Appendix A.

PRV Set Points, Closed Valves, and Check Valves

Table A-1. PRV Settings

PRS	Location	Main Valve Size (inch)	By-Pass Valve Size (inch)	Elevation (ft)	Setting (psi)	From Zone	To Zone	2024 Model Set Pressure (psi)
24	Sheep Creek Rd & Smoke Tree Rd	6	2	3945.7	60.0	Phelan	Smoke Tree	38.0
23	Riggins Rd & Smoke Tree Rd	6	2	3933.5	60.0	Yucca Terrace W	Smoke Tree	40.0
37	Valle Vista Rd & Smoke Tree Rd	6	2	3921.2	60.0	Yucca Terrace W	Smoke Tree	42.0
22	Monte Vista Rd & Smoke Tree Rd	6	2	3899.0	60.0	Yucca Terrace W	Smoke Tree	50.0
21	Campanula Rd & Smoke Tree Rd	6	2	3862.0	60.0	Yucca Terrace E	Smoke Tree	50.0
17	Riggins Rd & Yucca Terrace Dr	6	2	4012.8	70.0	Phelan	Yucca Terrace W	57.0
18	Valle Vista Rd & Yucca Terrace Dr	6	2	3990.1	60.0	Phelan	Yucca Terrace W	60.0
19	Monte Vista Rd & Yucca Terrace Dr	6	2	3973.1	60.0	Phelan	Yucca Terrace W	60.0
33	Johnson Rd & Yucca Terrace Dr	6	2	3942.8	60.0	Phelan	Yucca Terrace E	60.0
20	Campanula Rd & Yucca Terrace Dr	6	2	3918.9	60.0	Phelan	Yucca Terrace E	60.0
16	Sheep Creek Rd & Phelan Rd	6	2	4105.5	60.0	Nielson W	Phelan (sub-zone)	60.0
15	Riggins Rd & Phelan Rd	6	2	4091.0	55.0	Nielson E	Phelan	55.0
42	Sierra Vista Rd & Phelan Rd	6	2	4078.2	65.0	Nielson E	Phelan	70.0
27	Valle Vista Rd & Phelan Rd	4	-----	4061.5	60.0	Nielson E	Phelan	60.0
14	Monte Vista Rd & Phelan Rd	6	2	4039.1	55.0	Nielson E	Phelan	60.0
32	Johnson Rd & Phelan Rd	6	2	4012.6	55.0	Nielson E	Phelan	60.0
13	Campanula Rd & Phelan Rd	6	2	4004.9	55.0	Nielson E	Phelan	60.0
35	Lebec Rd & Nielson Rd	6	2	4224.1	55.0	Sunnyslope W	Nielson W	46.0
7	Malpaso Rd & Nielson Rd	4	-----	4226.4	60.0	Sunnyslope W	Nielson W	46.0
8	Sheep Creek Rd & Uzzel Rd	6	-----	4229.6	45.0	Tank 6	Nielson W	45.0
10	Riggins Rd & Nielson Rd	6	2	4176.0	55.0	Sunnyslope E A	Nielson E	60.0
11	Monte Vista Rd & Nielson Rd	6	2	4134.4	55.0	Sunnyslope E A	Nielson E	60.0
12	Campanula Rd & Nielson Rd	6	2	4087.1	55.0	Sunnyslope E A	Nielson E	60.0
34	Lebec Rd & Mirage Rd/Sunnyslope Rd	6	-----	4336.2	55.0	Tank 6	Sunnyslope W	40.0
6	Malpaso Rd & Mirage Rd/Sunnyslope Rd	Inactive	Inactive	Inactive	Inactive	Tank 7	Sunnyslope W	Inactive
28	Monte Vista Rd & Sunnyslope Rd	6	-----	4237.3	60.0	Snowline	Sunnyslope E B	60.0
29	Johnson Rd & Sunnyslope Rd	6	-----	4206.2	60.0	Snowline	Sunnyslope E B	60.0
41	Paramount Rd & Sunnyslope Rd	6	2	4161.7	76.0	Snowline	Sunnyslope E B	76.0
44	Pipeline Rd & Serrand Rd / Next to Reg 3	4	1.5	4541.0	120.0	Pipeline	Tank 6	115.0
40	Scrub Oak Dr & Manzanita Dr	2	-----	4956.4	60.0	Tank 5	Tank 5 (sub-zone)	60.0
31a	Near Tank 3	6	2	4958.8	30.0	Tank 5	Tank 3	10.0
45	Smoke Tree Rd 660' W/ Johnson Rd	6	-----	3887.8	70.0	Yucca Terrace E	Yucca Terrace W	72.0
43	Sheep Creek Rd & Lindero Rd	4	-----	4091.7	55.0	Nielson W	Phelan	50.0

Table A-2. Closed Valves

No.	Location	Model ID	Elevation (ft)	Normal Mode	Summer Mode	Model Status
1	Sheep Creek Rd and north Nielson Rd	SV-J9-043	4,200.41	Closed	Closed	Closed
2	Sheep Creek Rd and South Nielson Rd	SV-J9-047	4,199.19	Closed	Closed	Closed
3	Valle Vista south Phelan Rd	SV-K10-025	4,064.38	Closed	Closed	Closed
4	Sunrise Blvd	SV-K10-029	4,114.30	Closed	Closed	Closed
5	Sierra Vista midway Phelan Rd and Yucca Terrace Dr	SV-L10-026	4,044.99	Closed	Closed	Closed
6	Yucca Terrace Dr & Sheep Creek Rd	SV-L9-007	4,026.53	Closed	Open	Open
7	Smoke Tree Rd and Sheep Creek Rd	SV-N9-005	3,951.33	Closed	Closed	Closed

Table A-3. Check Valves

No.	Location	Model ID	Diameter (inch)	Flow Direction	From Zone	To Zone
1	Phelan Rd and Riggins Rd	MA-K10-048	8	East to West	Nielson E	Nielson W
2	Smoke Tree 600 ft west to Johnson Rd	IEC-P-45	8	East to West	Yucca Terrace E	Yucca Terrace W

Appendix B.

Well Pumping Systems - Hydraulic Test Reports

PUMP CHECK
Pumping Systems Analysts
Hydraulic Test Report

Since 1958

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

CERTIFICATE OF ACCURACY

Customer: Sheep Creek Water Company
Location: 6666 Highway 2
Identification: **Well #2A**

Test Date: 05/05/2023

Meter Size: 10" Make: McCrometer
Meter No: 00 218 10 Register: Gal x 1000

General Data

Meter read before test: 329355 Meter read after test: 329373

Pipe ID: 10 (Inch) Pipe area: 78.540 (sq.in.) Pressure: 11.0 (Lbs/sq.in.)

Test Data **Test Before Inspection**

Test Equipment			Totalizer		Volume				
Test No.	Mano Read	Actual GPM	Second Read	First Read	Diff.	Convert to Gallons	Time in Seconds	Metered GPM	Percent of Flow
1	4.60	361	329360	329358	2	2,000	333.29	360	99.7%
2	4.90	385	329366	329364	2	2,000	312.76	384	99.7%
3	5.35	420	329372	329369	3	3,000	430.96	418	99.4%
Avg.		388.8					Avg.	387.1	**99.6%**

Remarks
34.22.3247n117.36.5454w
PC 5198

Test 1 was with the VFD operating at 57.0 Hz.
Test 2 was with the VFD operating at 58.5 Hz.
Test 3 was with the VFD operating at 60.0 Hz.

Approved

Since 1958

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

Sheep Creek Water Company
6666 Highway 2

Test Date: 05/05/2023
Pump type: DWT
Plant: Well #2A

A test was made on this well pump and the following information was obtained.

EQUIPMENT

PUMP:	Flowserve/Goulds	SERIAL:	N/A
MOTOR:	US	SERIAL:	Y117685012-0003M0001
H.P.	50	LAT/LON:	34.22.3247n117.36.5454w
METER:	259000-046569	REF #:	PC 5198

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge, PSI	11.0	11.0	11.0
Discharge head, feet	25.4	25.4	25.4
Standing water level, feet	257.9		
Drawdown, feet	16.2	15.1	13.9
Pumping water level, feet	274.1	273.0	271.8
Total pumping head, feet	299.5	298.4	297.2
Gallons per minute flow	**420**	**385**	**361**
Gallons per foot of drawdown	25.9	25.5	26.0
Acre feet pumped per 24 hours	1.857	1.701	1.596
KW input to motor	39.1	36.0	33.3
HP input to motor	52.4	48.2	44.6
Motor load, % BHP	99.0	91.2	84.3
Measured speed of pump, RPM	1781	1736	1692
KWH per acre foot	505.4	508.1	500.6
Overall plant efficiency in %	**60.7**	**60.1**	**60.8**

Test 1 was with the VFD operating at 60.0 Hz at the time of the test.

Test 2 was with the VFD operating at 58.5 Hz.

Test 3 was with the VFD operating at 57.0 Hz as found.

The available water measurement location does not meet recommended industry standards. We recommend 8-10 diameters of straight pipe for the ideal test location.

The airline length was calibrated at 500.5'.

If you have any questions please contact Jon Lee at (951) 684-9801.

ANNUAL PUMPING COST ANALYSIS

Sheep Creek Water Company Test date: 05/05/2023

Plant: Well #2A
H.P. 50

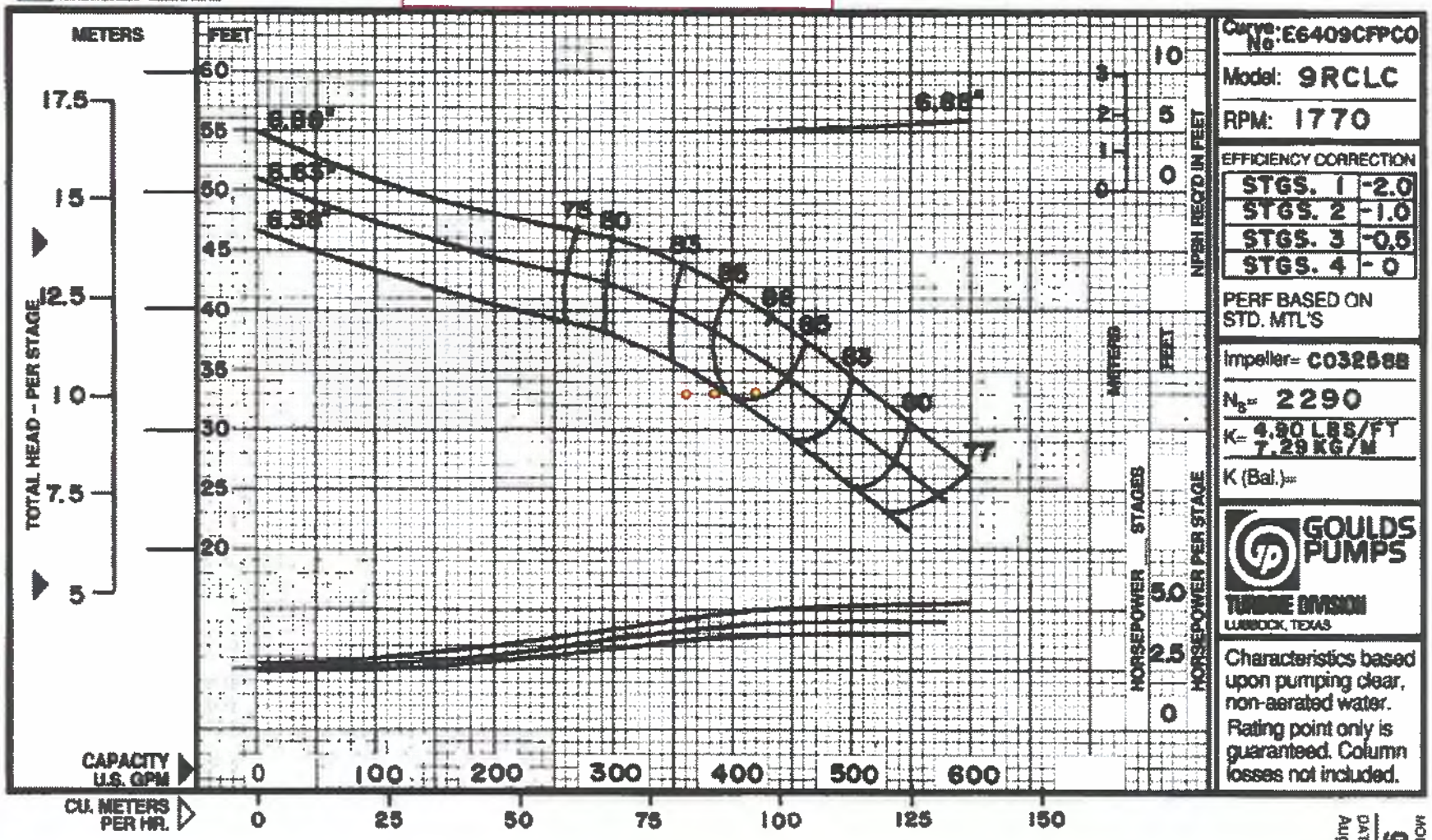
The following cost analysis is presented as an aid to your cost accounting and planning. It is an **Estimate** based on the pump test data and your energy use or hours of operation during the previous 12-month period.

	EXISTING CONDITIONS
Total annual hours of operation	1557
Total annual kWhrs	60879
Total annual cost	$18,233.17
Average Cost per kWh	$0.2995

	Test 1	Test 2	Test 3
KW input to motor	39.1	36.0	33.3
Acre feet pumped per 24 hour day	1.857	1.701	1.596
KWh per acre foot	505.4	508.1	500.6
Pumping cost per hour	$11.71	$10.78	$9.97
Pumping cost per acre foot	$151.36	$152.16	$149.93
Overall plant efficiency	60.7	60.1	60.8

Well #2A 5/05/2023
Test 1 299.5 h 420 q @ 1781 rpm
Test 2 298.4 h 385 q @ 1736 rpm
Test 3 297.2 h 361 q @ 1692 rpm

PUMP CHECK



Curve No: E6409CFPCO
Model: 9RCLC
RPM: 1770

EFFICIENCY CORRECTION

STGS. 1	-2.0
STGS. 2	-1.0
STGS. 3	-0.5
STGS. 4	- 0

PERF BASED ON STD. MTL'S

Impeller= C032588
N_s= 2290
K= 4.90 LBS/FT 7.29 KG/M
K (Bal.)=

GOULDS PUMPS
TURBINE DIVISION
LUBBOCK, TEXAS

Characteristics based upon pumping clear, non-aerated water.
Rating point only is guaranteed. Column losses not included.

MODEL 9RCLC
DATE August, 1995

9RCLC

PUMP CHECK
Pumping Systems Analysts
Hydraulic Test Report

Since 1958

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

CERTIFICATE OF ACCURACY

Customer: Sheep Creek Water Company
Location: 6666 Highway 2
Identification: **Well #3A**

Test Date: 05/05/2023

Meter Size: 8"
Meter No: 20023511-08/E12-02020
Make: Water Specialties
Register: Gal x 1000

General Data

Meter read before test: 261720
Meter read after test: 261738

Pipe ID: 8 (Inch) Pipe area: 50.266 (sq.in.) Pressure: 6.0 (Lbs/sq.in.)

Test Data **Test Before Inspection**

Test Equipment			Totalizer			Volume			
Test No.	Mano Read	Actual GPM	Second Read	First Read	Diff.	Convert to Gallons	Time in Seconds	Metered GPM	Percent of Flow
1	6.80	342	261725	261723	2	2,000	352.20	341	99.7%
2	6.80	442	261730	261728	2	2,000	272.58	440	99.5%
3	12.70	638	261737	261733	4	4,000	377.85	635	99.5%
Avg.		474.2					Avg.	472.0	99.5%

Remarks
34.22.2993n117.36.5199w
PC 5196

Test 1 was with the VFD operating at 45.8 Hz.
Test 2 was with the VFD operating at 50.0 Hz.
Test 3 was with the VFD operating at 60.0 Hz.

Approved

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

Since 1958

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

Sheep Creek Water Company
6666 Highway 2

Test Date: 05/05/2023
Pump type: DWT
Plant: Well #3A

A test was made on this well pump and the following information was obtained.

EQUIPMENT

PUMP:	Goulds	SERIAL:	N/A
MOTOR:	US	SERIAL:	G03-BF66-MB5
H.P.	100	LAT/LON:	34.22.2993n117.36.5199w
METER:	259000-046569	REF #:	PC 5196

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge, PSI	7.0	6.0	6.0
Discharge head, feet	16.2	13.9	13.9
Standing water level, feet	274.8		
Drawdown, feet	19.7	11.6	8.1
Pumping water level, feet	294.5	286.4	282.9
Total pumping head, feet	310.7	300.3	296.8
Gallons per minute flow	**643**	**442**	**344**
Gallons per foot of drawdown	32.7	38.1	42.5
Acre feet pumped per 24 hours	2.843	1.955	1.522
KW input to motor	70.8	42.7	32.9
HP input to motor	94.9	57.2	44.1
Motor load, % BHP	90.5	54.6	42.1
Measured speed of pump, RPM	1788	1490	1365
KWH per acre foot	597.6	524.3	519.0
Overall plant efficiency in %	**53.2**	**58.6**	**58.5**

Test 1 was with the VFD operating at 60.0 Hz at the time of the test.

Test 2 was with the VFD operating at 50.0 Hz.

Test 3 was the normal operation with the VFD operating at 45.8 Hz.

The available water measurement location does not meet recommended industry standards. We recommend 8-10 diameters of straight pipe for the ideal test location.

The airline length was calibrated at 460.8'.

If you have any questions please contact Jon Lee at (951) 684-9801.

ANNUAL PUMPING COST ANALYSIS

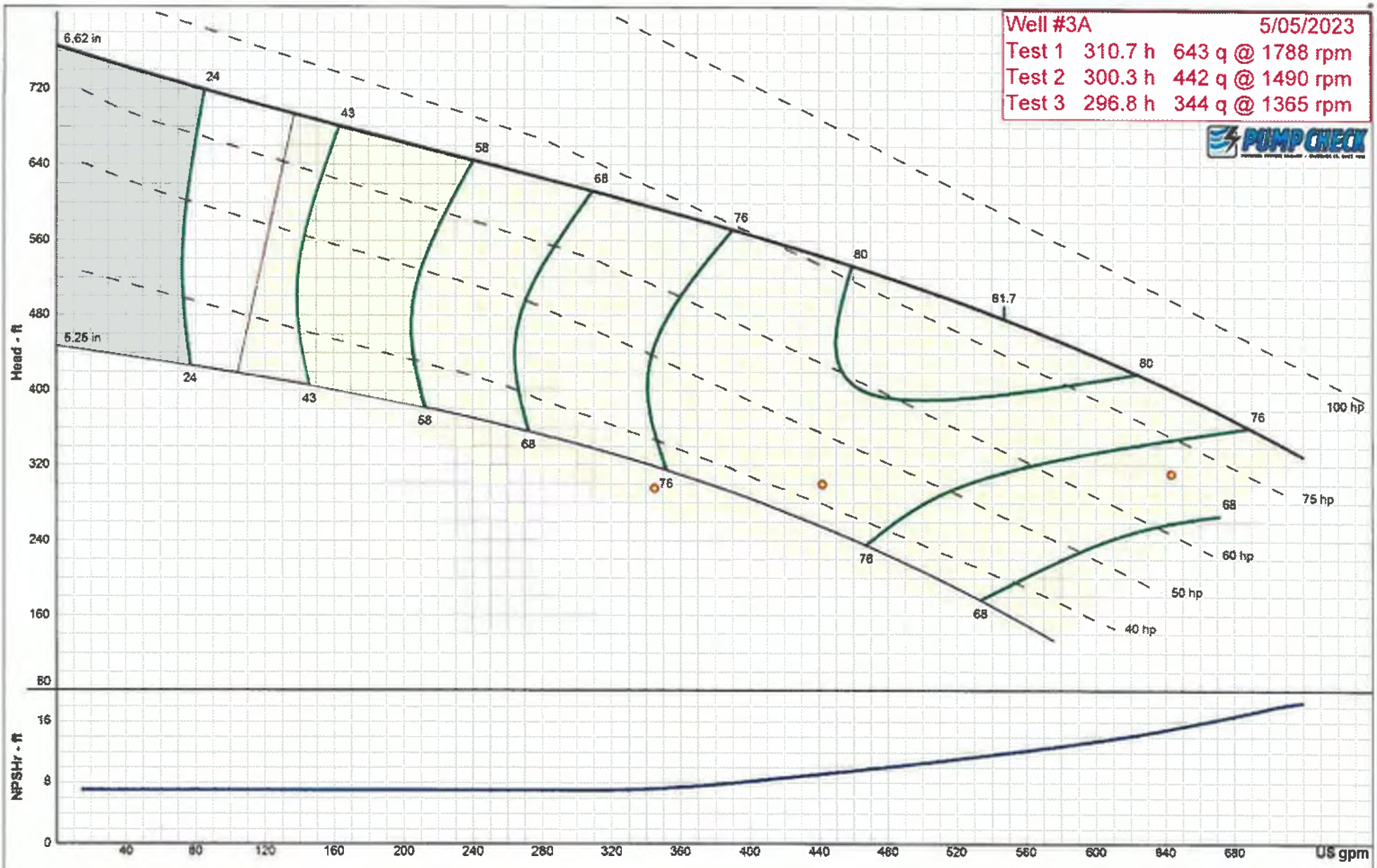
Sheep Creek Water Company Test date: 05/05/2023

Plant: Well #3A
H.P. 100

The following cost analysis is presented as an aid to your cost accounting and planning. It is an **Estimate** based on the pump test data and your energy use or hours of operation during the previous 12-month period.

	EXISTING CONDITIONS
Total annual hours of operation	664
Total annual kWhrs	47011
Total annual cost	$14,079.85
Average Cost per kWh	$0.2995

	Test 1	Test 2	Test 3
KW input to motor	70.8	42.7	32.9
Acre feet pumped per 24 hour day	2.843	1.955	1.522
KWh per acre foot	597.6	524.3	519.0
Pumping cost per hour	$21.20	$12.79	$9.85
Pumping cost per acre foot	$179.00	$157.02	$155.43
Overall plant efficiency	53.2	58.6	58.5



Company:	Sheep Creek Water Co.	Turbine 60 Hz	Size:	10RJLC (stages: 13)	GOULDS WATER TECHNOLOGY a xylem brand
Name:	Well 3A	Catalog: Xylem.TTO.Goulds Lineshaft.60, Vers 4.1	Speed:	1770 rpm	
Date:	06/03/2021	Lineshaft - 1800 rpm	Dia:	6.62 in	
		Design Point: —	Curve:	E6411CFPC1	
		Static Head: 0 ft			

Since 1958

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

CERTIFICATE OF ACCURACY

Customer: Sheep Creek Water Company
Location: 6666 Highway 2
Identification: **Well #4A**

Test Date: 05/05/2023

Meter Size: 10" Make: Water Specialties
Meter No: 20041188-10 Register: Gal x 1000

General Data

Meter read before test: 103839 Meter read after test: 103873

Pipe ID: 10 (Inch) Pipe area: 78.540 (sq.in.) Pressure: 2.5 (Lbs/sq.in.)

Test Data **Test Before Inspection**

Test Equipment			Totalizer			Volume			
Test No.	Mano Read	Actual GPM	Second Read	First Read	Diff.	Convert to Gallons	Time in Seconds	Metered GPM	Percent of Flow
1	4.80	377	103859	103848	2	2,000	319.85	375	99.5%
2	5.80	456	103859	103857	2	2,000	264.57	454	99.5%
3	6.70	526	103869	103866	3	3,000	343.26	524	99.7%
Avg.		452.9					Avg.	451.0	**99.6%**

Remarks
34.22.2856n117.36.5008w
PC 5199

Test 1 was with the VFD operating at 54.5 Hz.
Test 2 was with the VFD operating at 57.5 Hz.
Test 3 was with the VFD operating at 60.0 Hz.

Approved

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

Since 1958

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

Sheep Creek Water Company
6666 Highway 2

Test Date: 05/05/2023
Pump type: DWT
Plant: Well #4A

A test was made on this well pump and the following information was obtained.

EQUIPMENT

PUMP:	No Data	SERIAL:	N/A
MOTOR:	US	SERIAL:	D097805326-0123M0010
H.P.	60	LAT/LON:	34.22.2856n117.36.5008w
METER:	259000-001152	REF #:	PC 5199

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge, PSI	3.0	2.5	2.0
Discharge head, feet	6.9	5.8	4.6
Standing water level, feet	279.8		
Drawdown, feet	16.1	13.1	9.9
Pumping water level, feet	295.9	292.9	289.7
Total pumping head, feet	302.8	298.7	294.3
Gallons per minute flow	**526**	**456**	**377**
Gallons per foot of drawdown	32.7	34.8	38.1
Acre feet pumped per 24 hours	2.325	2.013	1.666
KW input to motor	47.2	41.4	35.3
HP input to motor	63.2	55.5	47.3
Motor load, % BHP	100.1	87.8	74.9
Measured speed of pump, RPM	1786	1711	1622
KWH per acre foot	487.2	493.6	508.6
Overall plant efficiency in %	**63.6**	**61.9**	**59.2**

Test 1 was with the VFD operating at 60.0 Hz at the time of the test.
Test 2 was with the VFD operating at 57.5 Hz.
Test 3 was with the VFD operating at 54.5 Hz.

The available water measurement location does not meet recommended industry standards. We recommend 8-10 diameters of straight pipe for the ideal test location.

The airline length was calibrated at 457.7'.

If you have any questions please contact Jon Lee at (951) 684-9801.

ANNUAL PUMPING COST ANALYSIS

Sheep Creek Water Company Test date: 05/05/2023

Plant: Well #4A
H.P. 60

The following cost analysis is presented as an aid to your cost accounting and planning. It is an **Estimate** based on the pump test data and your energy use or hours of operation since new pump and motor.

	EXISTING CONDITIONS		
Average Cost per kWh	$0.3431		
	Test 1	Test 2	Test 3
KW input to motor	47.2	41.4	35.3
Acre feet pumped per 24 hour day	2.325	2.013	1.666
KWh per acre foot	487.2	493.6	508.6
Pumping cost per hour	$16.19	$14.20	$12.11
Pumping cost per acre foot	$167.14	$169.35	$174.49
Overall plant efficiency	63.6	61.9	59.2

PUMP CHECK
Pumping Systems Analysts
Hydraulic Test Report

Since 1958

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CERTIFICATE OF ACCURACY

Customer: Sheep Creek Water Company
Location: 6666 Highway 2
Identification: **Well #5**

Test Date: 05/05/2023

Meter Size: 8" Make: Water Specialties
Meter No: 911778-08 Register: Gal x 1000

General Data

Meter read before test: 426119 Meter read after test: 426127

Pipe ID: 8 (Inch) Pipe area: 50.266 (sq.in.) Pressure: 11.0 (Lbs/sq.in.)

Test Data **Test Before Inspection**

Test Equipment			Totalizer		Volume				
Test No.	Mano Read	Actual GPM	Second Read	First Read	Diff.	Convert to Gallons	Time in Seconds	Metered GPM	Percent of Flow
1	6.80	342	426122	426120	2	2,000	355.59	337	98.7%
2	6.75	339	426124	426122	2	2,000	357.27	336	99.0%
3	6.75	339	426126	426124	2	2,000	357.31	336	99.0%
Avg.		340.1					Avg.	336.4	**98.9%**

Remarks
34.22.3228n117.30.5283w
PC 5197

All of the above tests were performed with the VFD operating at 60.0 Hz.

Approved

Since 1958

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

Sheep Creek Water Company
6666 Highway 2

Test Date: 05/05/2023
Pump type: DWT
Plant: Well #5

A test was made on this well pump and the following information was obtained.

EQUIPMENT

PUMP:	Goulds	SERIAL:	N/A
MOTOR:	US	SERIAL:	V107604714-0045M0002
H.P.	60	LAT/LON:	34.22.3228n117.30.5283w
METER:	259000-046569	REF #:	PC 5197

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge, PSI	11.0	20.0	31.0
Discharge head, feet	25.4	46.2	71.6
Standing water level, feet	267.8		
Drawdown, feet	6.9	5.7	4.6
Pumping water level, feet	274.7	273.5	272.4
Total pumping head, feet	300.1	319.7	344.0
Gallons per minute flow	**339**	**297**	**241**
Gallons per foot of drawdown	49.2	52.0	52.5
Acre feet pumped per 24 hours	1.499	1.311	1.066
KW input to motor	39.8	39.0	37.8
HP input to motor	53.3	52.3	50.7
Motor load, % BHP	84.4	82.7	80.2
Measured speed of pump, RPM	1730	1730	1730
KWH per acre foot	637.1	714.2	850.9
Overall plant efficiency in %	**48.2**	**45.8**	**41.4**

All of the above tests were performed with the VFD operating at 60.0 Hz.

Test 1 was the normal operation of the pump at the time of the test. The other results were obtained by throttling the pump discharge.

The airline length was calibrated at 415.6'.

If you have any questions please contact Jon Lee at (951) 684-9801.

ANNUAL PUMPING COST ANALYSIS

Sheep Creek Water Company Test date: 05/05/2023

Plant: Well #5
H.P. 60

The following cost analysis is presented as an aid to your cost accounting and planning. It is an **Estimate** based on the pump test data and your energy use or hours of operation during the previous 12-month period.

	EXISTING CONDITIONS
Total annual hours of operation	1595
Total annual kWhrs	63481
Total annual cost	$19,012.56
Average Cost per kWh	$0.2995

	Test 1	Test 2	Test 3
KW input to motor	39.8	39.0	37.8
Acre feet pumped per 24 hour day	1.499	1.311	1.066
KWh per acre foot	637.1	714.2	850.9
Pumping cost per hour	$11.92	$11.68	$11.32
Pumping cost per acre foot	$190.81	$213.91	$254.84
Overall plant efficiency	48.2	45.8	41.4

Since 1958

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

Sheep Creek Water Company
6666 Highway 2

Test Date: 05/05/2023
Pump type: DWT
Plant: Well #5

A test was made on this well pump and the following information was obtained.

EQUIPMENT

PUMP:	Goulds	SERIAL:	N/A
MOTOR:	US	SERIAL:	V107604714-0045M0002
H.P.	60	LAT/LON:	34.22.3228n117.30.5283w
METER:	259000-046569	REF #:	PC 5197

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge, PSI	11.0	20.0	31.0
Discharge head, feet	25.4	46.2	71.6
Standing water level, feet	267.8		
Drawdown, feet	6.9	5.7	4.6
Pumping water level, feet	274.7	273.5	272.4
Total pumping head, feet	300.1	319.7	344.0
Gallons per minute flow	**339**	**297**	**241**
Gallons per foot of drawdown	49.2	52.0	52.5
Acre feet pumped per 24 hours	1.499	1.311	1.066
KW input to motor	39.8	39.0	37.8
HP input to motor	53.3	52.3	50.7
Motor load, % BHP	84.4	82.7	80.2
Measured speed of pump, RPM	1730	1730	1730
KWH per acre foot	637.1	714.2	850.9
Overall plant efficiency in %	**48.2**	**45.8**	**41.4**

All of the above tests were performed with the VFD operating at 60.0 Hz.

Test 1 was the normal operation of the pump at the time of the test. The other results were obtained by throttling the pump discharge.

The airline length was calibrated at 415.6'.

If you have any questions please contact Jon Lee at (951) 684-9801.

ANNUAL PUMPING COST ANALYSIS

Sheep Creek Water Company Test date: 05/05/2023

Plant: Well #5
Meter No.: 259000-046569
H.P. 60

The following cost analysis is presented as an aid to your cost accounting and planning. It is an **Estimate** based on the pump test data and your energy use or hours of operation during the previous 12-month period.

This pump was found to be operating inefficiently. A new pump, properly designed, should operate with an overall plant efficiency of about **68.0** percent.

A reduction in your energy usage and cost would occur, as shown below, if this pump was redesigned and/or rebuilt.

The following analysis and projection assumes that the water requirement, GPM, total pumping lift and hours of operation will remain as they were at the time of the pump test.

	EXISTING CONDITIONS	IMPROVED EFFICIENCY	**SAVINGS**
Total annual kWhrs	63,481	44,994	**18,487**
Total annual cost	$19,012.56	$13,475.68	**$5,536.88**
kW input to motor	39.8	28.2	**11.6**
Hours of operation per year	1595	1595	
Equivalent 24 hour days	66.5	66.5	
Acre feet pumped per 24 hour day	1.499	1.499	
Average cost per kWhr	$0.2995	$0.2995	
Average cost per hour	$11.92	$8.45	
Average cost per acre foot	$190.81	$135.24	**$55.57**
kWh per acre foot	637.1	451.6	**185.5**
Overall plant efficiency	% 48.2	% 68.0	

Since 1958

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

CERTIFICATE OF ACCURACY

Customer: Sheep Creek Water Company
Location: 6666 Highway 2
Identification: **Well #8**

Test Date: 05/05/2023

Meter Size: 8" Make: McCrometer
Meter No: 04-06568-08 Register: Gal x 1000

General Data

Meter read before test: 332616
Correction factor found on meter: + 3.0%
Gallons per rev found on meter: 2.500

Meter read after test: 332634
Correction factor left on meter: + 3.0%
Gallons per rev left on meter: 2.500

Pipe ID: 8 (Inch) Pipe area: 50.266 (sq.in.) Pressure: 0.5 (Lbs/sq.in.)

Test Data **Test Before Inspection**

Test Equipment			Totalizer			Volume			
Test No.	Mano Read	Actual GPM	Second Read	First Read	Diff.	Convert to Gallons	Time in Seconds	Metered GPM	Percent of Flow
1	7.35	369	332620	332618	2	2,000	324.16	370	100.2%
2	9.85	495	332625	332623	2	2,000	241.71	496	100.3%
3	12.60	633	332633	332630	3	3,000	281.54	639	100.9%
Avg.		499.3					Avg.	502.0	**100.5%**

Remarks
34.22.2435n117.36.4800w
PC 5200

Test 1 was with the VFD operating at 50.0 Hz.
Test 2 was with the VFD operating at 54.0 Hz.
Test 3 was with the VFD operating at 60.0 Hz.

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PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

Sheep Creek Water Company
6666 Highway 2

Test Date: 05/05/2023
Pump type: DWT
Plant: Well #8

A test was made on this well pump and the following information was obtained.

EQUIPMENT

PUMP:	Goulds	SERIAL:	N/A
MOTOR:	US	SERIAL:	H0841078915-002R-01
H.P.	150	LAT/LON:	34.22.2435n117.36.4800w
METER:	259000-001152	REF #:	PC 5200/SCE 27478

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge, PSI	0.5	0.5	0.5
Discharge head, feet	1.2	1.2	1.2
Standing water level, feet	292.3		
Drawdown, feet	33.5	23.1	12.7
Pumping water level, feet	325.8	315.4	305.0
Total pumping head, feet	327.0	316.6	306.2
Gallons per minute flow	**633**	**495**	**369**
Gallons per foot of drawdown	18.9	21.4	29.1
Acre feet pumped per 24 hours	2.799	2.188	1.633
KW input to motor	64.4	46.9	36.0
HP input to motor	86.3	62.8	48.2
Motor load, % BHP	55.1	40.1	30.8
Measured speed of pump, RPM	1792	1612	1493
KWH per acre foot	552.3	514.5	529.2
Overall plant efficiency in %	**60.6**	**63.0**	**59.2**

Test 1 was with the VFD operating at 60.0 Hz at the time of the test.
Test 2 was with the VFD operating at 54.0 Hz.
Test 3 was with the VFD operating at 50.0 Hz.

The available water measurement location does not meet recommended industry standards. We recommend 8-10 diameters of straight pipe for the ideal test location.

The airline length was calibrated at 421.7'.

If you have any questions please contact Jon Lee at (951) 684-9801.

ANNUAL PUMPING COST ANALYSIS

Sheep Creek Water Company Test date: 05/05/2023

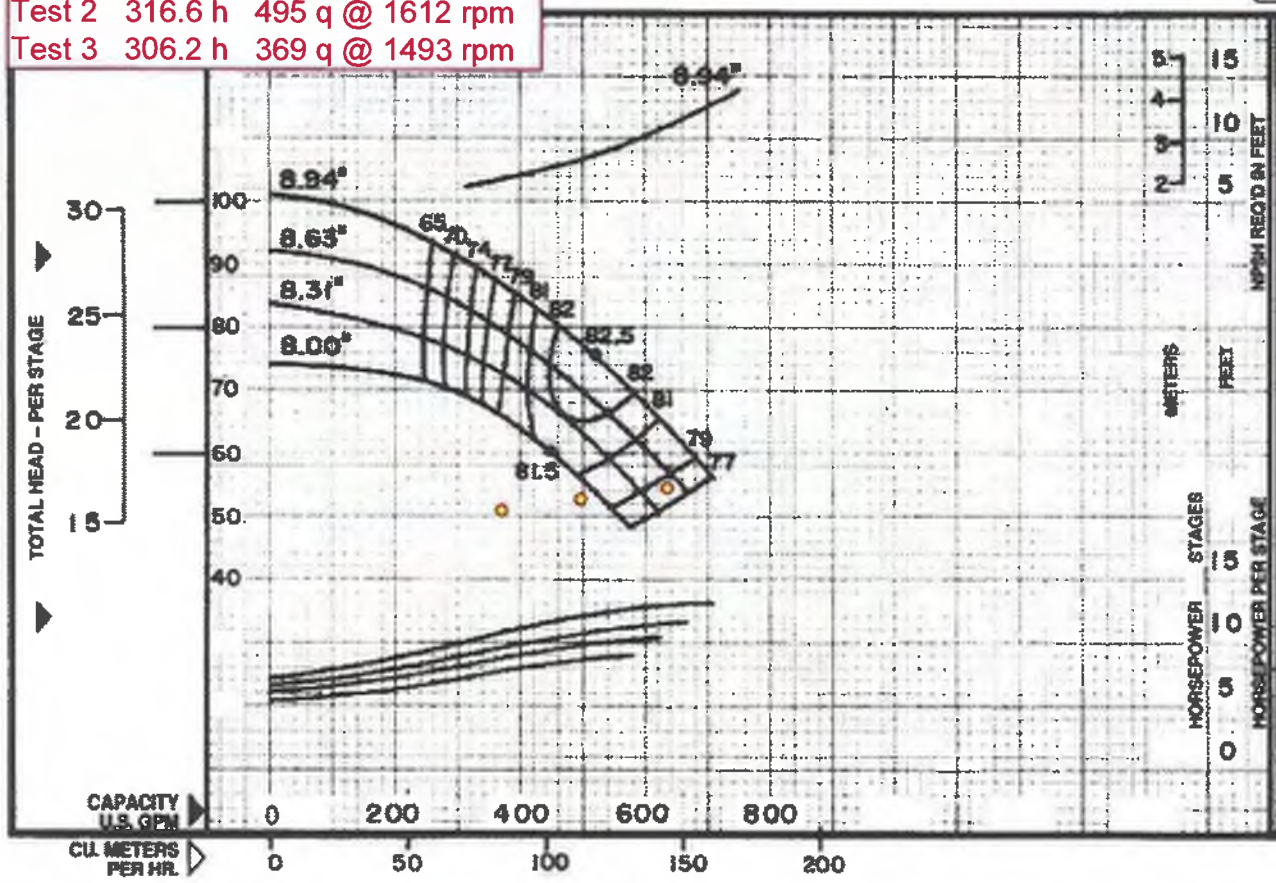
Plant: Well #8
H.P. 150

The following cost analysis is presented as an aid to your cost accounting and planning. It is an **Estimate** based on the pump test data and your energy use or hours of operation during the previous 12-month period.

	EXISTING CONDITIONS
Total annual hours of operation	1676
Total annual kWhrs	107934
Total annual cost	$37,032.29
Average Cost per kWh	$0.3431

	Test 1	Test 2	Test 3
KW input to motor	64.4	46.9	36.0
Acre feet pumped per 24 hour day	2.799	2.188	1.633
KWh per acre foot	552.3	514.5	529.2
Pumping cost per hour	$22.10	$16.09	$12.35
Pumping cost per acre foot	$189.48	$176.51	$181.58
Overall plant efficiency	60.6	63.0	59.2

Well #8 5/05/2023
Test 1 327.0 h 633 q @ 1792 rpm
Test 2 316.6 h 495 q @ 1612 rpm
Test 3 306.2 h 369 q @ 1493 rpm



PUMP CHECK

Curve No. 3131-1
Model: 12RALC
RPM: 1770

EFFICIENCY CORRECTION

STGS. 1	-3.0
STGS. 2	-2.0
STGS. 3	-1.0
STGS. 4	-0.5

PERF BASED ON STD. MTL'S

Impeller= C010608
N_S= 1576
K= 4.6 LBS/FT
6.8 KG/M
K (Bal.)=

GOULDS PUMPS
TURBINE DIVISION
LUBBOCK, TEXAS

Characteristics based upon pumping clear, non-aerated water. Rating point only is guaranteed. Column losses not included.

MODEL 12RALC
DATE May 1990

12RALC

PUMP CHECK

Pumping Systems Analysts

Hydraulic Test Report

Since 1958

(951) 684-9801 • Lic. 799498 • Fax (951) 684-2988

CERTIFICATE OF ACCURACY

Customer: Sheep Creek Water Company
Location: 4625 Walnut Road
Identification: **Well #11**

Test Date: 07/21/2023

Meter Size: 4"
Meter No: 20181558-04/E18-04417
Make: Water Specialties
Register: Gal x 100

General Data

Meter read before test: 433631
Meter read after test: 433696

Pipe ID: 3.5 (Inch) Pipe area: 9.621 (sq.in.) Pressure: 120.0 (Lbs/sq.in.)

Test Data **Test Before Inspection**

Test Equipment			Totalizer			Volume			
Test No.	Mano Read	Actual GPM	Second Read	First Read	Diff.	Convert to Gallons	Time in Seconds	Metered GPM	Percent of Flow
1	25.95	250	433676	433664	12	1,200	290.15	248	99.4%
2	26.00	250	433684	433676	8	800	193.03	249	99.4%
3	25.20	242	433695	433664	11	1,100	273.43	241	99.6%
Avg.		247.4					Avg.	246.1	**99.5%**

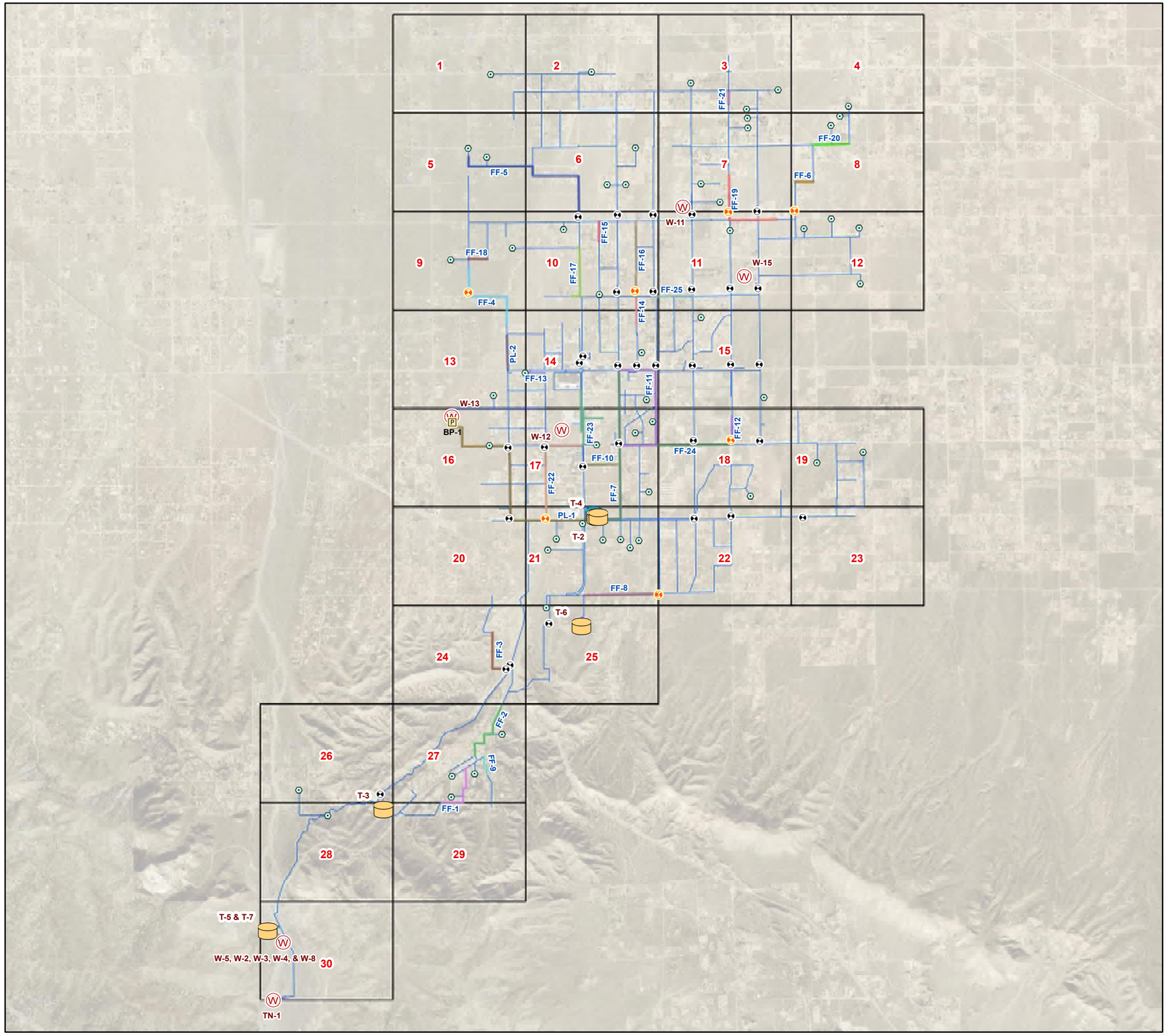
Remarks
34.26.5407n117.33.6571w
PC 5202

All of the above tests were performed with the VFD operating at 58.0 Hz while flowing one hydrant.

Approved

Appendix C.

CIP Projects Detail Maps



Legend

- New Booster Pump Station
- New PRS
- Well Improvement Project
- Dead-end Pipe Improvment Project
- Tank Rehabilitation Project
- Existing PRS
- Existing Pipeline
- Existing Tank
- Map Index Panel

Pipeline Improvement Project

- FF-1
- FF-2
- FF-3
- FF-4
- FF-5
- FF-6
- FF-7
- FF-8
- FF-9
- FF-10
- FF-11
- FF-12
- FF-13
- FF-14
- FF-15
- FF-16
- FF-17
- FF-18
- FF-19
- FF-20
- FF-21
- FF-22
- FF-23
- FF-24
- FF-25
- PL-1
- PL-2

N

0 0.2 0.4 0.8 1.2 1.6 Miles

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

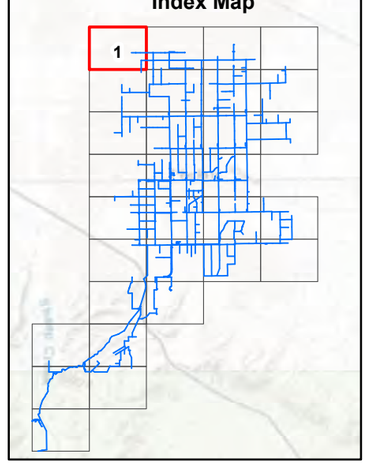
Figure C - Index Map

BEEKLEY
NUGGET
MONTARA
LEBEC
ROSWELL
SUNSET
CORTON
GRAHAM
ARAGON
UNNAMED
ROSWELL
GOSS
CORTON
WAGON TRAIN
RABBIT
MESCALERO
LEBEC
YUBA
AMADOR
SOLANO
SOLANO

Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 1

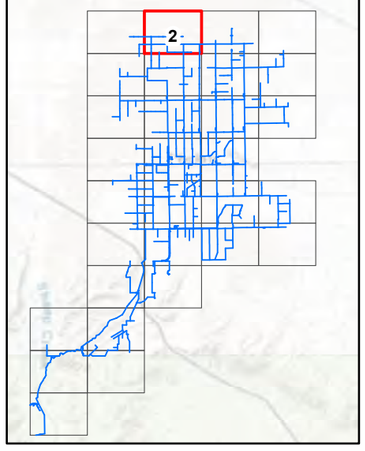
N

GREASEWOOD
EL ESTEBAN
SUNSET
ARAGON
CLOVIS
SAHARA
SIERRA VISTA
VALLE VISTA
ARAGON
GOSS
AMADOR
SHEEP CREEK
RIGGINS
SOLANO
SOLANO

Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

ARDURRA

Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 2

N

GREASEWOOD

GREASEWOOD

SUNSET

ARAGON

CAMPANULA

HACIENDA

GOSS

JOHNSON

AMADOR

AMADOR

MONTE VISTA

FF-21

CAMPANULA

SOLANO

SOLANO

PARAMOUNT

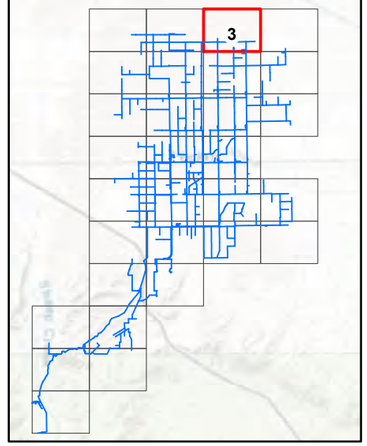
Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Pipeline Improvement Project

- FF-21

Index Map



0 87.5 175 350 525 700 Feet

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2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 3

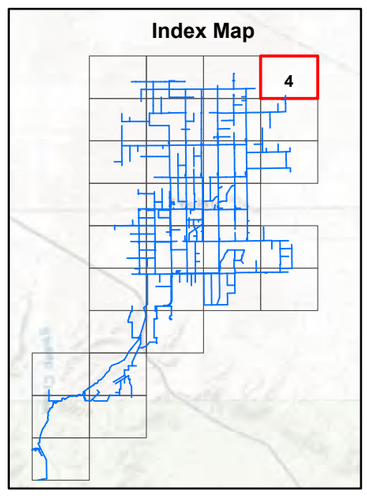
N

GREASEWOOD
BUTTONWOOD
PARAMOUNT
SUNSET
LAGER
SUNSET
ARAGON
GOSS
AILANTHUS
BUTTONWOOD
EABY
LAGER
SCHLITZ
AMADOR
ANDERSON RANCH
PARAMOUNT
SOLANO

Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 4

N

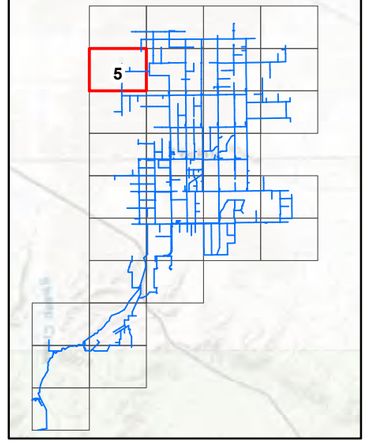
Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Pipeline Improvement Project

- FF-5

Index Map



0 87.5 175 350 525 700 Feet

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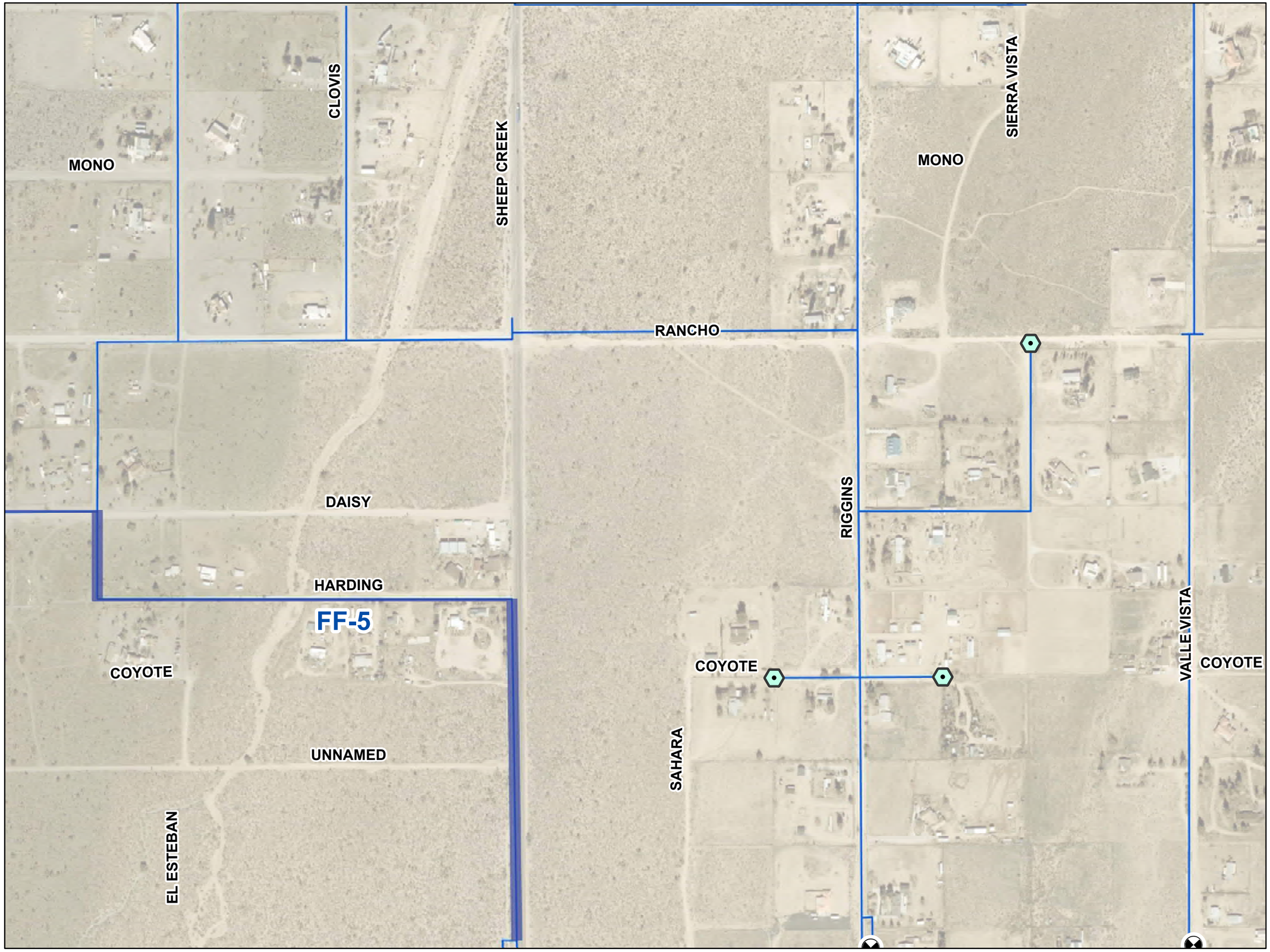
Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 5

N



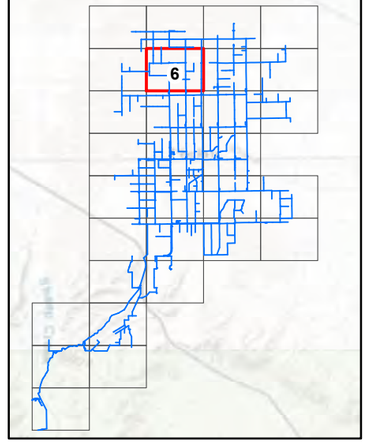
Legend

- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-5

Index Map



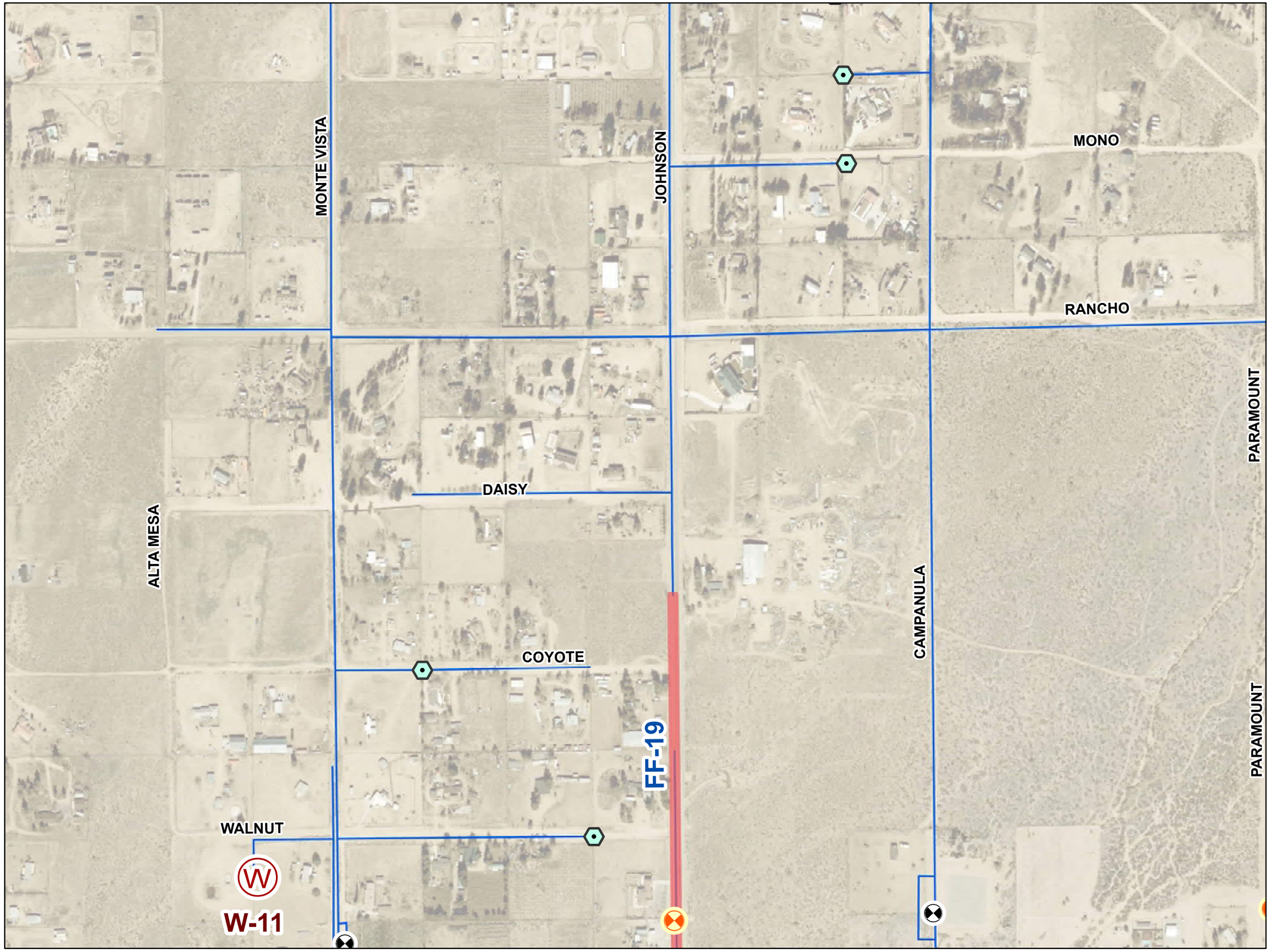
0 87.5 175 350 525 700 Feet

ARDURRA

Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 6



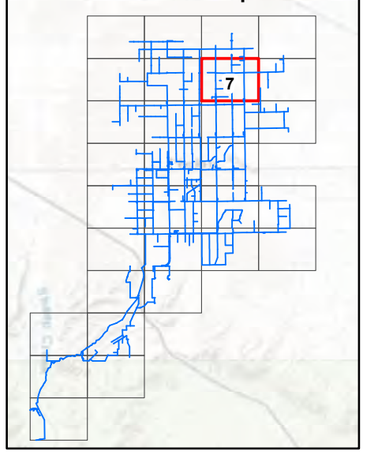
Legend

- New PRS
- Well Improvement Project
- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-19

Index Map



0 87.5 175 350 525 700 Feet

ARDURRA

Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 7

N

MONO

BUTTONWOOD

AILANTHUS

LAGER

SCHLITZ

RANCHO

FF-20

CENTOLA

DAISY

PARAMOUNT

FF-6

COYOTE

BUTTONWOOD

AILANTHUS

EABY

LAGER

SCHLITZ

ANDERSON RANCH

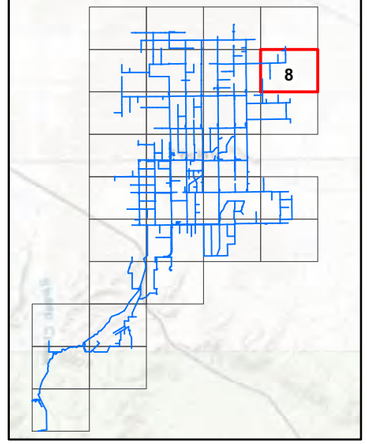
Legend

- New PRS
- Dead-end Pipe Improvment Project
- Existing Pipeline

Pipeline Improvement Project

- FF-6
- FF-20

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 8

N

CORTON
SMOKE TREE
LEBEC
BUCKTHORNE
MESCALERO
NUGGET
MONTARA
BUCKTHORNE
SHEPPARD
FF-18
AVENAL
WAGON TRAIN
BEEKLEY
LEBEC
FF-4
YUCCA TERRACE
BLUE STAKE
LEBEC

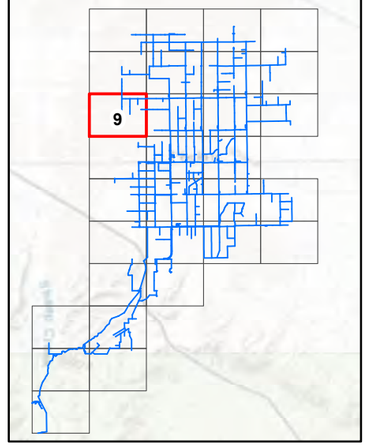
Legend

- New PRS
- Dead-end Pipe Improvment Project
- Existing Pipeline

Pipeline Improvement Project

- FF-4
- FF-18

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 9

N

EL ESTEBAN
SMOKE TREE
BUCKTHORNE
SHEPPARD
MALPASO
SAHARA
FF-15
BUCKTHORNE
AVENAL
SIERRA VISTA
FF-16
VALLE VISTA
LITTLER
FF-17
SHEEP CREEK
SAHARA
RIGGINS
YUCCA TERRACE
FF-14
MALPASO
CLOVIS

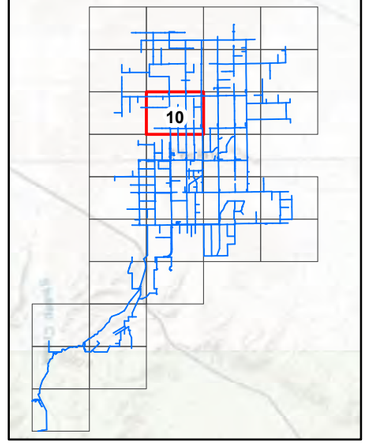
Legend

- New PRS
- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-5
- FF-14
- FF-15
- FF-16
- FF-17
- FF-25

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 10

SMOKE TREE

FF-19

BUCKTHORNE

JOHNSON

CAMPANULA

BUCKTHORNE

MONTE VISTA

AVENAL

UNNAMED

JUNIPER

W

W-15

YUCCA TERRACE

FF-25

ALTA MESA

DEL SOL

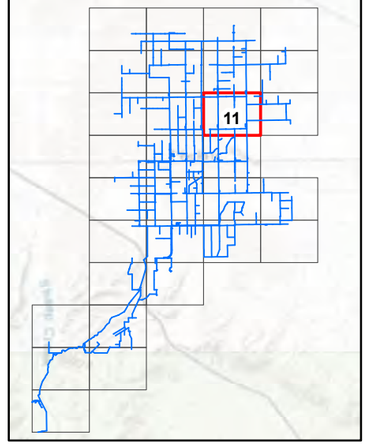
Legend

- New PRS
- Well Improvement Project
- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-19
- FF-25

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 11

N

CENTOLA

SMOKE TREE

AILANTHUS

BUCKTHORNE

SCHLITZ

BUTTONWOOD

AVENAL

ANDERSON RANCH

JUNIPER

JUNIPER

CENTOLA

PARAMOUNT

YUCCA TERRACE

EABY

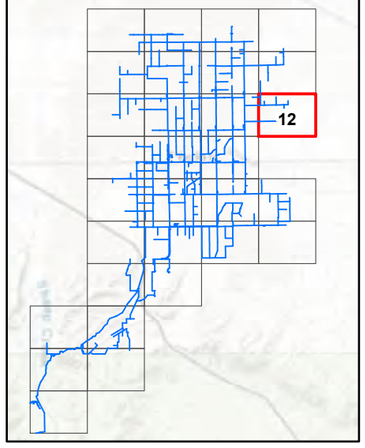
LAGER

ACACIA

Legend

- New PRS
- Dead-end Pipe Improvment Project
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 12

N

ACACIA
ACACIA
WHITE FOX
WHITE FOX
WAGON TRAIN
LINDERO
LINDERO
MESCALERO
BLUE STAKE
MANGO
LEBEC
FF-4
PL-2
CORTON
PHELAN
COLFAX
BEEKLEY
BLUE STAKE
BRAWLEY
CAMBRIA

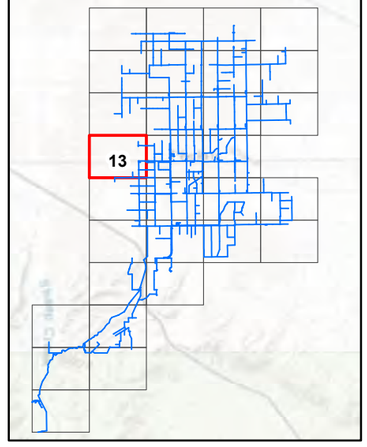
Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Pipeline Improvement Project

- FF-4
- PL-2

Index Map



0 87.5 175 350 525 700 Feet

ARDURRA

Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 13

N

ACACIA
UNNAMED
CLOVIS
SHEEP CREEK
SAHARA
RIGGINS
FF-14
SIERRA VISTA
VALLE VISTA
WHITE FOX
LINDERO
PHELAN
FF-13
BRAWLEY
BRAWLEY
MALPASO
FF-23
SAHARA
FF-7
SIERRA VISTA
FF-11
CAMBRIA
HIGHLAND

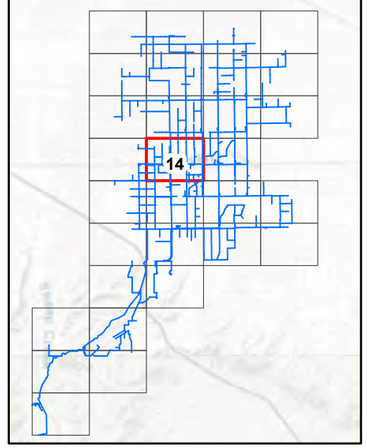
Legend

- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-7
- FF-11
- FF-13
- FF-14
- FF-23

Index Map



0 87.5 175 350 525 700 Feet

ARDURRA

Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 14

N

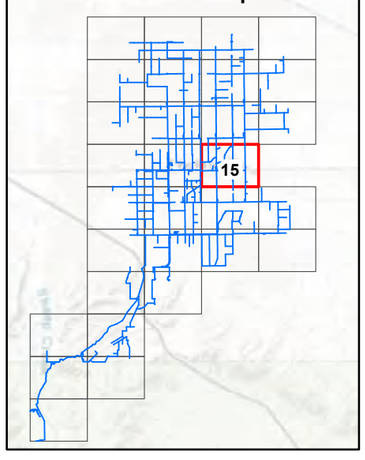
Legend

- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-11

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 15

N

CAMBRIA
BRAWLEY
COLFAX
CAMBRIA
W-13
BP-1
BLUE STAKE
ELSINORE
NIELSON
PL-1
BEEKLEY
LEBEC
CHAWACHO
DARWIN
DEER HAVEN
UNNAMED
HOLLISTER
HERMOSA
MANGO
VISTA
YUBA

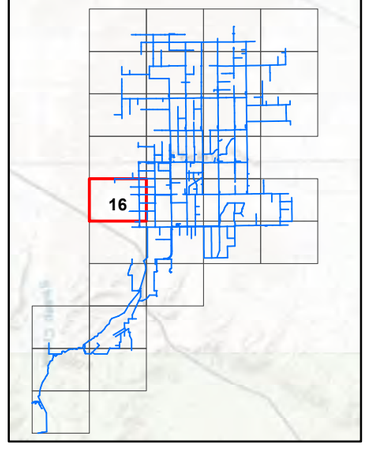
Legend

- New Booster Pump Station
- Well Improvement Project
- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- PL-1

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 16

CAMBRIA
MALPASO
ELSINORE
W-12
WARBLER
SAHARA
FF-23
RIGGINS
HIGHLAND
SIERRA VISTA
FF-11
SERRA
RIGGINS
NIELSON
STADIUM
CHAWACHO
UZZEL
FF-10
SIERRA VISTA
HOLLISTER
MC ALLISTER
SHEEP CREEK
YUBA
FF-22
FF-7
POZO

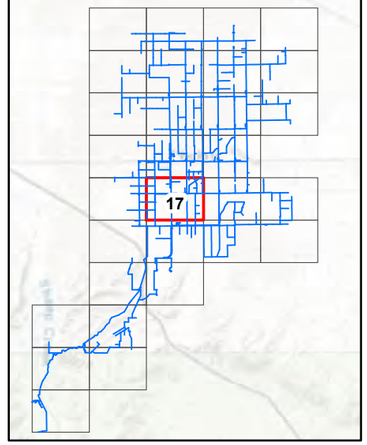
Legend

- Well Improvement Project
- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-7
- FF-10
- FF-11
- FF-22
- FF-23
- FF-24

Index Map



0 87.5 175 350 525 700 Feet

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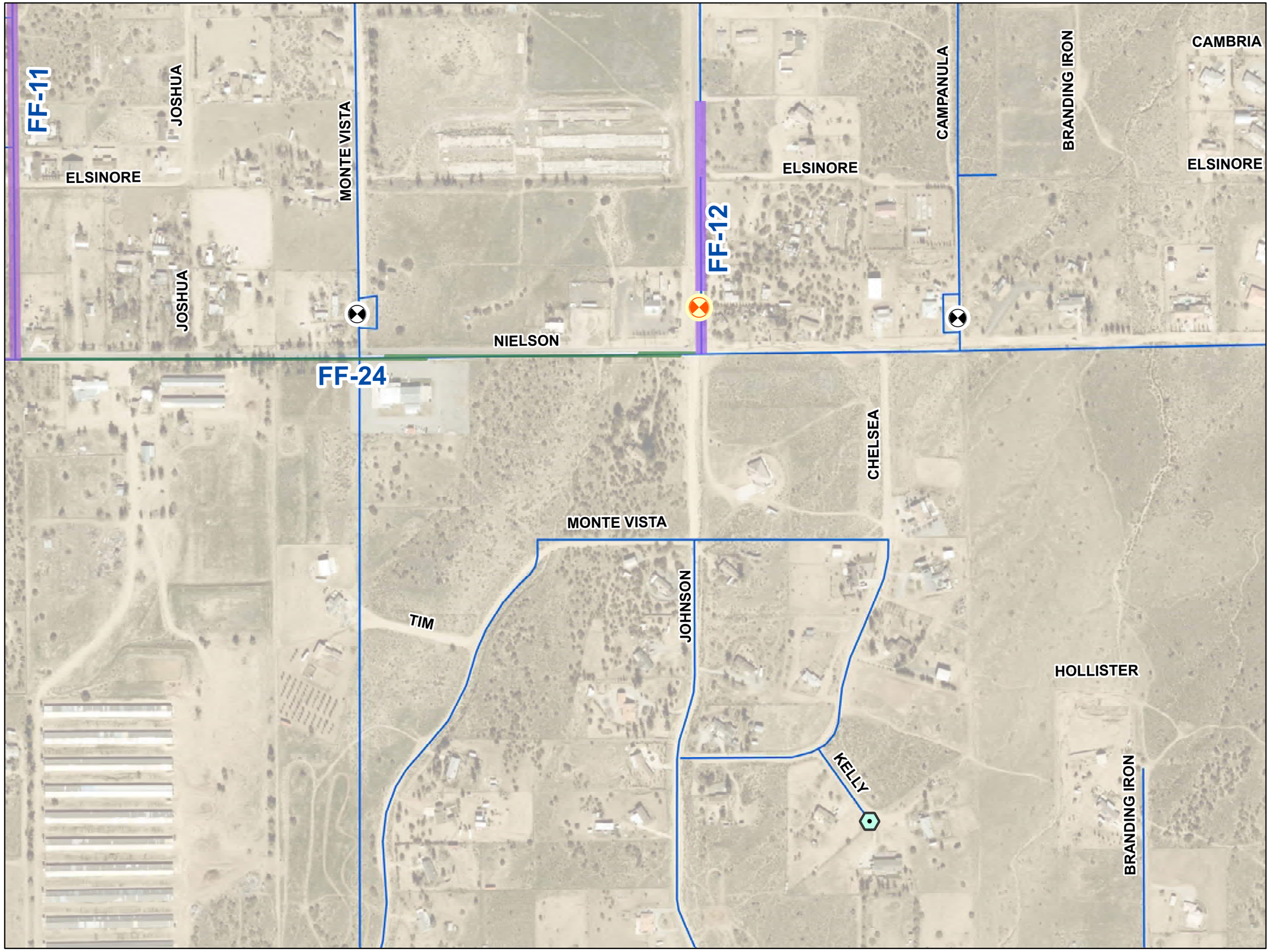
Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 17

N



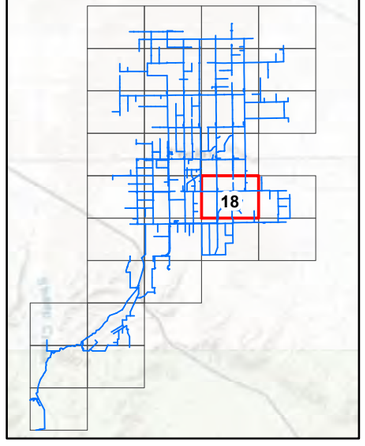
Legend

- New PRS
- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-11
- FF-12
- FF-24

Index Map



0 87.5 175 350 525 700 Feet

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2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 18

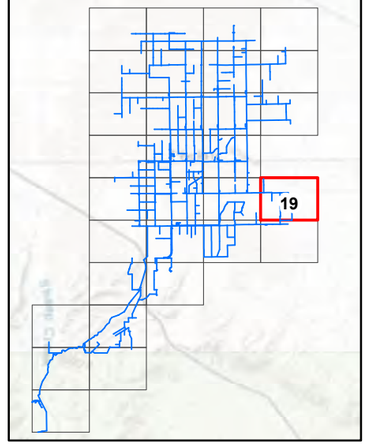
N

CAMBRIA
ELSINORE
PARAMOUNT
CENTOLA
ELSINORE
BUTTONWOOD
BLOSSOM
SCHLITZ
HOLLYWOOD
NIELSON
TRINITY
JOSHUA
HOLLISTER
PARAMOUNT
CENTOLA
BUTTONWOOD
EABY
LAGER
SCHLITZ

Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

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2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 19

N

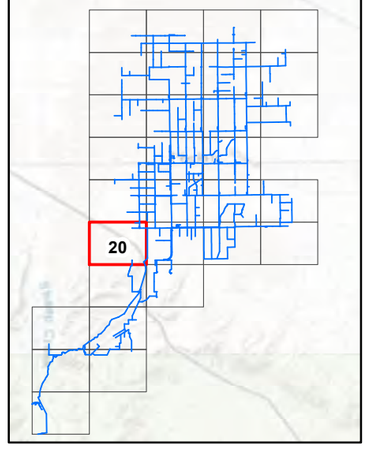
Legend

- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- PL-1

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 20

FF-22
PL-1
T-2
T-4
FF-7
SUNNYSLOPE
MALPASO
PROGRESS
SHEEP CREEK
SAHARA
VALLE VISTA
ARROWHEAD
SUNDOWN
YUBA
HILLTOP
HILLTOP
SHIP
SAHARA
RIGGINS
SIERRA VISTA
SNOW LINE
FF-8
JAVELIN
SAHARA
RIGGINS

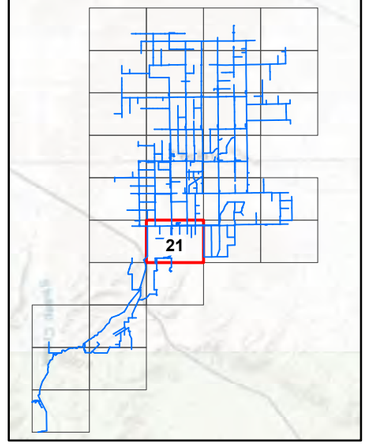
Legend

- New PRS
- Dead-end Pipe Improvment Project
- Tank Rehabilitation Project
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-7
- FF-8
- FF-22
- PL-1
- Existing Tank

Index Map



0 87.5 175 350 525 700 Feet

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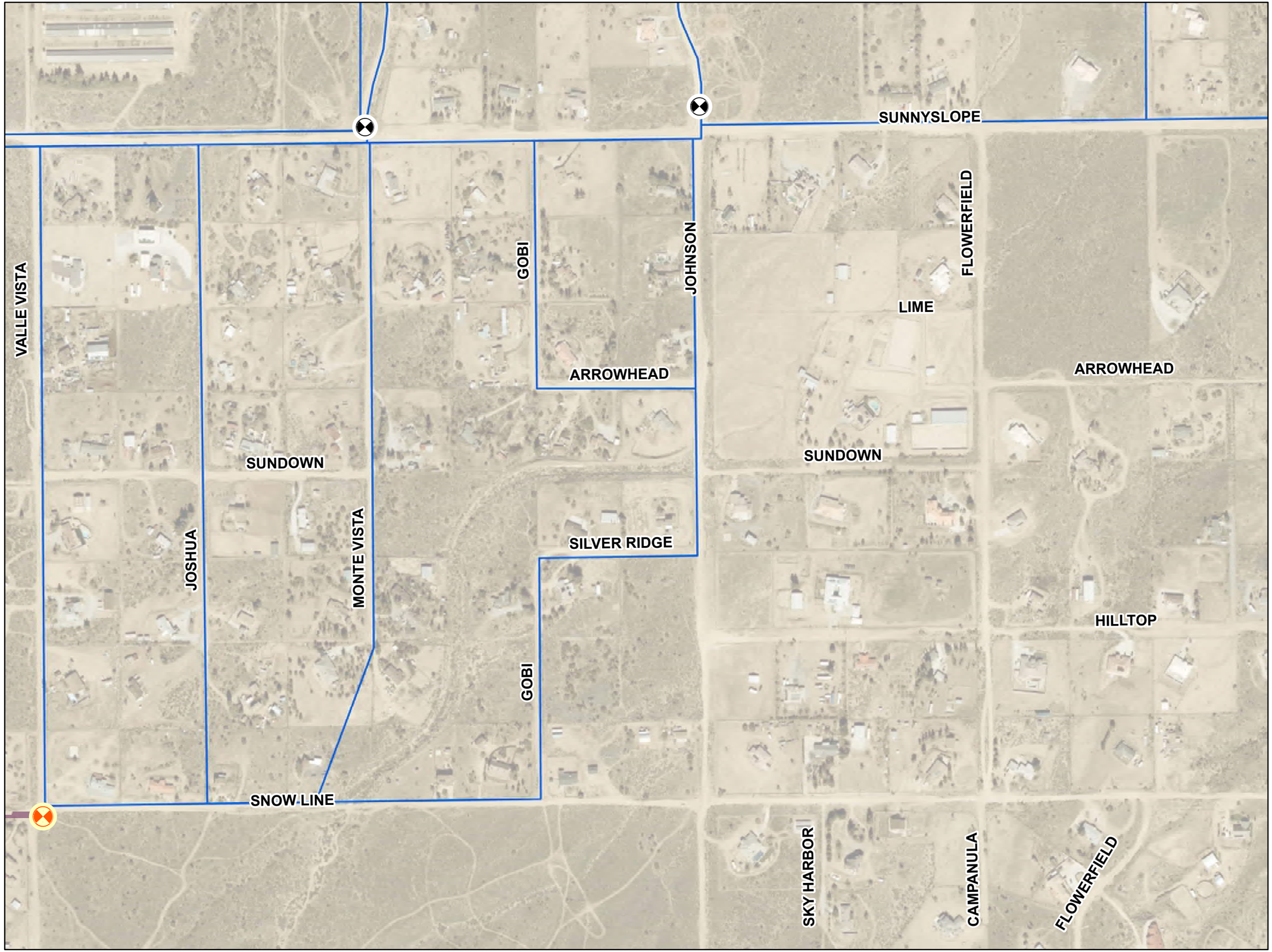
Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 21

N



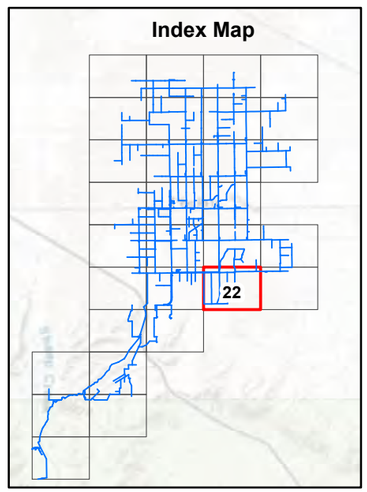
Legend

- New PRS
- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-8

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

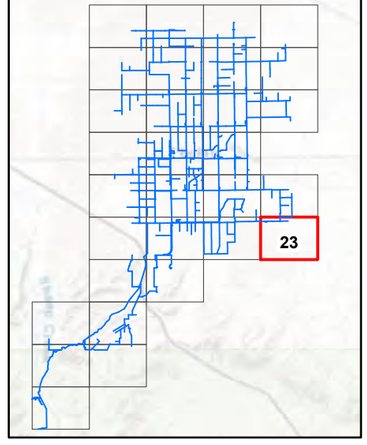
Proposed Capital Improvement Projects - Detail Map

Figure C - 22

Legend

- Existing PRS
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

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2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 23

N

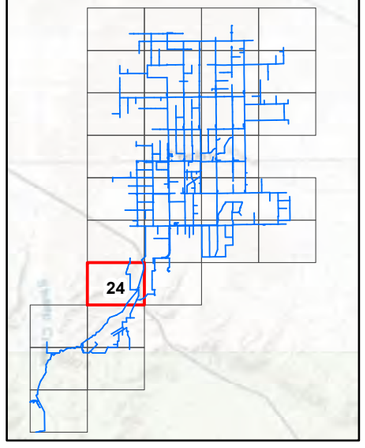
Legend

- Existing PRS
- Existing Pipeline

Pipeline Improvement Project

- FF-2
- FF-3

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

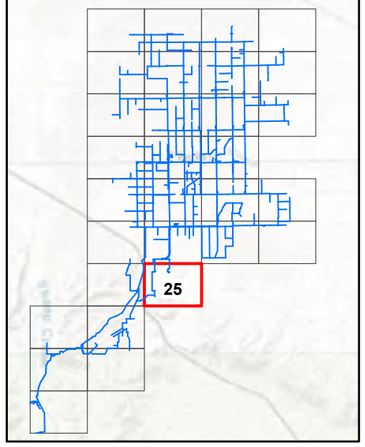
Figure C - 24

N

Legend

- Dead-end Pipe Improvment Project
- Tank Rehabilitation Project
- Existing PRS
- Existing Pipeline
- Existing Tank

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

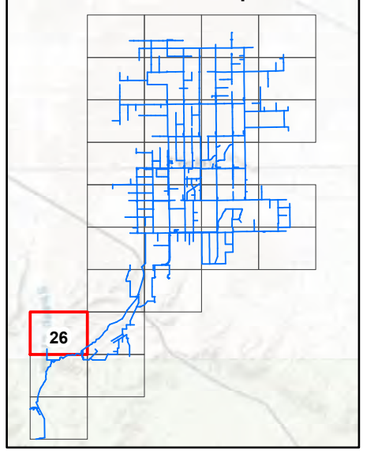
Figure C - 25

N

Legend

- Dead-end Pipe Improvment Project
- Existing PRS
- Existing Pipeline

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 26

N

SERRANO

PIPELINE

FF-2

UNNAMED

STATE HWY 2

FF-9

RANCHO

FF-1

UNNAMED

MOUNTAIN SPRINGS

RANCHO

WILDHORSE CANYON

BEAVER

SKYRIDGE

SNOW

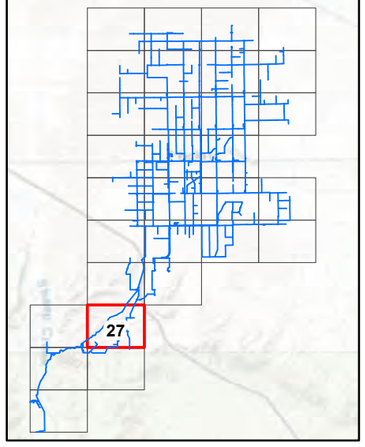
Legend

- Dead-end Pipe Improvment Project
- Existing Pipeline

Pipeline Improvement Project

- FF-1
- FF-2
- FF-9

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

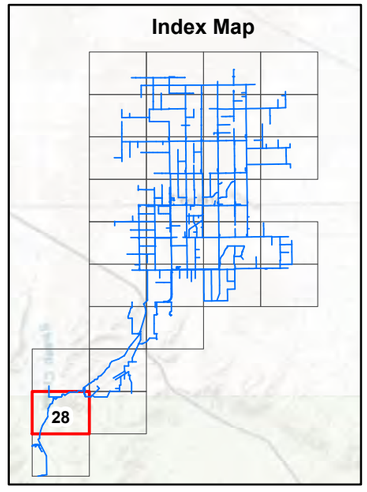
Figure C - 27

N

Legend

- Dead-end Pipe Improvment Project
- Tank Rehabilitation Project
- Existing PRS
- Existing Pipeline
- Existing Tank

Index Map



0 87.5 175 350 525 700 Feet

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2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 28

N

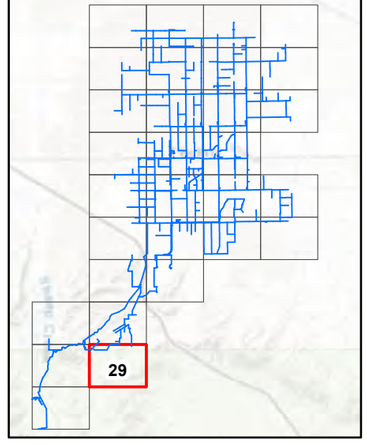
Legend

Existing Pipeline

Pipeline Improvement Project

FF-1

Index Map



0 87.5 175 350 525 700 Feet

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2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

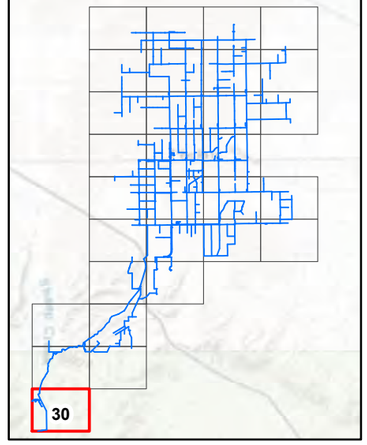
Figure C - 29

N

Legend

- Well Improvement Project
- Tank Rehabilitation Project
- Existing Pipeline
- Existing Tank

Index Map



0 87.5 175 350 525 700 Feet

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Sheep Creek Water Company
2024 Water Master Plan

Proposed Capital Improvement Projects - Detail Map

Figure C - 30

Appendix D.

Pipeline Improvement Projects Detail Table

Table D-1. Proposed Pipeline Improvements

CIP #	Model ID	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	Description
FF-1	MA-C8-004	696	4	8	Improve pressures of the hydrants near HW 2 and Wildhorse Canyon Rd
	MA-C8-005	219	4	8	
	MA-D8-009	276	4	8	
	MA-D8-010	101	4	8	
	MA-D8-011	708	4	8	
	MA-C8-003	98	4	8	
FF-2	MA-E8-008	330	4	8	Improve pressures of the hydrants near US HW 138 and Pipeline Rd
	MA-E8-010	313	4	8	
	MA-E8-011	342	4	8	
	MA-E8-016	261	4	8	
	IEC-P-249	27	4	8	
	MA-D8-030	30	4	8	
	MA-D8-012	342	4	8	
	MA-E8-001	412	4	8	
	MA-D8-013	413	4	8	
FF-3	MA-F8-001	1257	4	8	Improve pressures of the hydrants near Malpaso Rd and west of Cygent Rd
	MA-F8-004	430	4	8	
	MA-F8-006	15	4	8	
	IEC-P-19	63	4	8	
FF-4	IEC-P-201	1327	-----	8	Improve pressure at hydrants near Nugget Rd, Smoke Tree Rd, and Yucca Terrace Dr west of Sheep Creek Rd Loop the system from White Fox Trl to Avenal St
	IEC-P-199	1004	-----	8	
	IEC-P-243	814	-----	8	
	New PRS	-----	-----	PRS	
	IEC-P-203	164	-----	8	
FF-5	MA-N9-019	335	4	8	Improve pressure at hydrants near Daisy Ln west of Sheep Creek
	MA-N9-016	27	4	8	
	MA-N9-007	1341	4	8	
	MA-N9-021	15	4	8	
	MA-O8-002	319	4	8	
	MA-O9-031	651	4	8	
	MA-N9-001	1249	4	8	
	MA-O8-006	15	4	8	
	MA-O8-007	314	4	8	
	MA-O9-006	327	4	8	
	MA-O9-009	972	4	8	
	MA-O9-027	15	4	8	
	MA-O8-001	340	4	8	

Table D-1. Proposed Pipeline Improvements

CIP #	Model ID	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	Description
FF-6	IEC-P-123	638	-----	6	Improve pressure on hydrants near Centola Rd and Rancho Rd
	New PRS	-----	-----	PRS	
FF-7	MA-H10-003	485	10	12	Improve pressure along Riggins Rd
	MA-H10-013	15	6	12	
	MA-H10-067	164	10	12	
	MA-K10-034	1658	6	12	
	MA-K10-075	45	6	12	
	MA-H10-001	130	10	12	
	MA-I10-006	1320	6	12	
	MA-I10-014	617	6	12	
	MA-J10-018	24	6	12	
	MA-J10-042	672	6	12	
	MA-J10-052	34	6	12	
	MA-K10-016	819	6	12	
	MA-J10-053	30	6	12	
FF-8	IEC-P-229	2691	-----	8	Improve pressure of the hydrants on Sundown Dr between Valle Vista Rd and Monte Vista Rd
	IEC-P-245	33	-----	8	
	New PRS	-----	-----	PRS	
FF-9	MA-D8-017	52	4	8	Improve pressures of the hydrant on Wild Horse Canyon Rd east of Sky Ridge Rd
	MA-D8-035	38	4	8	
	MA-D8-018	294	6	8	
	MA-D8-016	307	4	8	
FF-10	MA-I10-001	1241	4	12	Improve pressures at hydrants on Uzzel Rd
FF-11	MA-J10-057	65	4	10	Improve pressure at hydrants on Phelan Rd between Johnson Rd and Riggins Rd
	MA-K10-077	15	6	10	
	MA-J10-059	184	4	10	
	MA-K10-006	15	6	10	
	MA-K10-008	378	6	10	
	MA-K10-076	37	6	10	
	MA-K10-011	26	6	10	
	MA-J10-017	455	4	10	
	MA-J10-016	131	4	10	
	MA-J10-015	411	4	10	
	MA-J10-003	760	6	10	
	MA-J10-001	508	6	10	
	MA-K10-013	51	6	10	
	MA-K10-014	30	6	10	

Table D-1. Proposed Pipeline Improvements

CIP #	Model ID	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	Description
	MA-K10-015	564	6	10	
	MA-J10-058	58	6	10	
	MA-K10-045	298	6	10	
	MA-K10-046	239	6	10	
	MA-K10-051	657	6	10	
	MA-K10-052	15	6	10	
	MA-K10-083	11	6	10	
	MA-K10-084	244	6	10	
	MA-K10-085	66	6	10	
	MA-K11-077	15	4	8	
	MA-J10-046	15	6	10	
	MA-J10-055	55	4	10	
FF-12	MA-J11-006	15	4	8	Improve pressures at hydrants near Phelan Rd and Johnson Rd
	IEC-P-151	298	-----	8	
	IEC-P-155	112	4	8	
	MA-J11-003	444	4	8	
	New PRS	-----	-----	PRS	
FF-13	MA-K9-022	87	4	8	Improve pressures at hydrant on Phelan Rd and Malpaso Rd
	MA-K9-123	15	4	8	
	MA-K9-023	525	4	8	
FF-14	MA-L10-015	946	4	8	Improve pressure at hydrant on Sierra Vista, midway between Yucca Terrace Dr and Lindero St
	MA-L10-031	15	4	8	
	MA-L10-051	23	4	8	
FF-15	IEC-P-181	699	------	8	Eliminate dead-ends and Improve pressures at hydrants near Sahara Rd
FF-16	IEC-P-141	466	4	8	Eliminate dead-ends and improve pressure on a hydrant on Sierra Vista Rd midway Yucca Terrace Dr and Smoke Tree Rd
	MA-L10-030	15	4	8	
	MA-M10-010	598	4	8	
	MA-M10-007	204	4	8	
	IEC-P-139	198	-----	8	
	MA-M10-021	271	4	8	
	IEC-P-137	211		8	
	MA-N10-014	709	4	8	
	New PRS	-----	-----	PRS	
FF-17	**MA-L9-024**	15	4	8	Improve pressure at hydrant on Shepherd Rd and Lebec Rd, and near Yucca Terrace Dr north of Malpaso Rd
	MA-M9-002	1713	4	8	
	MA-L9-014	302	4	8	

Table D-1. Proposed Pipeline Improvements

CIP #	Model ID	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	Description
FF-18	IEC-P-247	659	-----	6	Improve pressure at hydrant on Montara Rd
FF-19	MA-N11-059	15	4	8	Improve pressure at hydrants near Daisy Ln and Johnson Rd, and eliminate dead-ends on Johnson Rd between Rancho Rd and Smoke Tree Rd
	IEC-P-187	266	4	8	
	IEC-P-185	37	4	8	
	MA-N11-003	21	6	8	
	IEC-P-127	654	------	8	
	IEC-P-129	610	------	8	
	MA-N11-065	313	4	8	
	MA-N11-062	27	6	8	
	MA-N11-061	15	6	8	
	IEC-P-189	35	4	8	
	MA-N11-044	15	6	8	
	MA-N11-033	309	4	8	
	MA-N11-013	16	4	8	
	MA-N11-011	928	6	8	
	MA-N11-004	9	6	8	
	New PRS	-----	-----	PRS	
FF-20	MA-O12-009	49	4	8	Improve pressure at hydrants near Ailanthus
	MA-O13-001	638	4	8	
	MA-O12-001	555	4	8	
	MA-O12-010	57	4	8	
FF-21	IEC-P-195	472	-----	4	Improve pressure at hydrant at the east end of Amador Rd
FF-22	MA-H9-017	120	6	10	Improve pressure at hydrants on Nielson Rd between Sheep Creek Rd and Malpaso Rd
	MA-I9-006	653	6	10	
	MA-I9-014	614	6	10	
	MA-I9-015	23	6	10	
	MA-I9-031	15	6	10	
	MA-I9-032	10	6	10	
	MA-I9-035	554	6	10	
	MA-I9-041	5	6	10	
	MA-J9-061	15	6	10	
	MA-J9-037	228	6	10	
	MA-J9-004	17	4	10	
	MA-J9-036	48	6	10	
	MA-J9-062	300	6	10	
	MA-J9-030	661	4	10	

Table D-1. Proposed Pipeline Improvements

CIP #	Model ID	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	Description
	MA-J9-028	26	4	10	
	MA-J9-017	11	4	10	
	IEC-P-149	651	6	10	
	Fire Hydrant	-----	-----	Hydrant	
	Replace PRS	-----	-----	PRS	
FF-23	MA-J9-083	75	8	12	Improve pressures at hydrants near Sheep Creek Rd between Phelan Rd and Nielson Rd
	MA-J9-015	944	8	12	
	MA-J9-014	195	8	12	
	MA-J9-012	201	8	12	
	MA-J9-010	70	8	12	
	MA-J10-062	56	8	10	
	MA-J9-051	31	8	12	
	MA-J9-052	15	8	10	
	MA-J9-053	252	8	12	
	MA-J9-054	15	8	12	
	MA-J9-055	15	8	12	
	MA-J9-056	15	8	12	
	MA-J10-044	616	8	10	
	MA-J9-011	279	8	12	
	MA-J9-078	35	8	12	
	MA-J9-079	36	8	12	
	MA-K9-019	674	8	12	
FF-24	MA-J11-007	15	6	10	Improve pressures at hydrants on Nielson Rd west of Johnson Rd
	MA-J11-013	428	6	10	
	MA-J11-008	15	4	10	
	MA-J11-004	838	6	10	
	MA-J11-001	1335	4	10	
	MA-J11-020	60	6	10	
FF-25	MA-L11-058	15	4	8	Improve pressure at Yucca Terrace Dr and Monte Vista Rd, and eliminate dead-ends on Yucca Terrace east of Valle Vista Rd
	MA-L11-006	602	4	8	
	MA-L10-022	70	4	8	
	MA-L10-004	77	4	8	
	MA-L11-044	49	4	8	
	IEC-P-131	561	------	8	
PL-1	IEC-P-239	341	------	6	Well 13 connection to Tank 8
	IEC-P-237	132	------	6	
	IEC-P-225	384	------	6	

Table D-1. Proposed Pipeline Improvements

CIP #	Model ID	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	Description
	IEC-P-223	1760	------	6	
	IEC-P-207	1682	------	6	
	IEC-P-209	2667	------	6	
	IEC-P-221	580	------	6	
	IEC-P-211	688	------	6	
	IEC-P-213	344	------	6	
	IEC-P-215	332	------	6	
PL-2	IEC-P-197	1208	-----	8	Connect dead-end pipes on Lebec Rd (None FF CIP)