia inquired if the big rigs driving on Merced St. is due to the Adams Ave. construction and if this is being waived. Chief Alcaraz stated the revamping of the truck route has been completed and approved, but staff wants to give the business owners and truck drivers time to acclimate to the new truck route; approximately six months. Officers are handing out truck route flyers to truck drivers and businesses where trucking is a big part of their industry. Chief Alcaraz stated if it's something egregious officers will take enforcement action immediately.

FIRE DEPARTMENT REPORT

Approval of Resolution No. 2500, a Resolution of the City Council of the City of Fowler approving a lease-purchase agreement with Leasing 2, Inc. for the purchase of two new fire engines for \$726,835.68.

Fire Chief Lopez requested approval of Resolution No. 2500 for the purchase of two new fire trucks. This will improve the fleet and increase the department's response time.

Councilmember Parra made a motion to approve Resolution No. 2500, a Resolution of the City Council of the City of Fowler approving a lease-purchase agreement with Leasing 2, Inc. for the purchase of two new fire engines for \$726,835.68, seconded by Mayor Pro-Tem Rodriquez. The motion carried by roll call vote: Ayes: Parra, Rodriquez, Cardenas, Kazarian, Mejia. Noes: None. Abstain: None. Absent: None.

Chief Lopez thanked Council, City Manager Quan, Public Works Director Dominguez, and City Attorney Cross.

CITY ATTORNEY'S REPORT

City Attorney Cross reported there was action on only one item from the special meeting. Pursuant to government code section 54957: public employee-appointment, Finance Director.

Mayor Pro-Tem Rodriquez made a motion to approve; seconded by Councilmember Parra. Approved unanimously 5-0. The council authorized City Manager to hire and appoint Margarita "Maggie" Moreno as the new Finance Director of the City of Fowler and authorized to begin at the E step in the city's salary schedule, which is approximately \$115,000 annually with a \$500 per month car allowance consistent with other directors.

Mr. Cross announced Brown Act, conflicts of interest, ethics training will be scheduled soon. The training will possibly be split up into two days in conjunction with department directors; the first tentatively scheduled for May 18, 2021 and the second, June 1, 2021.

CONSENT CALENDAR

The consent calendar consisted of: A) Ratification of Warrants – April 20, 2021; B) Approve Minutes of the City Council Special Meeting – April 6, 2021, and City Council Meeting – April 6, 2021

Mayor Pro-Tem Rodriquez made a motion to approve the consent calendar, seconded by Councilmember Parra. The motion carried by roll call vote: Ayes: Rodriquez, Parra, Cardenas, Kazarian Mejia. Noes: None. Abstain: None. Absent: None.

COMMITTEE REPORTS

Mayor Cardenas reported United Health Center requested their COVID-19 vaccine hours be placed on the city's website. Everyone is welcome to get the vaccine over the age of 16. They are open Monday through Friday from 9:00 a.m. – 3:00 p.m. and have both the Pfizer and Moderna vaccines.

Councilmember Kazarian raised his concern over Cesar Rodriguez and his appointment to the Planning Commission. It appears Mr. Rodriguez wasn't truthful about his involvement in the rezone project. Councilmember Kazarian is requesting this discussion be placed on a future council agenda to speak with Mr. Rodriguez about his involvement. It was the consensus of the council to add to the May 4, 2021 agenda to reconsider Mr. Rodriguez's appointment.

Councilmember Parra thanked City Manager Quan for attending the League of CA Cities meeting. Councilmember Parra also announced Fresno Irrigation District is backing out of their area that supports Fowler. Mr. Parra will share more information with Councilmember Kazarian. United Health Center's COVID-19 vaccine event scheduled for last week was postponed due to the vaccine being Johnson & Johnson; the rescheduled event date is still yet to be determined.

ADJOURNMENT

Having no further business, Councilmember Mejia made a motion, seconded by Councilmember Kazarian to adjourn. The motion carried and the meeting adjourned at 8:00 p.m.



ITEM 8 C FOWLER CITY COUNCIL

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	Regular Item
_	Workshop
	Closed Session
	Public Hearing
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Concent

REPORT TO THE CITY COUNCIL

April 28, 2021

FROM: David Peters, City Engineer

SUBJECT

Actions pertaining to Federal State Transportation Block Grant program.

1. Award the Adams Avenue Reconstruction Phase II & III project to Don Berry Construction in the amount of \$1,198,278.00.

RECOMMENDATION

Staff recommends awarding the construction contract for the Adams Avenue Reconstruction Phase II and III project to Don Berry Construction in the amount of \$1,198,278,00.

BACKGROUND

On April 6, 2021, the City received five responsive bids for the City's Adams Avenue Reconstruction Phase II & III project. The project proposes to reconstruct street pavements, install traffic striping, and install concrete ADA compliant curb ramps along Adams Avenue from 5th Street to Temperance Avenue. The bids received for the Base Bid ranged from \$1,198,278.00 to \$1,404,162.45. The Engineer's Estimate for this project was \$1,315,000.00.

Don Berry Construction holds a Class A Contractor's license in the State of California in good standing and has successfully completed City of Fowler projects in the recent past.

Attached is the summary of the five responsive bids received.

If the project is awarded, construction of the project will begin in the middle of May and will be completed in late July prior to schools opening in the fall.

FISCAL IMPACT

The project is 100% funded by Federal Surface Transportation Block Grant funds.

Attachments:

- Bid Summary

CITY OF FOWLER - Adams Ave Reconstruction Phase II & III / STPL 5173 (033) & (035)

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CITY OF FOWLER - Adams Ave Reconstruction Phase II & III / STPL 5173 (033) & (035) and the substruction Phase II & III / STPL 5173 (033) & (035)

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#2

Item No. Quantity Unit	Quantity	Unit Phase	tem Description	Unit Price	Total Amount	Unit Price	Total Amount
d Schedt 1 2 3 4	"le "A"	- Phase					
1 2 6 4	,					and the same of the same of the same of the same of	The same of the same of the
2 6 4		1.5	Mobilization (\$15,000 Maximum)	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
w 4	Ħ	เร	Traffic Control	\$16,000.92	\$16,000.92	\$24,200.00	\$24,200.00
4	ī	ฆ	Dust Control	\$500.00	\$500.00	\$4,000.00	\$4,000.00
	1	SJ	Lead Compliance Plan	\$800.00	\$800.00	\$3,500.00	00:005'£\$
5	1	SI	Clearing and Grubbing	\$33,000.00	\$33,000.00	\$61,200.00	\$61,200.00
vo.	10,039	λS	Grind & Remove Existing Asphalt Pavement (F)	\$3.00	\$30,117.00	\$4.50	\$45,175.50
7	10,039	λ	13 - Inch Full Depth Reclamation with Cement (FDR-C) (F)	\$13.00	\$130,507.00	\$11.25	\$112,938.75
8	1	ras	Increase or Decrease in Cement for FDR-C Method	\$0.08	\$0.08	\$0.10	\$0.10
6	2,507	NT	Hot Mix Asphalt(F)	\$84.00	\$210,588.00	\$88.00	\$220,616.00
10	21	EA	Concrete Ramp	\$5,000.00	\$105,000.00	\$4,400.00	\$92,400.00
11	108	ſΈ	Concrete Curb and Gutter	\$65.00	\$7,020.00	\$42.00	\$4,536.00
12	12	SF	Concrete Sidewalk	\$8.00	\$96.00	\$46.00	\$552.00
13	5	EA	Concrete Valley Gutter	\$3,500.00	\$17,500.00	\$4,000.00	\$20,000.00
14	12	EA	Adjust Sewer Manhole to Grade	\$1,200.00	\$14,400.00	\$1,350.00	\$16,200.00
15	15	EA	Adjust Valve Frame and Cover to Grade	\$800.00	\$12,000.00	\$950.00	\$14,250.00
16	9	EA	Relocate Existing Sign and Post	\$300.00	\$1,800.00	\$650.00	\$3,900.00
17	7	ĘĄ	install Fire Hydrant Assembly	\$10,000.00	\$20,000.00	\$9,000.00	\$18,000.00
18	1	รา	Pavement Delineation	\$17,000.00	\$17,000.00	\$18,000.00	00'000'81\$
19		SJ	Miscellaneous Facilities and Operations	\$2,500.00	\$2,500.00	\$20,000.00	\$20,000.00
Bid Schedule "B" - Phase III	.'B" -1	Phase	#				
F	н	ี่	Mobilization (\$15,000 Maximum)	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
2	1	SJ	Traffic Control	\$16,000.92	\$16,000.92	\$25,000.00	\$25,000.00
3	r	S)	Dust Control	\$500.00	\$500.00	\$4,000.00	\$4,000.00
4	1	ภ	Lead Compliance Plan	\$800.00	\$800.00	\$3,500.00	\$3,500.00
ın	-	รา	Clearing and Grubbing	\$5,000.00	\$5,000.00	\$57,200.00	\$57,200.00
9	14,472	λS	Grind & Remove Existing Asphalt Pavement (F)	\$2.50	\$36,180.00	\$4.50	\$65,124.00
7	14,472	λS	13 - Inch Full Depth Reclamation with Cement (FDR-C) (F)	\$11.50	\$166,428.00	\$11.25	\$162,810.00
	1	LBS	Increase or Decrease in Cement for FDR-C Method	\$0.0\$	\$0.08	\$0.10	\$0.10
6	3,585	Ž,	Hot Mix Asphalt Concrete(F)	\$84.00	\$301,140.00	\$88.00	\$315,480.00
10	80	SF	Concrete Sidewalk	\$7.50	\$600.00	\$16.00	\$1,280.00
11	m	EA	Concrete Ramp	\$6,000.00	\$18,000.00	\$4,700.00	\$14,100.00
12	7	ξA	Adjust Sewer Manhole to Grade	\$1,200.00	\$8,400.00	\$1,350.00	\$9,450.00
13	2	ð	Adjust Valve Frame and Cover to Grade	\$800.00	\$8,000.00	\$950.00	\$9,500.00
4	s	EA	Adjust Sewer Cleanout Frame and Cover to Grade	\$800.00	\$4,000.00	\$850.00	\$4,250.00
15	1	S	Pavement Delineation	\$17,000.00	\$17,000.00	\$18,000.00	\$18,000.00
16	1	t,	Miscellaneous Facilities and Operations	\$2,500.00	\$2,500.00	\$5,000.00	\$5,000.00



	Consent
u	Regular Item
	•
п	Workshop
	Closed Session
п	Public Hearing
竹	EM NO: 8D

REPORT TO THE CITY COUNCIL

April 28, 2021

FROM: David Peters, City Engineer

SUBJECT

Actions pertaining to the Compliance Order No. 03_23_18R_026; 1,2,3 Trichloropropane (1,2,3-TCP) Maximum Contaminant Level Violation

1. Approve a consultant services agreement with Provost & Pritchard Consulting Group (Provost & Pritchard) to provide professional engineering services for the Well 7 TCP Treatment Project in the amount of \$269,000 subject to the review and approval by the City Attorney.

RECOMMENDATION

Staff recommends approval of a consultant services agreement with Provost & Pritchard in the amount of \$269,000 for professional engineering services related to design of Trichloropropane treatment facilities for Well 7. Well 7 is located near the intersection of Adams Avenue & Temperance Avenue in the northeast portion of the City.

BACKGROUND

On August 15, 2018, the City of Fowler received Compliance Order No. 03_23_18R_026; 1,2,3 Trichloropropane (1,2,3-TCP) Maximum Contaminant Level Violation from the State Water Resources Control Board. The Compliance Order states that 1,2,3 Trichloropropane levels in Well 7 effluent exceed the State's Maximum Contaminant Level (MCL) and mandates that system improvements be made to correct the water quality deficiencies by August 31, 2021. The City has successfully obtained an extension to this date to December 31, 2022 due to delays in correcting the issue related to COVID-19.

The first step in completing the necessary system improvements is to prepare engineering design plans and specifications for treatment facilities at Well 7. The improvements are intended to successfully remove the 1,2,3 TCP contaminant from effluent water pumped by Well 7. Provost & Pritchard has provided a proposal and contract to provide these services in the amount of \$269,000.

Due to the urgency of this situation and the importance of complying with the terms of the Compliance Order, it is recommended that Council confirm dispensing with the formal competitive purchasing process and award the consulting services agreement to Provost & Pritchard consistent with the City's Purchasing Policy, Section 7 – Exceptions to Purchasing Methods, Subsection I, which authorizes Council to waive the formal process when immediate commencement of services is in the best interest of the City.

Staff believes Provost & Pritchard is uniquely qualified to provide engineering services associated with the proposed scope of services immediately because of their experience in preparing the City's TCP Feasibility Study, knowledge of the City's water system and standards, and history of successfully completing similar projects with staff in nearby jurisdictions.

FISCAL IMPACT

The proposed contract will be financed utilizing litigation settlement funds which have been designated for use in providing water system improvements necessary to correct the water quality deficiencies caused by 1,2,3 TCP.

Attachments:

- Consultant Services Agreement



286 W. Cromwell Avenue Fresno, CA 93711-6162 Tel: (559) 449-2700 Fax: (559) 449-2715

www.ppeng.com

3-3-2021

David Peters, PE City Engineer City of Fowler 128 S. 5th Street Fowler, CA 93625

Subject: Proposal for – Engineering Design Services for 1,2,3-Trichloropropane

(TCP) Treatment at the City of Fowler Well 7

Dear Mr. Peters:

Thank you for the opportunity to submit this proposal to provide engineering services for the City of Fowler. This proposal discusses our understanding of the project, recommends a scope of services together with associated fees, deliverables and approximate schedules, sets forth our assumptions and discusses other services that may be of interest as the project proceeds.

Project Understanding

In January 2020 Provost & Pritchard prepared a technical memorandum titled "City of Fowler 1,2,3-TCP Mitigation Feasibility Study". The purpose of the study was to recommend an approach to mitigate TCP contamination in five (5) of the City's wells. The study identified improvements required to treat the TCP contaminated wells with granular activated carbon (GAC) adsorption.

The City has asked for asked Provost & Pritchard to provide a scope of work and fee to provide engineering design services for one (1) of the five wells identified in the Feasibility Study (Well 7). In order to treat Well 7 for TCP removal, three (3) pairs of 12-foot diameter GAC vessels will be required. The existing Well 7 parcel is not large enough for construction of the proposed treatment plant and cannot be expanded due to the adjacent residential homes. The City will need to acquire a privately-owned parcel nearby on which to construct the treatment plant, and a transmission pipeline from the existing well site to the treatment plant will need to be designed. Other features of the treatment plant include an at-grade vessel foundation, a backwash reclaim storage tank and pump, a small retention pond, chemical enclosure, and masonry wall. The design services will be completed based on the following task breakdown:

Schematic Design
Construction Documents
Bidding Assistance
Construction Administration

Project Team

Provost & Pritchard staff has more experience solving TCP drinking water contamination problems than any other firm in the nation. For your project we have assembled our most experienced TCP mitigation staff – all located 30 minutes from the City.

Kevin Berryhill, PE – Principal Engineer

Kevin Berryhill is a national leading expert in TCP mitigation and associated GAC design. He has evaluated TCP mitigation alternatives at more water systems and wells than any other engineer in the nation and is frequently sought out to serve as an expert on the subject. Kevin is Provost & Pritchard's principal water treatment practice lead with 25 years of engineering experience.

Keith Mortensen, PE - Project Engineer

Keith Mortensen will serve as project engineer and will assist Kevin in the design. Keith is a principal civil engineer with over 14 years of experience in the design of water treatment and water resource projects. His design experience specializes in water treatment plants, but he also has experience in well installations, chlorination systems, pipelines, pump stations, water storage, and system automation. Keith has assisted Kevin on nearly every water treatment project completed by Provost & Pritchard over the past 5 years and has worked on more than a dozen TCP and GAC design projects.

Scope of Services

Our proposed scope of work for this proposal is segregated into several phases, described below.

Phase SD: Schematic Design Phase

A. PROJECT MANAGEMENT

- 1. Project management and administration
- 2. Prepare and maintain workplan and design schedule
- 3. Attend kick-off meeting with City staff
- 4. Prepare and submit monthly billing
- 5. Conduct QA/QC program

B. SURVEYING

- Conduct right-of-way and boundary research for the well site and treatment site to be acquired by City.
- 2. Conduct a field survey to locate sufficient monumentation to re-establish the rightof-way and property lines within the project limits
- Conduct topographic ground surveys within the project limits to create a base map
 of the existing topography and improvements

C. AGENCY AND UTILITY COORDINATION

- Utility Notifications Send utility request letters to utility companies to obtain utility information within the project limits
- 2. Review Record Information and complete utility base mapping

D. SCHEMATIC DESIGN

 Prepare a preliminary site plan for the treatment site showing the proposed treatment systems and appurtenances

E. GEOTECHNICAL SERVICES

 Hire geotechnical subconsultant to conduct exploratory borings, laboratory testing and provide geotechnical engineering report containing findings, conclusions, and recommendations for use in design and preparation of construction specifications

Assumptions:

- The project management and programming budget is based on a total design project duration of 6 months.
- b) Sufficient monumentation will be locatable to determine right-of-way and property limits.
- c) The GAC treatment plant will be constructed on a parcel of the farmland adjacent to the well site that the City will acquire.
- d) City will provide record drawings of utilities under their control and/or arrange for potholing to confirm utility locations and depths.

Phase CD: Construction Documents Phase

A. PRELIMINARY PLANS, SPECIFICATIONS, AND COST ESTIMATE

- 1. Address any remaining comments on the preliminary site plan
- 2. Prepare (60%) plans for the wellhead treatment construction project, including the following sheets:
 - i. Cover and index (1 sheet)
 - ii. General notes (1 sheet)
 - iii. Legend and abbreviations (1 sheet)
 - iv. Hydraulic profile (1 sheets)
 - v. Horizontal control plan (1 sheet)
 - vi. Demolition plan (2 sheets)
 - vii. Site plan (2 sheets)
 - viii. Grading plan (1 sheet)
 - ix. Site piping plan (2 sheet)
 - x. Transmission pipeline plan & profile (1 sheet)
 - xi. GAC vessel piping plan (1 sheet)
 - xii. Manifold piping details (1 sheet)
 - xiii. Backwash water disposal details (2 sheets)
 - xiv. Chlorination and enclosure details (3 sheets)
 - xv. Miscellaneous details (5 sheets)
 - xvi. Structural details (3 sheets)
 - xvii. Electrical sheets prepared by Provost & Pritchard's electrical engineering subconsultant
- 3. Prepare preliminary technical specifications in CSI format
- 4. Prepare itemized estimate of quantities and cost

- 5. Submit preliminary (60%) plans, specifications and estimate (PS&E) in electronic pdf format
 - i. Schedule and conduct workshop review meeting separately with DDW

Assumptions:

- a) Provost & Pritchard CAD standards and title block will be used for the design of this project
- b) Provost& Pritchard's current CAD version will be used
- c) City boiler plate front-end specifications will be used (if available)

B. PERMITTING ASSISTANCE

- Coordinate with the State Water Resources Control Board Division of Drinking Water (DDW) and the Central Valley Regional Water Quality Board regarding the project
- 2. Prepare and submit Operations Plan to DDW for approval

Assumptions:

- a) City will pay for all permit fees directly
- b) No permits will be required other than those specifically identified above
- c) The City will coordinate with property owners adjacent to the new treatment site regarding aesthetic impacts, and construction activities.
- d) New electrical service will be required for the treatment site

C. DRAFT FINAL (90%) DESIGN

- 1. 60% submittal review meeting with City
- 2. Address 60% review comments
- 3. Prepare draft final plans, including the same sheets listed in the previous phase
- 4. Prepare draft final technical specifications
- 5. Incorporate City up-front documents
- 6. Prepare draft final cost opinions
- 7. Submit draft final plans, specifications and estimate in electronic pdf format

D. FINAL (100%) PLANS, SPECIFICATIONS, AND ESTIMATES

- 1. 90% submittal review meeting with City
- 2. Address draft final review comments
- 3. Prepare final plans
- 4. Prepare final technical specifications
- 5. Prepare final opinion of probable construction costs
- 6. Submit final plans, specifications, and estimate
- 7. Submit final construction documents in electronic pdf format

E. BUILDING DEPARTMENT PLAN REVIEW

- 1. Submit two full-size plan sets and one set of structural calculations for City plan check
- 2. Complete backcheck process to obtain City approval

Assumptions:

a) Contractor will prepare and implement Storm Water Pollution Prevention Plan and Dust Control Plan if required

Phase BD: Bidding Assistance Phase

A. BIDDING SERVICES

- Attend pre-bid conference
- 2. Assist with the preparation of addenda and clarifications as necessary during the bid period
- 3. Review bid proposals and provide recommendation for award

Assumptions:

a) The City will advertise and facilitate the bidding process and Provost & Pritchard will assist

Phase CA: Construction Administration Phase

A. CONSTRUCTION SERVICES

- 1. Attend pre-construction kickoff meeting
- 2. Review contractor submittals prior to the start of construction
- Make periodic site visits while construction is active to observe the progress of work; including a site visit for substantial completion and a final walk-through. A total of four (4) construction administration site visits are included in the scope of services.
- 4. Assist in response to RFIs (assumed 4 RFI responses)
- 5. Review the contractor's completion documents. Prepare record drawings based on "as-built" information furnished by the Contractor and City. Provide one electronic copy of reproducible record drawings to City for permanent records.

Assumptions:

- a) A Conditional Use Permit (CUP) will not be required
- b) No flood plain surveys will be required
- c) The City will prepare required environmental permitting and will pay all agency review, permit, and/or utility service application fees
- d) The City's existing SCADA system can support the addition of the instrumentation and controls associated with the GAC plant

Professional Fees

Provost & Pritchard Consulting Group will perform the services in this Project for the fixed fee amount shown below. These services will be invoiced monthly, on a percent-complete basis. Reimbursable Expenses are included in the Fixed Fee amount stated.

Proposed Fee – TCP Design Se	rvices
Phase	Estimated Fee
Phase SD: Schematic Design	\$42,000
Phase CD: Construction Documents	\$175,000
Phase BD: Bidding Assistance	\$10,000
Phase CA: Construction Administration	\$42,000
Total Estimated Fee:	\$269,000

The line items shown above are estimates and are not intended to limit billings for any given Task. Required task effort may vary up or down from the line item estimates shown, however total billings will not exceed the Total shown without additional authorization. If the scope changes materially from that described above, as a result of any agency's decision or because of design changes requested by the Owner, we will prepare a revised estimate of our fees for your approval before we proceed.

Schedule

Provost & Pritchard is prepared to begin immediately upon authorization to proceed. We will work with the City to establish a mutually agreed upon schedule.

Additional Services

The following services are not included in this proposal, however these and others can be provided at additional cost, upon request.

- 1. Construction Bid Assistance
- 2. Bid packages for separate procurement of GAC vessels and/or carbon
- Services associated with land acquisition
- Applying for plan amendment, rezoning, or code variances.
- Legal descriptions and exhibits
- 6. Payment of plan check and permit fees
- 7. Potholing and utility locating services
- Hydraulic modeling or surge analysis
- Environmental permitting assistance
- 10. Construction staking
- 11. As-built survey
- 12. Contractor pregualification

- 13. Construction management and/or inspection
- 14. Labor compliance assistance
- 15. Preparation of Dust Control plans or Storm Water Pollution Prevention Plans (SWPPP)
- 16. Environmental permitting

Terms and Conditions

If this proposal is acceptable, please sign the Consultant Services Agreement, and return a copy to our office. These documents will serve as our Notice to Proceed. This proposal is valid for 30 days from the date above.

Sincerely Yours, **Provost & Pritchard Consulting Group** even Beerwhill Kevin Berryhill, RCE 70415 Keith Mortensen, RCE 75865 Principal Engineer Vice President **Terms & Conditions Accepted** By City of Fowler Signature Signature **Printed Name Printed Name** TITLE DATE TITLE DATE



286 W. Cromwell Avenue Fresno, CA 93711-6162 (559)449-2700 FAX (559)449-2715 www.provostandpritchard.com

CONSULTANT SERVICES AGREEMENT

CSA No: 21-73

Client	City of Fowler	Proposal No.	21-73	
Attention	David Peters	Telephone	_(559) 299-1544	·····
Bill To	City of Fowler	Fax		
Billing Address	128 S. 5th Street	E-Mail	dpeters@peters- engineering.com	
City, Zip Code	Fowler, CA 93625			
	Engineering Design Services for 1,2,3-Trichloropropane (TCP) Treatment at the City of			
Project Title	Fowler Well 7	Location	Fowler, CA	

Description of Services: Please refer to attached proposal dated March 3, 2021, "Proposal for – Engineering Design Services for 1,2,3-Trichloropropane (TCP) Treatment at the City of Fowler Well 7."

The provisions set forth below and on the following paragraphs 1 through 42 are incorporated into and made a part of this Agreement. In signing, the Client acknowledges that they have read and approved all such terms and hires Provost & Pritchard Engineering Group, Inc., dba Provost & Pritchard Consulting Group, (Consultant) to perform the above-described services.

TERMS AND CONDITIONS

Client and Consultant agree that the following terms and conditions shall be part of this agreement:

- In providing services under this Agreement, the Consultant shall perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances at the same time and in the same or similar locality. The Consultant makes no warranty, express or implied, as to its professional services rendered under this Agreement.
- 2. Client acknowledges that Consultant is not responsible for the performance of work by third parties including, but not limited to, the construction contractor and its subcontractors.
- Client agrees that if Client requests services not specified in the scope of services described in this agreement, Client will pay for all such additional services as extra services, in accordance with Consultant's billing rates utilized for this contract.

DOCUMENTS

- 4. Client acknowledges that all reports, plans, specifications, field data and notes and other documents, including all documents on electronic media, prepared by Consultant (collectively Work Product) are instruments of service which shall remain the property of Consultant and may be used by Consultant without the consent of Client. Consultant shall retain all common law, statutory law and other rights, including copyrights. Consultant grants Client a perpetual, royalty-free fully paid-up, nonexclusive and irrevocable license to copy, reproduce perform, dispose of, use and re-use the Work Product in connection with the Project, in whole or in part, and to authorize others to do so for the benefit of Client. Client acknowledges that its right to utilize Work Product pursuant to this agreement will continue only so long as Client is not in default, pursuant to the terms and conditions of this agreement, and Client has performed all its obligations under this agreement.
- 5. Client agrees not to reuse Work Product, in whole or in part, for any project other than the project that is the subject of this agreement. Client further agrees to waive all claims against Consultant resulting in any way from any unauthorized changes or unauthorized reuse of the Work Product for any other project by anyone on Client's behalf. Client agrees not to use or permit any other person to use versions

- of Work Product which are not final and which are not signed and stamped or sealed by Consultant. Client shall be responsible for any such use of non-final Work Product. Client hereby waives any claim for liability against Consultant for use of non-final Work Product. If a reviewing agency requires that check prints be submitted with a stamp or seal, those shall not be considered final for purposes of this paragraph.
- 6. In the event Client (1) makes, agrees to, authorizes, or permits changes in Work Product, or (2) makes, agrees to, authorizes, or permits construction of such unauthorized changes, which changes are not consented to in writing by Consultant, or (3) does not follow recommendations prepared by Consultant pursuant to this agreement, resulting in unauthorized changes to the project, Client acknowledges that the unauthorized changes and their effects are not the responsibility of Consultant. Client agrees to release Consultant from all liability arising from such unauthorized changes, and further agrees to defend, indemnify and hold harmless Consultant, its officers, directors, employees and subconsultants from and against all claims, demands, damages or costs, including attorneys' fees, arising from such changes.
- 7. Under no circumstances shall delivery of Work Product for use by the Client be deemed a sale by the Consultant, and the Consultant makes no warranties, either express or implied, of merchantability and fitness for any particular purpose. In no event shall the Consultant be liable for indirect or consequential damages as a result of the Client's unauthorized use or reuse of the Work Product.
- 8. The Client is aware that differences may exist between electronic files delivered and the printed hard-copy construction documents. In the event of a conflict between the signed construction documents prepared by the Consultant and electronic files, the signed sealed hard-copy documents shall govern.

LIMITATIONS

- 9. Consultant makes no representations concerning soils or geological conditions unless specifically included in writing in this agreement, or by amendments to this agreement. If Consultant recommends that Client retain the services of a Geotechnical Engineer and Client chooses to not do so, Consultant shall not be responsible for any liability that may arise out of the making of or failure to make soils or geological surveys, subsurface soils or geological tests, or general soils or geological testing.
- 10. Client acknowledges that, unless specifically stated to the contrary in the proposal's description of services to be provided, Consultant's scope of services for this project does not include any services related in any way to asbestos and/or hazardous or toxic materials. Should Consultant or any other party encounter such materials on the job site, or should it in any other way become known that such materials are present or may be present on the job site or any adjacent or nearby areas which may affect Consultant's services, Consultant may, at its option, suspend or terminate work on the project until such time as Client retains a qualified contractor to abate and/or remove the asbestos and/or hazardous or toxic materials and warrant that the job site is free from any hazard which may result from the existence of such materials.

INDEMNIFICATION

11. To the fullest extent allowed by law, Consultant will indemnify and hold harmless, but shall have no duty to defend Client, its officers, directors, employees, and agents (collectively, the "Client Indemnitees") from, for and against any and all claims, demands, damages, losses, expenses, liabilities, and penalties arising out of or relating to the Project, but only to the extent caused by the negligent or other wrongful acts or omissions of Consultant, its subconsultants, or any person or entity for whose acts or omissions any of them are responsible, or by the failure of any such party to perform as required by this Agreement. To the fullest extent allowed by law, Client will indemnify and hold harmless, but shall have no duty to defend Consultant and its officers, directors, employees and agents from, for and against any and all claims, demands, damages, losses, expenses, liabilities and penalties arising out of or relating to the Project, but only to the extent caused by the negligent or other wrongful acts or omissions of Client or any person or entity for whose acts or omissions it is responsible, or by the failure of any such party to perform as required by this Agreement. The obligations and rights of this Section are in addition to other obligations and rights of indemnity provided under this Agreement or applicable law.

FINANCIAL

12. All fees and other charges due Consultant will be billed monthly and shall be due at the time of billing unless specified otherwise in this agreement. If Client fails to pay Consultant within sixty (60) days after invoices are rendered, Consultant shall have the right in its sole discretion to consider such default in

- payment a material breach of this entire agreement, and, upon written notice, Consultant's duties, obligations and responsibilities under this agreement may be suspended or terminated for cause pursuant to Sections 26 through 31. In such event, Client shall promptly pay Consultant for all outstanding fees and charges due Consultant at the time of suspension or termination including all costs and expenses incurred in the performance of services up to suspension or termination.
- 13. Consultant shall not be liable to Client for any costs or damages that may result from the termination or suspension of services under this agreement due to Client's failure to pay Consultant invoices in accordance with the terms of this paragraph. In the event that Consultant agrees to resume terminated or suspended services after receiving full payment of all late invoices, Client agrees that time schedules and fees, as applicable, related to the services will be equitably adjusted to reflect any delays or additional costs caused by the termination or suspension of services.
- 14. In all cases where the proposal calls for payment of a retainer, that payment shall be made by Client to Consultant prior to commencement of services under this agreement. Upon receipt of retainer payment, the Consultant shall commence services as provided for under this Agreement. Unless otherwise provided for in the project proposal, such retainer shall be held by Consultant throughout the duration of the contract, and shall be applied to the final project invoice, and to any other outstanding AR, including late payment charges, on the project. Any amount of said retainer in excess of the final invoice and other outstanding AR shall be returned to the Client within 30 days of issuance of the final project invoice.
- 15. Client agrees that all billings from Consultant to Client will be considered correct and binding on Client unless Client, within ten (10) days from the date of receipt of such billing, notifies Consultant in writing of alleged inaccuracies, discrepancies, or errors in billing. In the event of a dispute over any billing or portion of billing, Client agrees to pay the undisputed portion of any billings in accordance with the payment terms set forth in Section 18.
- 16. Client agrees to pay a monthly late payment charge, which will be the lesser of one and one half percent (1-1/2%) per month or a monthly charge not to exceed the maximum legal rate, which will be applied to any unpaid balance commencing thirty (30) days after the date of the billing. Client acknowledges that payments applied first to unpaid late payment charges and then to unpaid balances of invoices.
- 17. In the event Consultant's fee schedule changes due to any increase of costs such as the granting of wage increases and/or other employee benefits to field or office employees or any taxes or fees imposed by local, state, or federal government on consultants' fees during the lifetime of this agreement, the new fee schedule shall apply to all subsequent work on time-and-materials contracts.
- 18. If payment for Consultant's services is to be made on behalf of Client by a third party lender, Client agrees that Consultant shall not be required to indemnify the third party lender, in the form of an endorsement or otherwise, as a condition to receiving payment for services. Client agrees to reimburse Consultant for all collection agency fees, legal fees, court costs, reasonable consultant staff costs and other expenses paid or incurred by Consultant in the event that collection efforts become necessary to enforce payment of any unpaid billings due to Consultant in connection with the services provided in this agreement.

LIMITATION OF LIABILITY

19. Notwithstanding any other provisions of this Agreement to the contrary, the aggregate liability of the Consultant under this Agreement, whether for breach of contract, tort, strict liability or any other legal theory, will not exceed the total amount of Consultant's compensation for performing services under this Agreement or \$50,000, whichever is greater, however this limitation of Consultant's liability does not apply to third-party claims, or to the Client's reasonable attorneys' fees and expert witnesses' fees and litigation expenses arising out of or related to such third-party claims for which Consultant is liable.

DISPUTE RESOLUTION

20. In an effort to resolve any conflicts or disputes that arise regarding performance under this agreement by either party, Client and Consultant agree that all such disputes shall be submitted to nonbinding mediation, using a mutually agreed upon mediation services experienced in the resolution of construction disputes. Unless the parties mutually agree otherwise, such mediation shall be a precondition to the initiation of any litigation. The parties further agree to include a similar mediation provision in their agreements with other independent contractors and consultants retained for the project and require them to similarly agree to these dispute resolution procedures. This provision shall not be interpreted to restrict the right of either party to file an action in a court of law, in the County of

Fresno, State of California, having appropriate jurisdiction or to preclude or limit the Consultant's right to record, perfect or to enforce any applicable lien or Stop Notice rights.

CONSTRUCTION PROJECTS

- 21. If the scope of services contained in this agreement does not include construction phase services for this project, Client agrees that such construction phase services will be provided by Client or by others. Client assumes all responsibility for interpretation of the contract documents and for construction observation and supervision and waives any claim against Consultant that may in any way be connected thereto. In addition, Client agrees to indemnify and hold Consultant harmless from any loss, claim, or cost, including reasonable attorneys' fees and costs of defense, arising or resulting from the performance of such services by other persons or entities and from any and all claims arising from the modification, clarification, interpretation, adjustments or changes made to the contract documents to reflect changed field or other conditions, except for claims arising from the negligence or other wrongful acts of Consultant, its employees, its subconsultants, or any other person or entity for which Consultant is responsible.
- 22. Client agrees to include provisions in its contract with the construction contractor to the effect that in accordance with generally accepted construction practices, the construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property, and that this requirement shall apply continuously and not be limited to normal working hours. Neither the professional activities of Consultant nor the presence of Consultant or its employees or subconsultants at a construction site shall relieve the contractor and its subcontractors of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the contract documents and applicable health or safety requirements of any regulatory agency or of state law.
- 23. Client agrees to require its contractor and subcontractors to review the plans, specifications and documents prepared by Consultant prior to the commencement of construction phase work. If the contractor and/or subcontractors believe there are deficiencies, conflicts, errors, omissions, code violations, or other deficiencies in the plans, specifications and documents prepared by Consultant, contractors shall notify Client so those deficiencies may be corrected or otherwise addressed by Consultant prior to the commencement of construction phase work.
- 24. If, during the construction phase of the project, Client discovers or becomes aware of changed field or other conditions which necessitate clarifications, modifications or other changes to the plans, specifications, estimates or other documents prepared by Consultant, Client agrees to notify Consultant and, at Client's option, retain Consultant to prepare the necessary changes or modifications before construction activities proceed. Further, Client agrees to require a provision in its construction contracts for the project which requires the contractor to promptly notify Client of any changed field or other conditions so that Client may in turn notify Consultant pursuant to the provisions of this paragraph.
- 25. If, due to the Consultant's error, omission or negligence, a required item or component of the Project is omitted from the Consultant's construction documents, the Consultant shall not be responsible for paying the cost required to add such item or component to the extent that such item or component would have been required and included in the original construction documents. The Consultant will not be responsible for any cost or expense that enhances the value of the Project.

SUSPENSION AND TERMINATION

- 26. If the Project or the Consultant's services are suspended by the Client for more than thirty (30) consecutive calendar days, the Consultant shall be compensated for all services performed and reimbursable expenses incurred prior to the receipt of notice of suspension. In addition, upon resumption of services, the Client shall compensate the Consultant for expenses incurred as a result of the suspension and resumption of its services, and the Consultant's schedule and fees for the remainder of the Project shall be equitably adjusted.
- 27. If the Consultant's services are suspended for more than ninety (90) days, consecutive or in the aggregate, the Consultant may terminate this Agreement upon giving not less than five (5) calendar days' written notice to the Client.
- 28. If the Client is in breach of the payment terms or otherwise is in material breach of this Agreement, the Consultant may suspend performance of services upon five (5) calendar days' notice to the Client. The Consultant shall have no liability to the Client, and the Client agrees to make no claim for any delay or

- damage as a result of such suspension caused by any breach of this Agreement by the Client. Upon receipt of payment in full of all outstanding sums due from the Client, or curing of such other breach that caused the Consultant to suspend services, the Consultant shall resume services, and there shall be an equitable adjustment to the remaining project schedule and fees as a result of the suspension.
- 29. Client acknowledges Consultant has the right to complete all services included in this agreement. In the event this agreement is terminated before the completion of all services, unless Consultant is responsible for such early termination, Client agrees to release Consultant from all liability for services not performed or completed by Consultant and from liability for any third-party reliance, use, interpretation or extrapolation of Consultant's work product. In the event all or any portion of the services by Consultant are suspended, abandoned, or otherwise terminated, Client shall pay Consultant all fees and charges for services provided prior to termination, not to exceed the contract limits specified herein, if any. Client acknowledges if the project services are suspended and restarted, there will be additional charges due to suspension of the services which shall be paid for by Client as extra services pursuant to Section 26. Client acknowledges if project services are terminated for the convenience of Client, Consultant is entitled to reasonable termination costs and expenses, to be paid by Client as extra services pursuant to Section 28.
- 30. The Client may terminate this Agreement for the Client's convenience and without cause upon giving the Consultant not less than seven (7) calendar days' written notice.
- 31. In the event of termination of this Agreement by either party, Consultant shall invoice Client for all outstanding services and expenses reasonably incurred by the Consultant in connection with the orderly termination of this Agreement, including but not limited to demobilization, reassignment of personnel, associated overhead costs and all other expenses directly resulting from the termination. The Client shall within thirty (30) calendar days of termination pay the Consultant for all services rendered and all reimbursable costs incurred by the Consultant up to the date of termination, in accordance with the payment provisions of this Agreement.

OTHER

- 32. This agreement shall be binding upon the heirs, executors, administrators, successors and assigns of Client and Consultant.
- 33. This agreement shall not be assigned by either Client or Consultant without the prior written consent of the other.
- 34. Consultant's or Client's waiver of any term, condition or covenant shall not constitute the waiver of any other term, condition or covenant. Consultant's or Client's waiver of any breach of this agreement shall not constitute the waiver of any other breach of the Agreement.
- 35. Client and Consultant agree that if any term or provision of this Agreement is determined to be illegal, in conflict with any law, void or otherwise unenforceable, and if the essential terms and provisions of this Agreement remain unaffected, then the validity of the remaining terms and provisions will not be affected and the offending provision will be given the fullest meaning and effect allowed by law.
- This agreement shall be governed by and construed in accordance with the laws of the State of California.
- 37. Within the limits of the approved scope and fee, Consultant may engage the services of any subconsultants when, in the Consultant's sole opinion, it is appropriate to do so. Such subconsultants may include testing laboratories, geotechnical engineers and other specialized consulting services deemed necessary by the Consultant to carry out the scope of the Consultant's services.
- 38. Consultant shall be entitled to immediately, and without notice, suspend the performance of any and all of its obligations pursuant to this agreement if Client files a voluntary petition seeking relief under the United States Bankruptcy Code or if there is an involuntary bankruptcy petition filed against Client in the United States Bankruptcy Court, and that petition is not dismissed within fifteen (15) days of its filing. Any suspension of services made pursuant to the provisions of this paragraph shall continue until such time as this agreement has been fully and properly assumed in accordance with the applicable provisions of the United States Bankruptcy Code and in compliance with final order or judgment issued by the Bankruptcy Court.
- 39. This agreement shall not be construed to alter, affect or waive any design professional's lien, mechanic's lien or stop notice right, which Consultant may have for the performance of services pursuant to this agreement. Client agrees to provide to Consultant the current name and address of the record owner of the property upon which the project is to be located. Client also agrees to provide Consultant with the name and address of any and all lenders who may loan money on the project and who are entitled to receive a preliminary notice.

- 40. Consultant shall not be liable for damages resulting from the actions or inactions of governmental agencies including, but not limited to, permit processing, environmental impact reports, dedications, general plans and amendments thereto, zoning matters, annexations or consolidations, use or conditional use permits, project or plan approvals, and building permits. Client agrees that it is the responsibility of Client to maintain in good standing all governmental approvals or permits and to timely apply for any necessary extensions thereof.
- 41. Consultant and Client each agree to waive consequential damages for claims, disputes or other matters in question arising out of or relating to this Agreement. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with paragraphs 26 through 31, except for termination expenses provided for in said paragraph 31. Client further agrees that to the fullest extent permitted by law, Consultant shall not be liable to Client for any special, indirect or consequential damages whatsoever, whether caused by Consultant's negligence, errors, omissions, strict liability, breach of contract, breach of warranty or other cause or causes whatsoever, including but not limited to, loss of use of equipment or facility, and loss of profits or revenue.
- 42. This Agreement is the entire Agreement between the Client and the Consultant. It supersedes all prior communications, understandings and agreements, whether oral or written. Amendments to this Agreement must be in writing and signed by both the Client and the Consultant.

Client	 Provost & Pritchard Engineering Group, Inc., dba Provost & Pritchard Consulting Group	
Ву	 Ву	the Mars
Name/Title	 Name/Title	Keith Mortensen/Vice President RCE 75865
Date Signed	Date Signed	March 3, 2021