

County Service Area 14 Belmont Manor

Community Meeting
Thursday, January 20, 2022



AGENDA

- ▶ Introductions
- ▶ Background Information
- ▶ Feasibility Study
- ▶ Next Steps
- ▶ Questions

BACKGROUND

- ▶ Survey was sent to community members on August 5, 2020
- ▶ Majority of residents that responded were in favor of hiring a consultant to complete the study
- ▶ Provost and Pritchard Consulting Group (P&P) was selected
- ▶ Efforts were made to include nearby water system - Belmont Water Corporation (BWC)
- ▶ BWC decided to not join CSA 14
- ▶ P&P completed feasibility study and concluded that there are 4 viable alternatives:
 - ▶ Alternative 1: Connecting to the City of Fresno Water System with a 16-inch transmission main
 - ▶ Alternative 2: Connecting to the City of Fresno Water System with an 8-inch transmission main
 - ▶ Alternative 3: Consolidation with the City of Fresno
 - ▶ Alternative 4: New well + treatment

Feasibility Study - Alternative 1

Connecting to the City of Fresno Water System with a 16-inch transmission main

- ▶ Necessary improvements
- ▶ Capital Costs

Alternative 1



Figure 4-1
Alternative 1
Master Service With
16-Inch Transmission Main

EST. 1988
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company

Legend

- Well
- CSA 14
- 4-Inch Pipeline
- 6-Inch Pipeline
- 8-Inch Pipeline
- Transmission Main

4/29/2021 : G:\Fresno_County-of-1397139721001-Conn from CSA 14 to City of Fresno\400 GISMap\Alternative_1_11x17.mxd

Alternative 1 (\$4.8 Million)

PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST ALTERNATIVE 1 - CSA 14 MASTER SERVICE CONNECTION TO CITY OF FRESNO 16" MAIN					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
Construction Costs					
1	Mobilization, Demobilization, Insurance, and Bonds	1	LS	\$145,000	\$145,000
2	Prepare and Implement SWPPP (or WPCP)	1	LS	\$25,000	\$25,000
3	Dust Control	1	LS	\$25,000	\$25,000
4	Worker Protection	1	LS	\$20,000	\$20,000
5	Clearing and Grubbing	1	LS	\$15,000	\$15,000
6	Tie-in to the Existing Water System	1	LS	\$20,000	\$20,000
7	Demolish Existing Wells/Hydropneumatic Tanks	1	LS	\$50,000	\$50,000
8	New AMR Water Meter, and Meter Box	40	EA	\$2,500	\$100,000
9	Miscellaneous Items	1	LS	\$25,000	\$25,000
10	Traffic Control	1	LS	\$100,000	\$100,000
11	Fancher No.6 Crossing (Open Channel Canal)	1	LS	\$300,000	\$300,000
12	Briggs Number 7 Crossing (2x48" Parallel Pipelines)	1	LS	\$100,000	\$100,000
13	Dewatering	1	LS	\$150,000	\$150,000
14	Master Service Meter	1	EA	\$20,000	\$20,000
15	16-inch C900 PVC Transmission Main	7,500	LF	\$160	\$1,200,000
16	16-Inch Isolation Valves	6	EA	\$15,000	\$90,000
17	Dry Barrel Fire Hydrants with Bollards	8	EA	\$10,000	\$80,000
18	Sampling Station	1	EA	\$5,000	\$5,000
19	Permanent Blow Off Assembly	1	EA	\$10,000	\$10,000
20	Temporary Trench Resurfacing	7,500	LF	\$10	\$75,000
21	Permanent Trench Resurfacing	7,500	LF	\$45	\$337,500
Overall Construction Subtotal					\$2,892,500
Non-Construction Costs					
22	Engineering, Geotechnical, surveying	1	LS	\$289,250	\$289,250
23	Construction Management & Inspection	1	LS	\$202,475	\$202,475
24	Environmental, Legal, Administration	1	LS	\$144,625	\$144,625
25	Permitting	1	LS	\$15,000	\$15,000
26	Water Acquisition Cost (Average of 2012-2014 Annual Production)	0	/AF	\$10,000	\$0
27	Right of Way Acquisition	1	LS	\$10,000	\$10,000
Total Non-Construction Costs					\$661,350
28	Contingency - 20% of overall construction costs	1	LS	\$578,500	\$578,500
Total Project Cost					\$4,132,350

Feasibility Study - Alternative 2

Connecting to the City of Fresno Water System with an 8-inch transmission main

- ▶ Necessary improvements
- ▶ Capital Costs

Alternative 2 (\$5.4 Million)

PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST ALTERNATIVE 2 - CSA 14 CONNECTION TO CITY OF FRESNO 8" MAIN					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
Construction Costs					
1	Mobilization, Demobilization, Insurance, and Bonds	1	LS	\$162,000	\$162,000
2	Prepare and Implement SWPPP (or WPCP)	1	LS	\$25,000	\$25,000
3	Dust Control	1	LS	\$25,000	\$25,000
4	Worker Protection	1	LS	\$20,000	\$20,000
5	Clearing and Grubbing	1	LS	\$15,000	\$15,000
6	Tie-in to the Existing Water System	1	LS	\$20,000	\$20,000
7	Demolish Existing Wells/Hydropneumatic Tanks	1	LS	\$50,000	\$50,000
8	New AMR Water Meter, and Meter Box	40	EA	\$2,500	\$100,000
9	Bolted Steel Water Storage Tank (60,000 gallons)	1	LS	\$100,000	\$100,000
10	Booster Pump Station	1	LS	\$150,000	\$150,000
11	Site Improvements	1	LS	\$500,000	\$500,000
12	Miscellaneous Items	1	LS	\$25,000	\$25,000
13	Traffic Control	1	LS	\$100,000	\$100,000
14	Fancher No.6 Crossing (Open Channel Canal)	1	LS	\$300,000	\$300,000
15	Briggs Number 7 Crossing (2x48" Parallel Pipelines)	1	LS	\$100,000	\$100,000
16	Dewatering	1	LS	\$150,000	\$150,000
17	Master Service Meter	1	EA	\$10,000	\$10,000
18	8-inch C900 PVC Transmission Main	8,700	LF	\$100	\$870,000
19	8-Inch Gate Valves	6	EA	\$2,500	\$15,000
20	Dry Barrel Fire Hydrants with Bollards	8	EA	\$10,000	\$80,000
21	Sampling Station	1	EA	\$5,000	\$5,000
22	Permanent Blow Off Assembly	1	EA	\$10,000	\$10,000
23	Temporary Trench Resurfacing	7,500	LF	\$10	\$75,000
24	Permanent Trench Resurfacing	7,500	LF	\$45	\$337,500
Overall Construction Subtotal					\$3,244,500
Non-Construction Costs					
25	Engineering, Geotechnical, surveying	1	LS	\$324,450	\$324,450
26	Construction Management & Inspection	1	LS	\$227,115	\$227,115
27	Environmental, Legal, Administration	1	LS	\$162,225	\$162,225
28	Permitting	1	LS	\$15,000	\$15,000
29	Water Acquisition Cost (Average of 2012-2014 Annual Production)	0	/AF	\$10,000	\$0
30	Land Acquisition	1	LS	\$50,000	\$50,000
31	Right of Way Acquisition	1	LS	\$10,000	\$10,000
Total Non-Construction Costs					\$788,790
32	Contingency - 20% of overall construction costs	1	LS	\$648,900	\$648,900
Total Project Cost					\$4,682,190

Feasibility Study - Alternative 3

Consolidation with the City of Fresno

- ▶ Necessary improvements
- ▶ Capital Costs

Alternative 3 (\$5.9 Million)

PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST ALTERNATIVE 3 - CSA 14 CONSOLIDATION WITH CITY OF FRESNO (16" MAIN)					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
Construction Costs					
1	Mobilization, Demobilization, Insurance, and Bonds	1	LS	\$185,000	\$185,000
2	Prepare and Implement SWPPP (or WPCP)	1	LS	\$20,000	\$20,000
3	Dust Control	1	LS	\$20,000	\$20,000
4	Worker Protection	1	LS	\$15,000	\$15,000
5	Traffic Control	1	LS	\$10,000	\$10,000
6	Clearing and Grubbing	1	LS	\$10,000	\$10,000
7	4-inch C900 PVC Pipe	330	LF	\$50	\$16,500
8	6-Inch C900 PVC Pipe	1,420	LF	\$75	\$106,500
9	8-inch C900 PVC Pipe	2,630	LF	\$100	\$263,000
10	4-inch Gate Valves	2	EA	\$2,000	\$4,000
11	6-inch Gate Valves	8	EA	\$2,300	\$18,400
12	8-inch Gate Valves	14	EA	\$2,500	\$35,000
13	Dry Barrel Fire Hydrants with Lateral	7	EA	\$10,000	\$70,000
14	Permanent Blow Off Assembly	1	EA	\$10,000	\$10,000
15	Tie-in to the Existing Water System	1	LS	\$20,000	\$20,000
16	Abandon Existing System in Place	1	LS	\$30,000	\$30,000
17	Demolish Existing Wells/Hydropneumatic Tanks	1	LS	\$50,000	\$50,000
18	New AMR Water Meter, and Meter Box	40	EA	\$2,500	\$100,000
19	Temporary Trench Resurfacing	4,380	LF	\$10	\$43,800
20	Permanent Trench Resurfacing	4,380	LF	\$45	\$197,100
21	Miscellaneous Items	1	LS	\$25,000	\$25,000
22	Traffic Control	1	LS	\$100,000	\$100,000
23	Fancher No.6 Crossing (Open Channel Canal)	1	LS	\$300,000	\$300,000
24	Briggs Number 7 Crossing (2x48" Parallel Pipelines)	1	LS	\$100,000	\$100,000
25	Dewatering	1	LS	\$150,000	\$150,000
26	16-inch C900 PVC Transmission Main	7,500	LF	\$160	\$1,200,000
27	16-Inch Isolation Valves	6	EA	\$15,000	\$90,000
28	Dry Barrel Fire Hydrants with Bollards	8	EA	\$10,000	\$80,000
29	Sampling Station	1	EA	\$5,000	\$5,000
30	Permanent Blow Off Assembly	1	EA	\$10,000	\$10,000
31	Temporary Trench Resurfacing	7,500	LF	\$10	\$75,000
32	Permanent Trench Resurfacing	7,500	LF	\$45	\$337,500
Overall Construction Subtotal					\$3,696,800

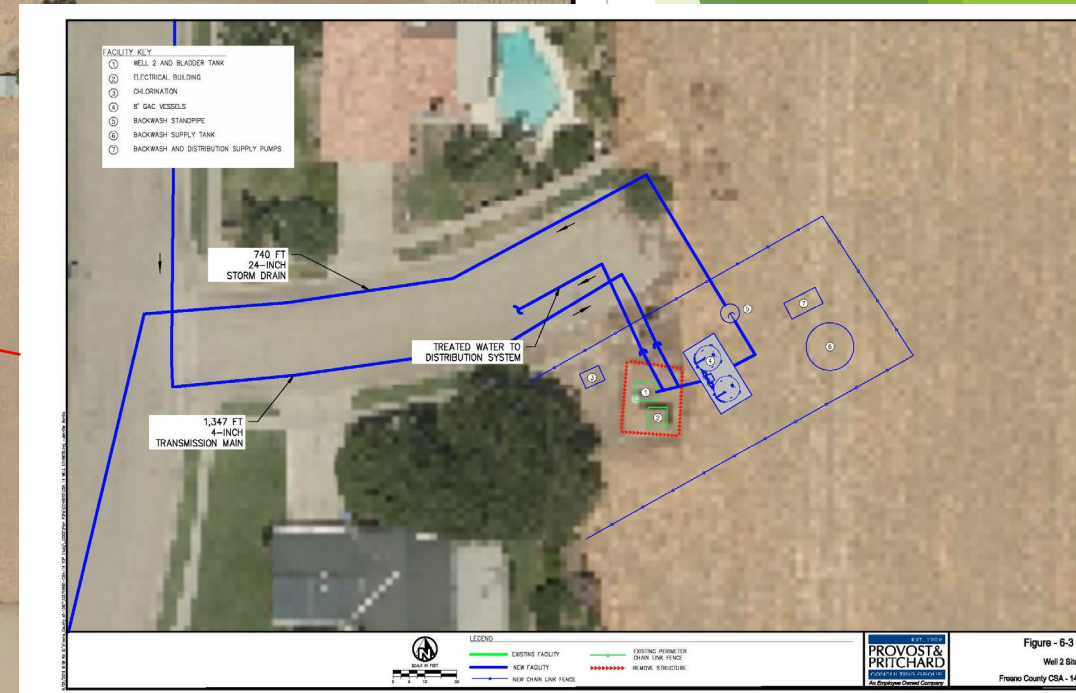
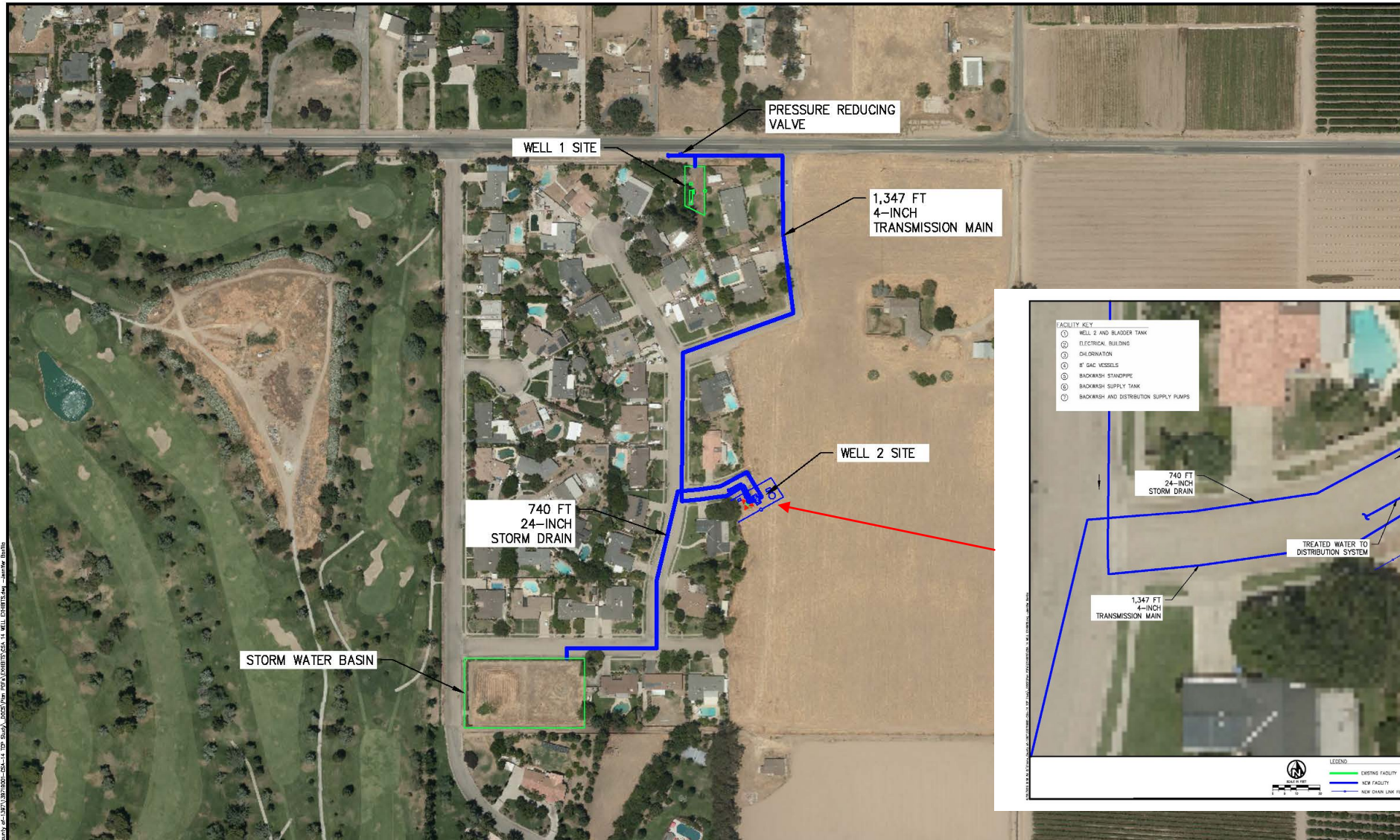
PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST ALTERNATIVE 3 - CSA 14 CONSOLIDATION WITH CITY OF FRESNO (16" MAIN)					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
Non-Construction Costs					
33	Engineering, Geotechnical, surveying	1	LS	\$369,680	\$369,680
34	Construction Management & Inspection	1	LS	\$258,776	\$258,776
35	Environmental, Legal, Administration	1	LS	\$184,840	\$184,840
36	Permitting	1	LS	\$15,000	\$15,000
37	Water Acquisition Cost (Average of 2012-2014 Annual Production)	0	/AF	\$10,000	\$0
38	Right of Way Acquisition	1	LS	\$10,000	\$10,000
39	Annexation Fee	1	LS	\$12,309	\$12,309
Total Non-Construction Costs					\$850,605
40	Contingency - 20%	1	LS	\$739,360	\$739,360
Total Project Cost					\$5,286,765

Feasibility Study - Alternative 4

New Well + Treatment

- ▶ Necessary improvements
- ▶ Capital Costs

Alternative 4



2023-03-15 10:48 AM 6:30 AM County of Fresno 15741271000-125-14 TSP Study 15741271000-125-14 Well 2 Site 15741271000-125-14 Well 2 Site 15741271000-125-14 Well 2 Site

LEGEND

	EXISTING FACILITY		EXISTING PERIMETER CHAIN LINK FENCE
	NEW FACILITY		REMOVE STRUCTURE
	NEW CHAIN LINK FENCE		

SCALE IN FEET

EST. 1968
PROVOST & PRITCHARD
 CONSULTING GROUP
 An Employee Owned Company

Figure - 6-1
 Water System Vicinity
 Fresno County CSA - 14

Figure - 6-3
 Well 2 Site
 Fresno County CSA - 14

Alternative 4 (\$3.9 Million)

PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST ALTERNATIVE 4 - CSA 14 TCP TREATMENT AND NEW WELL					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
Construction Costs					
New Well					
1	Mobilization, Demobilization, Insurance, and Bonds	1	LS	\$75,000	\$75,000
2	Prepare and Implement SWPPP (or WPCP)	1	LS	\$15,000	\$15,000
3	Dust Control	1	LS	\$15,000	\$15,000
4	Worker Protection	1	LS	\$7,500	\$7,500
5	Clearing and Grubbing	1	LS	\$15,000	\$15,000
6	Demolish Existing Wells/Hydropneumatic Tanks	1	LS	\$50,000	\$50,000
7	Conductor Casing	50	LF	\$400	\$20,000
8	Drill Pilot Hole (to 600 feet total depth)	550	LF	\$75	\$41,250
9	Collect Depth Zone Samples	5	EA	\$15,000	\$75,000
10	Open Pilot Hole (to 600 feet total depth)	600	LF	\$55	\$33,000
11	Blank Casing	500	LF	\$48	\$24,000
12	Perforated Casing	100	LF	\$76	\$7,600
13	2" Diameter Sounding Tube	400	LF	\$20	\$8,000
14	3" Diameter Gravel Fill Pipe	400	LF	\$20	\$8,000
15	Gravel Pack	400	LF	\$60	\$24,000
16	Annular Seal	200	LF	\$70	\$14,000
17	Preliminary Development	72	HR	\$350	\$25,200
18	Pump Development and Pump Test	1	LS	\$22,000	\$22,000
19	Additional Pump Development and Pump Testing	40	HR	\$300	\$12,000
20	Well Pump Foundation	1	LS	\$5,000	\$5,000
21	Pump Bowls	1	LS	\$25,000	\$25,000
22	Pump Motor	1	LS	\$25,000	\$25,000
23	Column Pipe and Shaft	600	LF	\$200	\$120,000
24	Discharge Head	1	LS	\$25,000	\$25,000
25	Electrical, Controls & Lighting	1	LS	\$500,000	\$500,000
26	Standby Generator & Appurtenances	1	LS	\$150,000	\$150,000
27	6,500 Gallon Hydropneumatic Tank	1	LS	\$120,000	\$120,000
28	Site Grading (FP)	1	LS	\$10,000	\$10,000
29	Class 2 Aggregate Base Surfacing	2,500	SF	\$3	\$7,500
30	Chain Link Fence & Access Gates	200	LF	\$50	\$10,000
31	Tie-in to the Existing Water System	1	LS	\$20,000	\$20,000
32	Destroy Existing CSA 30 Well	1	LS	\$50,000	\$50,000
New Well Construction Subtotal					\$1,559,050

PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST ALTERNATIVE 4 - CSA 14 TCP TREATMENT AND NEW WELL					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
TCP Treatment					
33	Mobilization, Demobilization, Insurance, and Bonds	1	LS	\$47,000	\$47,000
34	Site demolition, clearing and grubbing	1	LS	\$15,000	\$15,000
34	Purchase GAC vessels	1	LS	\$200,000	\$200,000
35	Vessel installation and testing	1	LS	\$20,000	\$20,000
35	At-grade vessel foundation	1	LS	\$20,000	\$20,000
36	Additional cost to recess vessels	1	LS	\$0	\$0
36	Site piping modifications/additions and PRV	1	LS	\$100,000	\$100,000
37	Offsite raw water pipeline (1,350 ft of 4-inch pipe)	1	LS	\$125,000	\$125,000
37	Offsite storm drain pipeline (740 ft of 18-inch pipe)	1	LS	\$100,000	\$100,000
38	Nitrate analyzer	1	LS	\$35,000	\$35,000
38	Chlorination system w/ analyzer	1	LS	\$25,000	\$25,000
39	Electrical modifications, metering, and telemetry modifications	1	LS	\$100,000	\$100,000
39	Well pump upgrades to overcome GAC head loss	1	LS	\$0	\$0
40	Backwash supply tank, backwash supply pump, and booster pump	1	LS	\$100,000	\$100,000
41	Miscellaneous site work, paving, vaults, fences	1	LS	\$100,000	\$100,000
TCP Treatment Construction Subtotal					\$987,000
Total Construction Cost					\$2,546,050
Non-Construction Costs					
New Well					
42	Engineering, Geotechnical, surveying	1	LS	\$155,905	\$155,905
43	Construction Management & Inspection	1	LS	\$109,134	\$109,134
44	Environmental, Legal, Administration	1	LS	\$77,953	\$77,953
45	Permitting	1	LS	\$15,000	\$15,000
46	Water Acquisition Cost (Average of 2012-2014 Annual Production)	0	/AF	\$10,000	\$0
47	Right of Way Acquisition	1	LS	\$10,000	\$10,000
New Well Non-Construction Cost Subtotal					\$367,991
TCP Treatment					
48	Land acquisition	1	LS	\$50,000	\$50,000
49	Engineering, geotech, surveying, and construction administration	1	LS	\$200,000	\$200,000
50	Construction Management & Inspection	1	LS	\$84,000	\$84,000
51	Environmental, Legal, Administration	1	LS	\$60,000	\$60,000
52	Operations Plan and permitting	1	LS	\$15,000	\$15,000
53	Sales Tax on GAC Vessels (8%)	1	LS	\$16,000	\$16,000
TCP Treatment Non-Construction Cost Subtotal					\$425,000
Total Non-Construction Costs					\$792,991
54	Contingency - 20% of Well Construction Costs	1	LS	\$311,810	\$311,810
55	Contingency - 20% of TCP Treatment Costs	1	LS	\$197,400	\$197,400
Total Contingency Cost					\$509,210
Total Project Cost					\$3,848,251

Capital & Operating Cost comparison

PROJECT COST	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	16-Inch Transmission Main	8-Inch Transmission	Consolidation	New Well + GAC
Total Capital Cost	\$ 4,804,235	\$ 5,354,235	\$ 5,958,235	\$ 3,848,251
Other Sources of Funding	\$ 1,850,000	\$ 1,850,000	\$ 1,850,000	\$ 1,850,000
Net Capital Cost	\$ 2,954,235	\$ 3,504,235	\$ 4,108,235	\$ 1,998,251
Monthly Debt Service per Customer (Estimate)	\$ 409	\$ 485	\$ 568	\$ 276
ANNUAL CUSTOMER COST				
Current Annual Water Fee Assessment	\$ 806	\$ 806	\$ 806	\$ 806
Equivalent Monthly Rate	\$ 67	\$ 67	\$ 67	\$ 67
New Estimate Equivalent Monthly Rate	\$ 72	\$ 120	\$ 55	\$ 154
Equivalent Monthly Rate with Debt Service	\$ 481	\$ 605	\$ 623	\$ 430

Next Steps

- ▶ Application process with the State Water Resources Control Board (SWRCB)
- ▶ Funding options
- ▶ Funding process

Questions / Comments