

CALAVERAS PUBLIC UTILITY DISTRICT
506 W. St. Charles, Street San Andreas, CA 95249

BOARD OF DIRECTORS SPECIAL MEETING: 3:00 PM
April 30, 2024

Jack Tressler
President of the Board

Director Richard Blood
Director Brady McCartney

Director J.W. Dell 'Orto
Director Kevin Sparks

Calaveras Public Utility District hereby provides notice that it will convene its specially scheduled public meetings of the Board of Directors at the District Office. If you are unable to attend in person, we encourage you to attend remotely as follows:

- **Join the Conference Call Meeting**
- **Dial-in number (US): 1(669)900-9128**
- **Join the online ZOOM meeting:**
- <https://us02web.zoom.us/j/82182432906?pwd=SDBjMkVOUzl1VHhLVjdndHVsOXVaUT09>
- **Meeting ID: 821 8243 2906**
- **Meeting Passcode code: 135344**

Please mute your call before joining. This will limit technical difficulties with audio. Only unmute your call if the President has requested public comment on an item. Upon completing your comments, please mute your call again. Do not put the call on hold, as hold music can ruin the call for all other participants. If that occurs, or in the event of disruptive conduct, staff reserves the right to disconnect that caller. Do no talk over the top of any other callers. Conversations must be one at a time.

AGENDA

- 1. CALL THE MEETING TO ORDER**
- 2. ROLL CALL OF DIRECTORS**
 - a. President Jack Tressler
 - b. Director Richard Blood
 - c. Director J.W. Dell 'Orto
 - d. Director Brady McCartney
 - e. Director Kevin Sparks
- 3. PLEDGE OF ALLEGIANCE**
- 4. PUBLIC COMMENT (Limit: 3 min/person)**

At this time, members of the public may address the Board on any matter within its jurisdiction which is not on the agenda. The public is encouraged to work with staff to place items on the agenda for Board consideration. No action can be taken on matters not listed on the agenda. Comments are limited to 3 minutes per person.

ITEMS FOR BOARD DISCUSSION AND/OR ACTION

Board action may occur on any identified agenda item. Any member of the public may directly address the Board on any identified agenda item of interest, either before or during the Board's consideration of that item.

5. WATER MASTER PLAN UPDATE

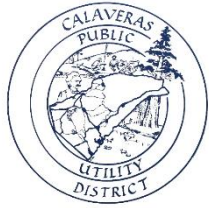
Action Requested: Discussion

- a. Presentation of Draft Water Master Plan and Draft Capital Improvement Program by Peterson-Brustad, Inc.
- b. Public Workshop on Water Master Plan and Capital Improvement Program
- c. Public Comment (Limit: 3 min/per person)

6. ADJOURNMENT

If there is no other Board business the President will adjourn to its next regular meeting scheduled for May 21, 2024, at 5:00 p.m.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Office at (209) 754-9442. Notification in advance of the meeting will enable CPUD to make reasonable arrangements to ensure accessibility to this meeting. Any documents that are made available to the Board before or at the meeting, not privileged or otherwise protected from disclosure, and related to agenda items, will be made available at CPUD for review by the public.



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Capital Improvement Plan Workshop

Special Board Meeting

April 30th, 2024

Water Master Plan Highlights

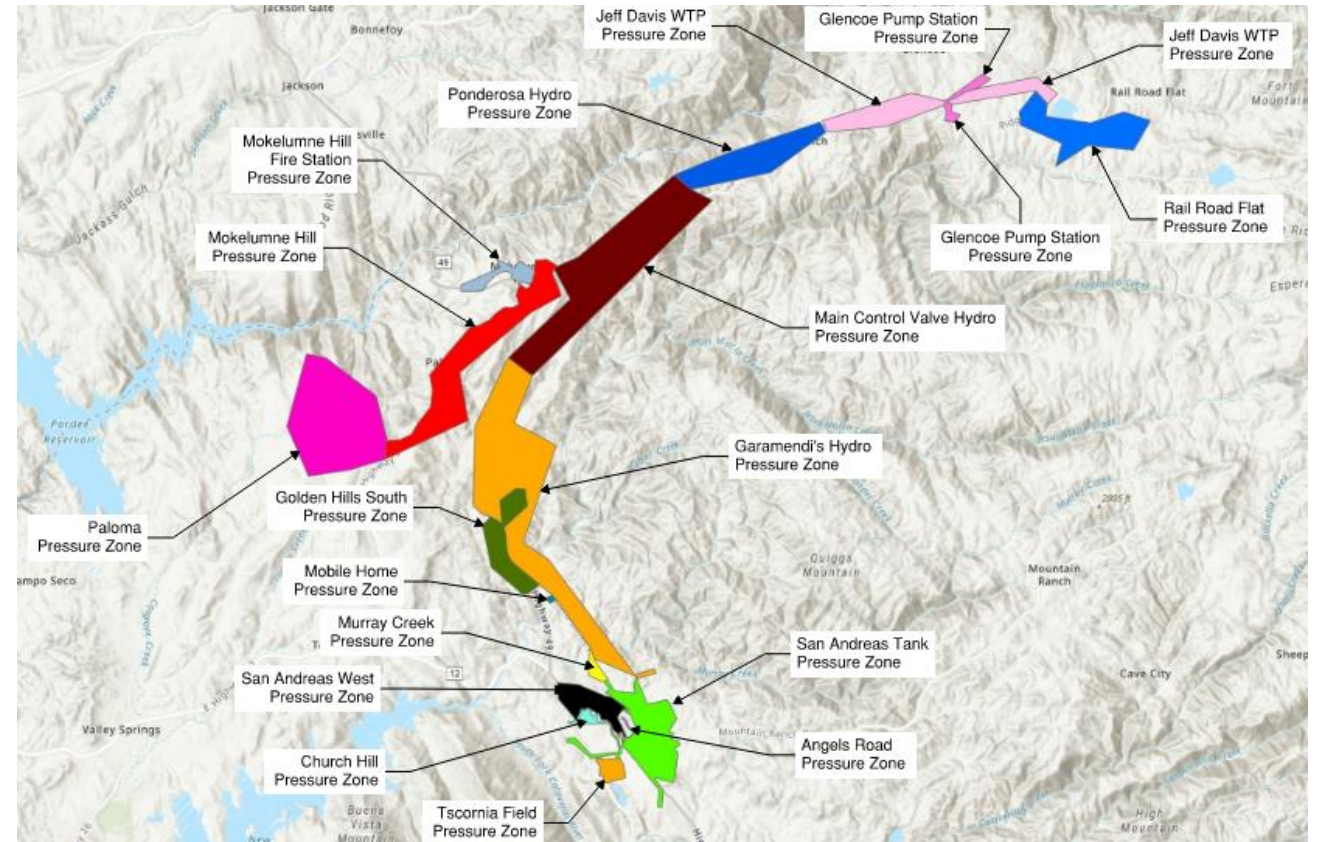
Water Treatment Plant Evaluation

Facility Condition Assessments

- ▶ Pumps Stations
- ▶ Hydro Stations
- ▶ Storage Tank Inspections
 - All storage tanks dive inspected by CSI in 2023

Distribution System Analysis

- ▶ Hydraulic Model Updates and Evaluation



Storage Tank Inspections

Tank Rehabilitations for short-term:

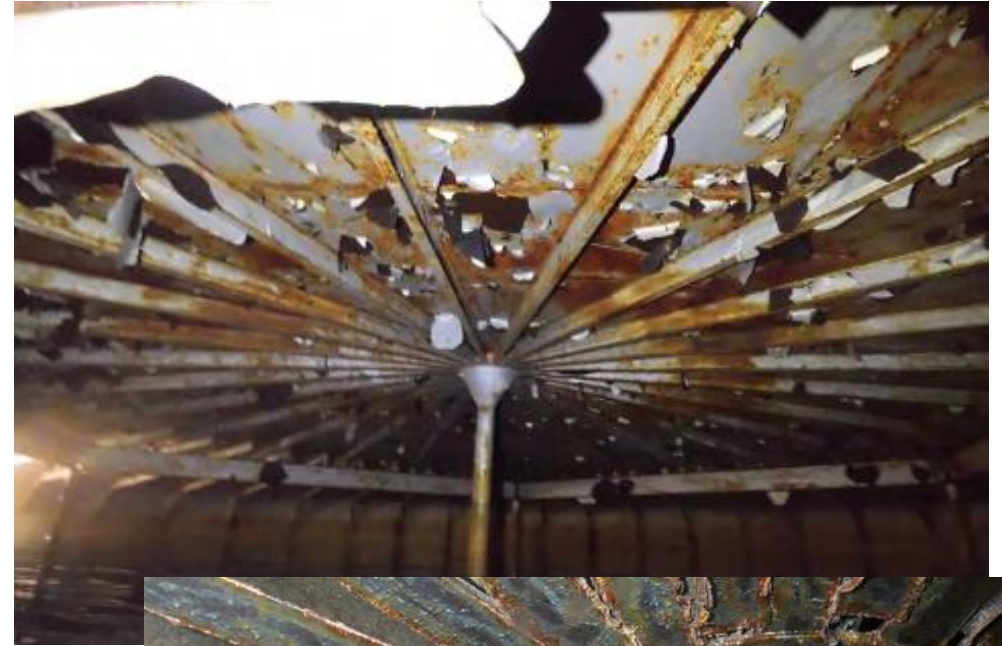
- ▶ San Andreas Tank – R&R coatings and structural repairs
- ▶ Railroad Flat Tank – R&R interior coating only and structural repairs
- ▶ Jeff Davis WTP Clearwell #1 – R&R coatings and structural repairs

Tank Rehabilitations for near-term:

- ▶ Mokelumne Hill Tank - R&R interior coating only and minor structural repairs
- ▶ Paloma Tank - R&R coatings and minor structural repairs

Tank Abandonment

- ▶ Golden Hills Tank



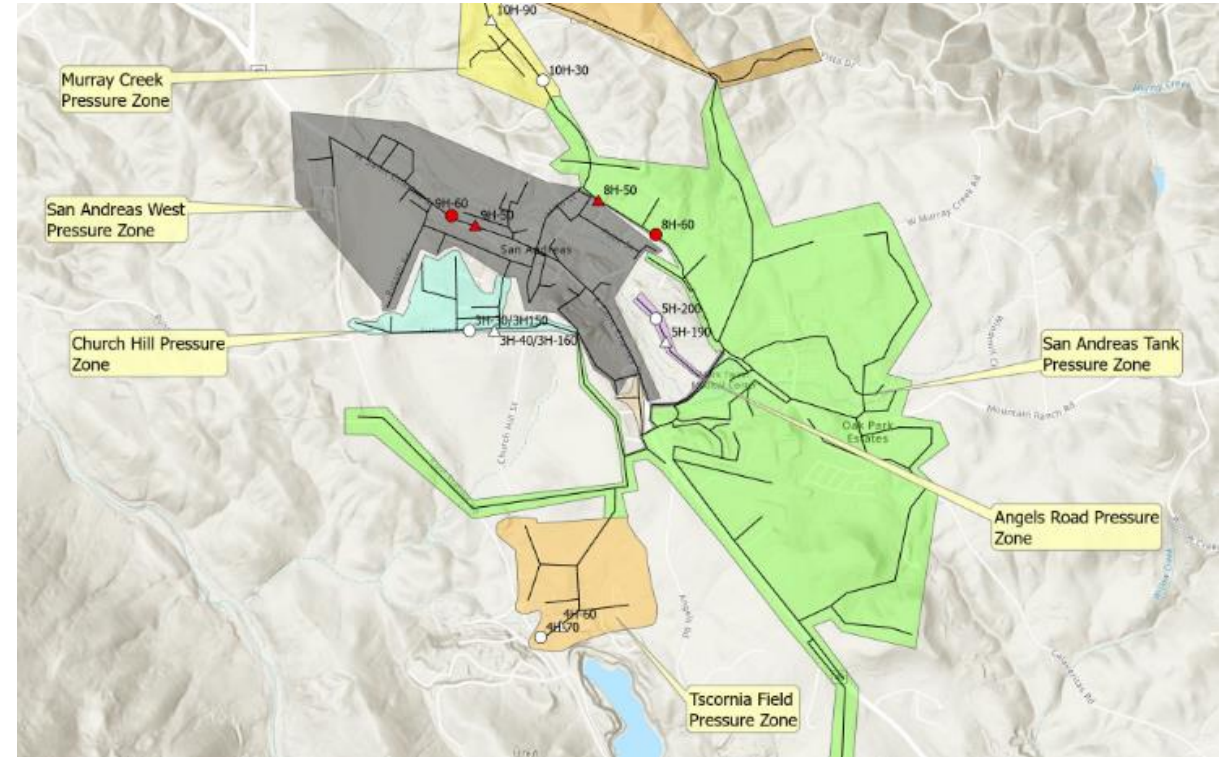
Distribution System Analysis

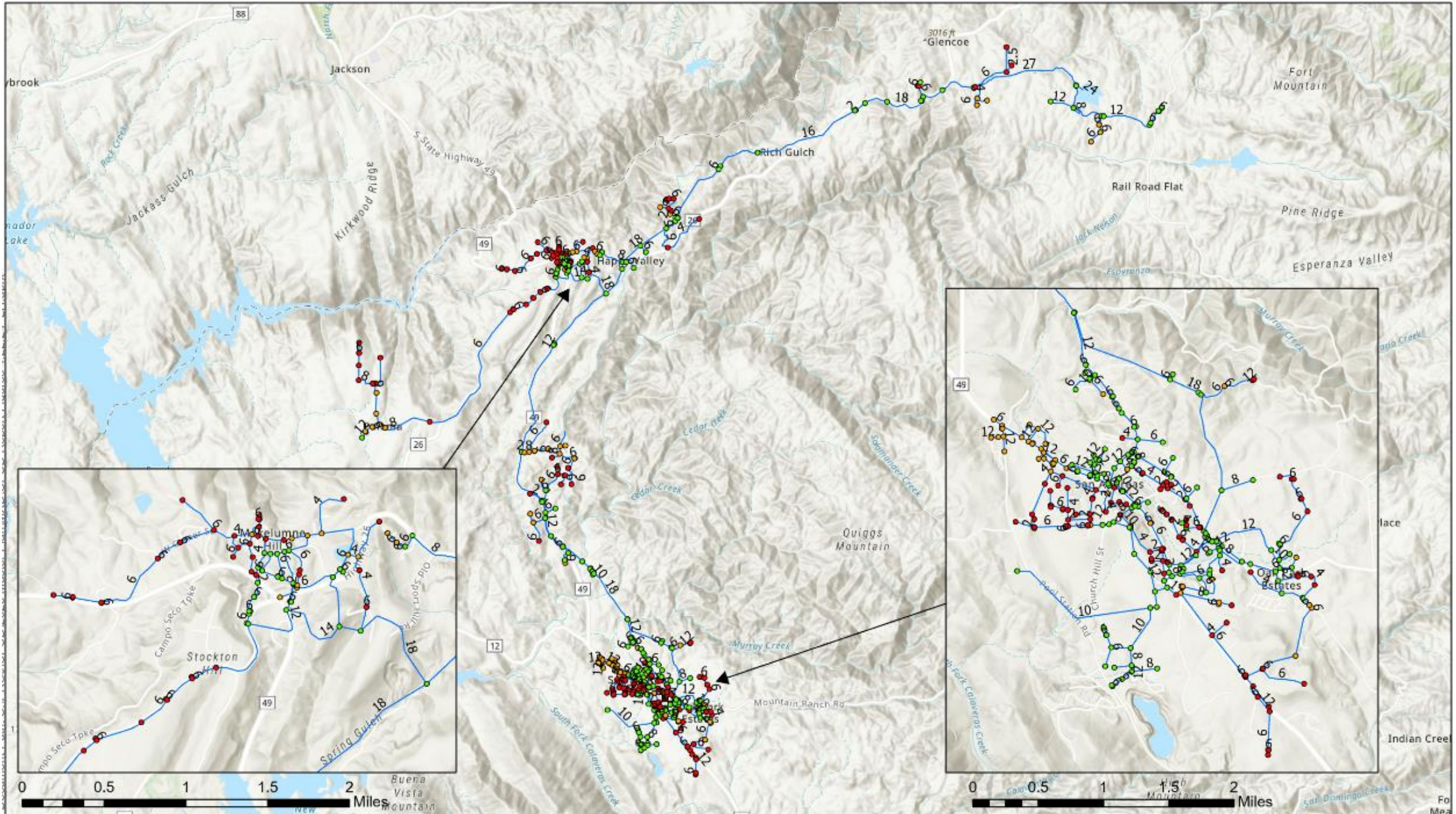
Hydraulic Model Updates

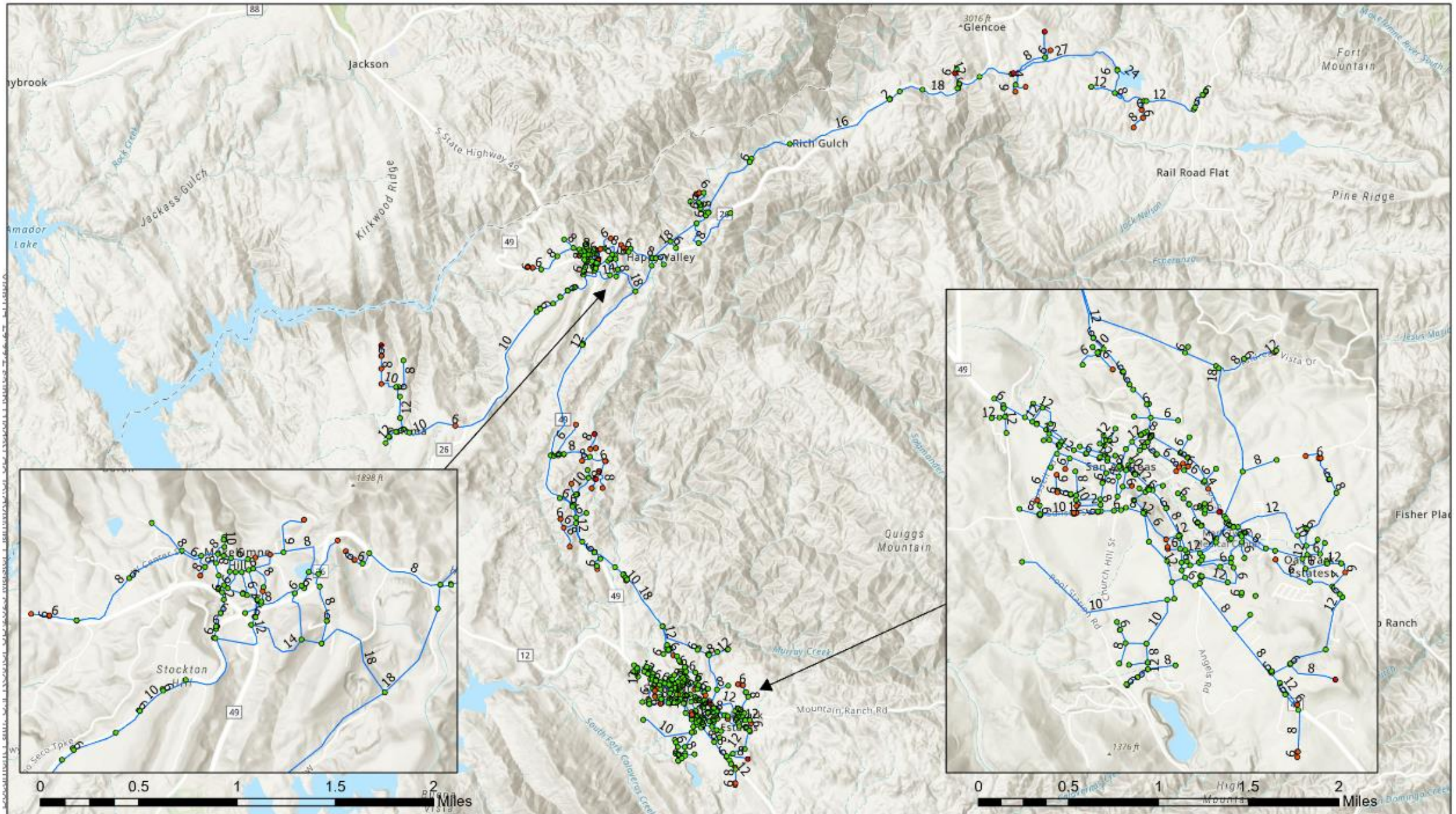
- ▶ PBI reviewed existing field fire flow data
- ▶ PBI developed supplemental fire flow testing plan in key areas
- ▶ PBI calibrated the model to be within 10% of field test information

System Evaluation

- ▶ Proposed improvements are governed by available Fire Flow



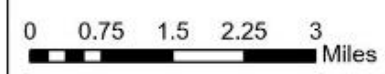


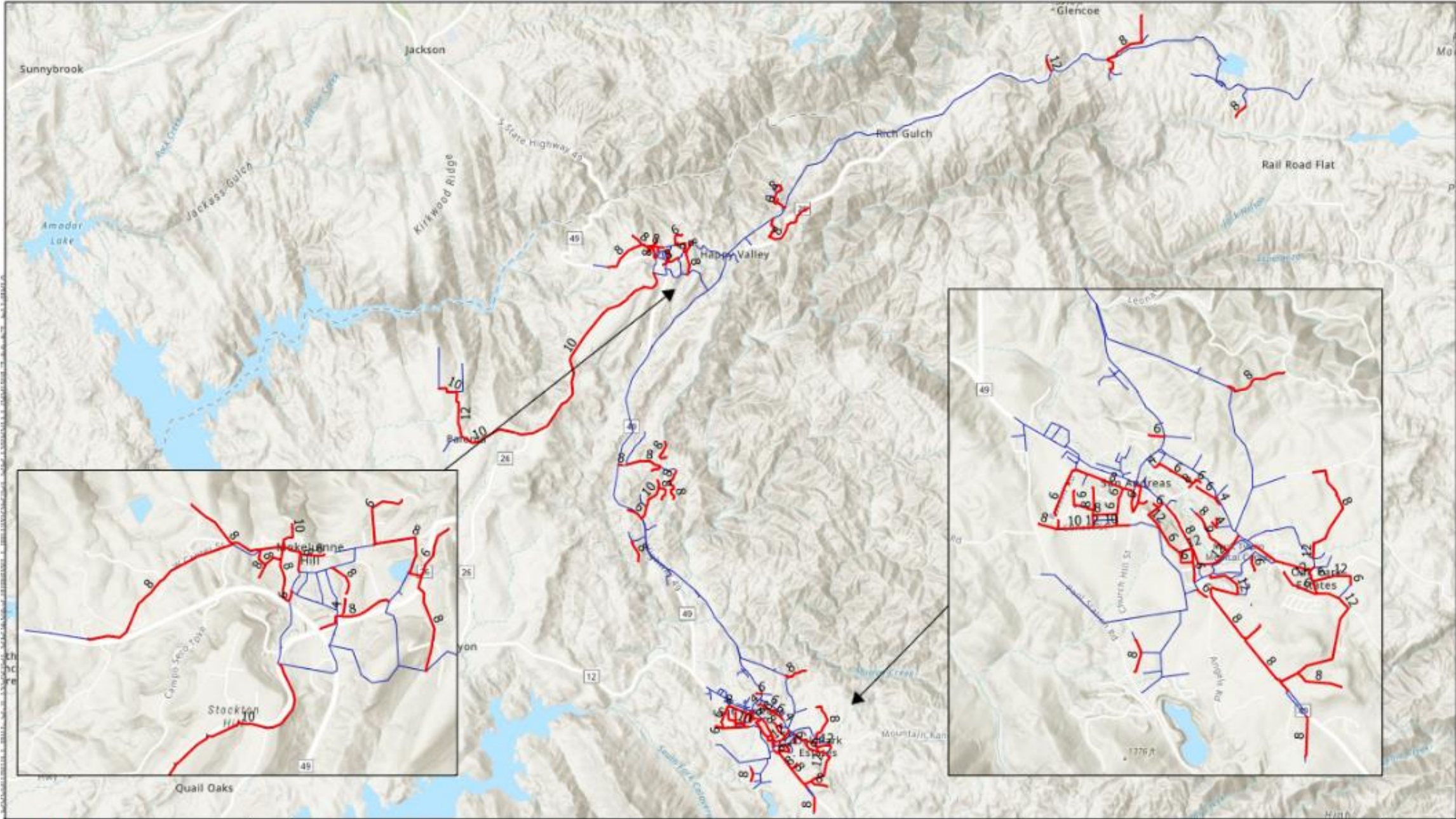


Legend

- Fire Flow > 1,500 gpm
- Fire Flow between 1,000 - 1,500 gpm
- Fire Flow < 1,000 gpm

— Pipe Network





Capital Improvement Plan Approach

Soft Costs

- ▶ 20% Estimating Contingency
- ▶ 7.5% Allowance for Engineering/Design Cost
- ▶ 7.5% Allowance for Construction Management
- ▶ 5% Allowance for Bonds/Insurance/Mobilization

Recommended Projects

- ▶ High Priority Projects to improve system reliability/safety
- ▶ Annual Infrastructure Projects

40% Soft Costs



- Contingency
- Engineering/Design
- Construction Management
- Bonds/Insurance/Mobilization



Capital Improvement Plan Approach

High Priority Projects

- ▶ South Fork Pump Station
 - Undercutting of the dam, repair broken river gate, repair hydro tank, repair valve in sump, electrical upgrades
- ▶ Glencoe Pumps Station
 - Address fire flows and add SCADA
- ▶ Hydro Stations
 - Structural/Electrical Upgrades at Ponderosa, MCV, and Garamendi
- ▶ Storage Tanks
 - Rehabilitation short term and near term
 - Abandonment

Annual Infrastructure Programs

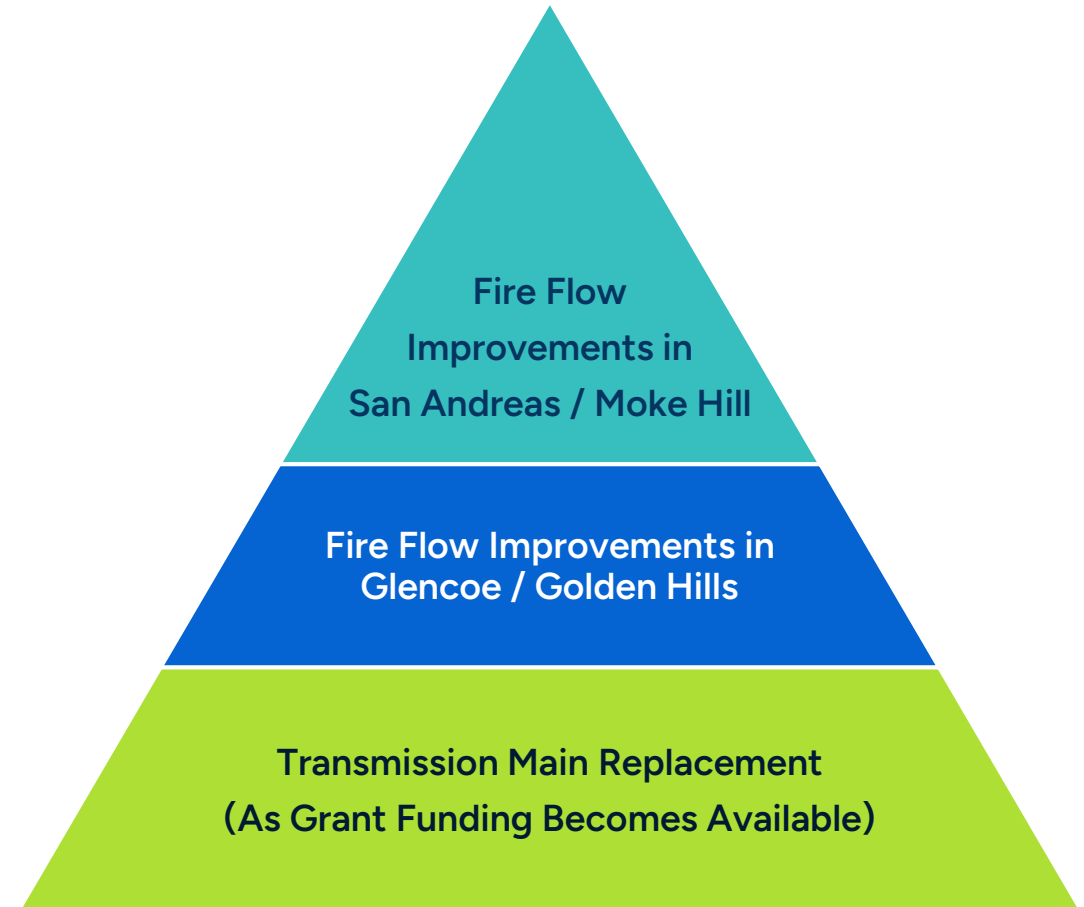
- ▶ Total of 18 miles of pipe in system
- ▶ Assumed 50% of existing piping is past useful life
- ▶ Anticipating all pipes will be at end of useful life within next 50 years
- ▶ Recommend replacement of 2% of the distribution system piping per year



Annual Infrastructure Program

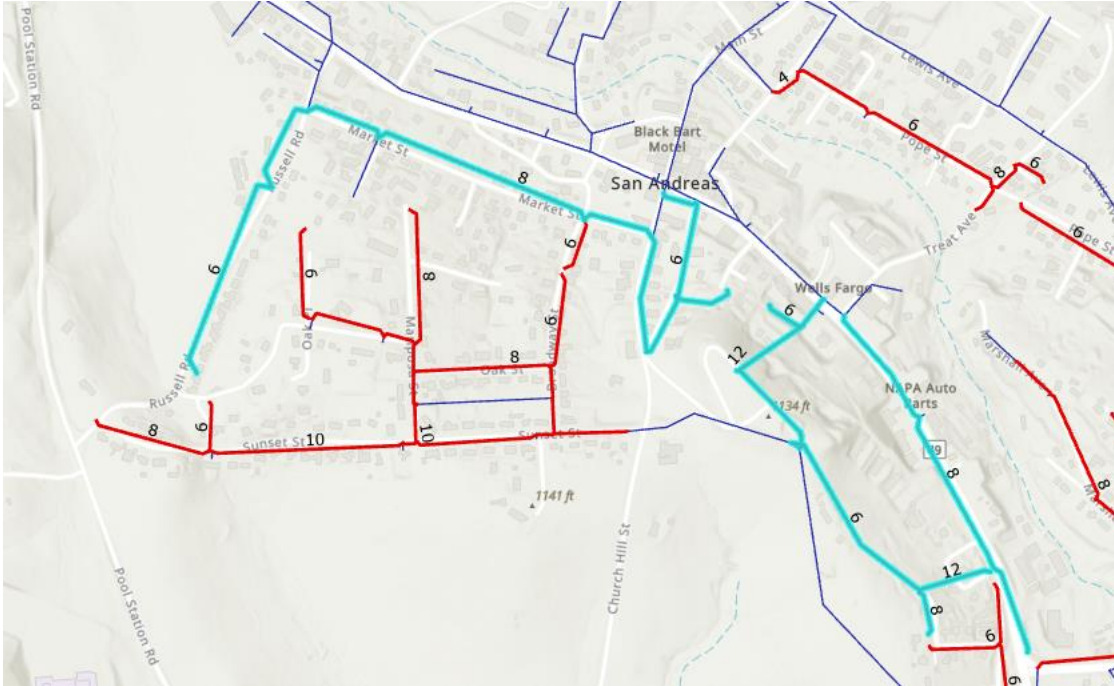
Pipeline Replacement

- ▶ Priority 1:
 - Replace distribution mains in San Andrea Pressure Zone for Fire Flow
 - Replace distribution mains in Mokelumne Hill Pressure Zone for Fire Flow
- ▶ Priority 2:
 - Glencoe Pressure Zone Fire Flow Improvements
 - Golden Hills Pressure Zone Fire Flow Improvements
- ▶ Priority 3: (As Grant Funding Becomes Available)
 - Redundant transmission main between Mokelumne Hill and Golden Hills
 - Redundant transmission main between Golden Hills and San Andreas
 - Transmission Main Replacement between Mokelumne Hill and Paloma



\$5.6 Million

Capital Improvement Plan – Year 1



High Priority Projects

- ▶ Glencoe Pump Station
 - SCADA and mechanical improvements
- ▶ San Andreas Tank Rehabilitation
 - Remove and Replace Coatings
 - Structural Repairs
 - Modify Overflow
 - SCADA Upgrades
 - Backup Power

Annual Infrastructure Program

- ▶ San Andreas West Fire Flow Improvements (Phase 1)



\$5 Million

Capital Improvement Plan – Year 2



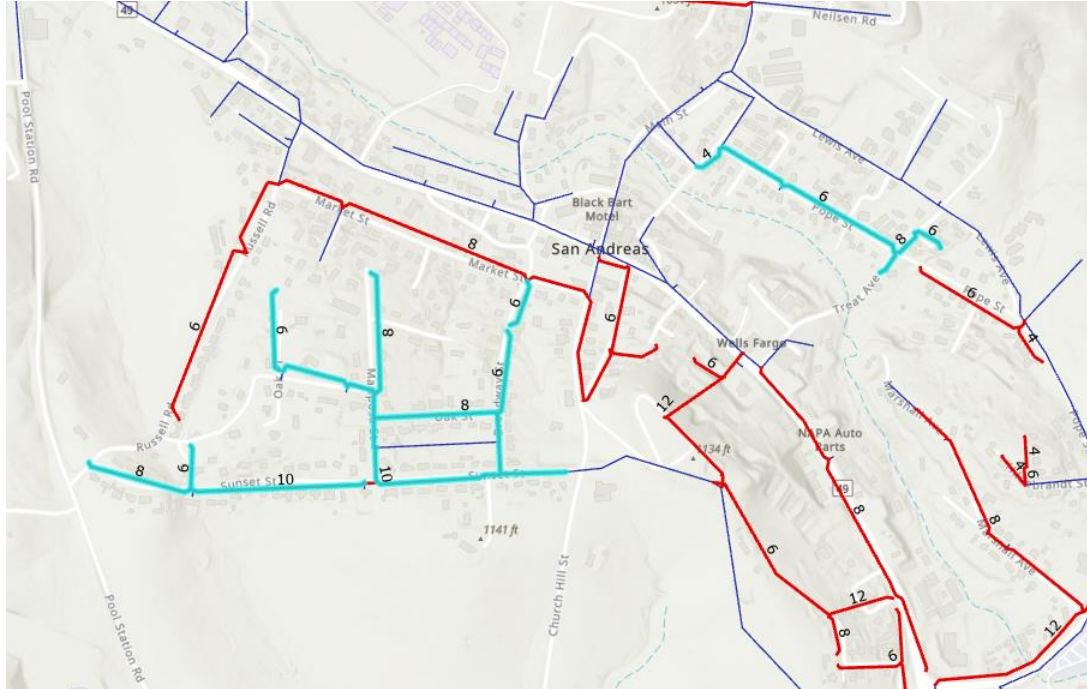
High Priority Projects

- ▶ South Fork Pump Station Rehabilitation
 - Repair undercutting of dam, repair broken river gate, address intake plugging, repair hydro tank, repair valve in sump
- ▶ Hydro Station Rehabilitations
 - Main Control Valve Hydro #2 - Isolation valves, building upgrades, and electrical upgrades
 - Garamendi Hydro #3 - Isolation valves, building upgrades, and electrical upgrades
- ▶ Railroad Flat Tank Rehabilitation
 - Remove and Replace Interior Coatings
 - Structural Repairs



\$5 Million

Capital Improvement Plan – Year 2 Continued



High Priority Projects

- ▶ Golden Hills Tank Abandonment
 - Replace undersized piping to transmission main
 - Demo existing tank

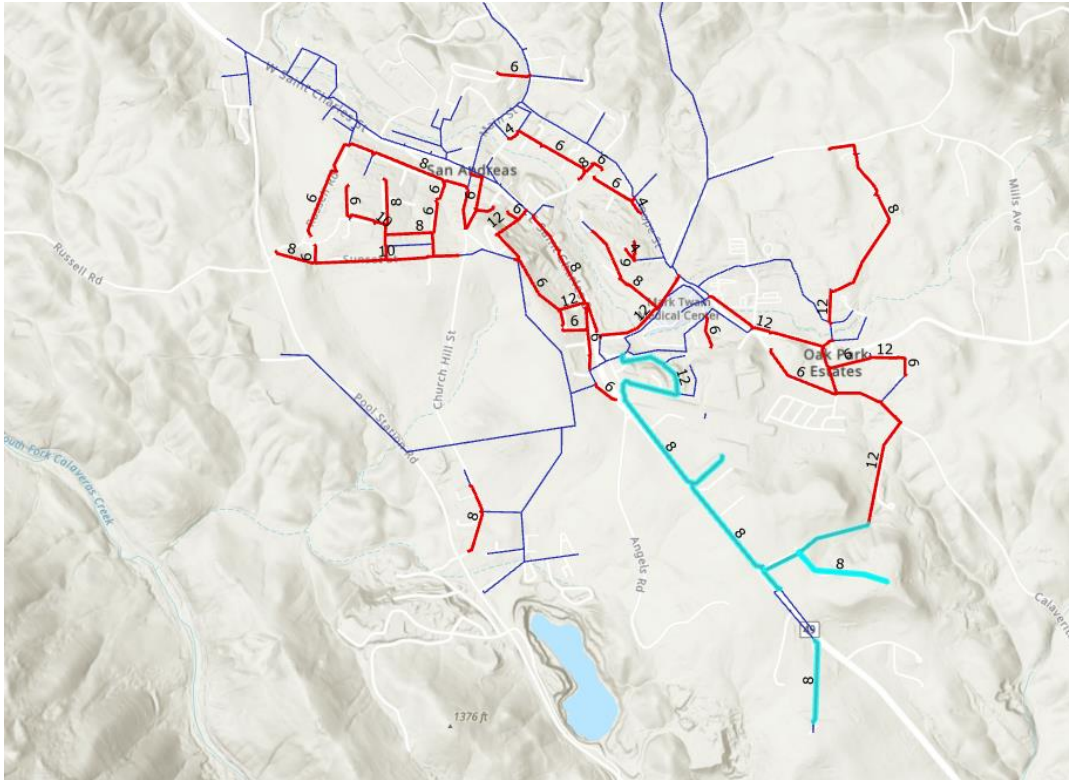
Annual Infrastructure Program

- ▶ San Andreas West Fire Flow Improvements (Phase 2)



\$5.7 Million

Capital Improvement Plan – Year 3



High Priority Projects

- ▶ Jeff Davis WTP
 - Replace piping in Building
 - Add Backwash Reclaim System
- ▶ Hydro Station Rehabilitations
 - Ponderosa Hydro #1 - Isolation valves, building upgrades, and electrical upgrades
- ▶ Paloma Tank Rehabilitation
 - Remove and replace coatings
 - Minor structural repairs
 - SCADA Upgrades

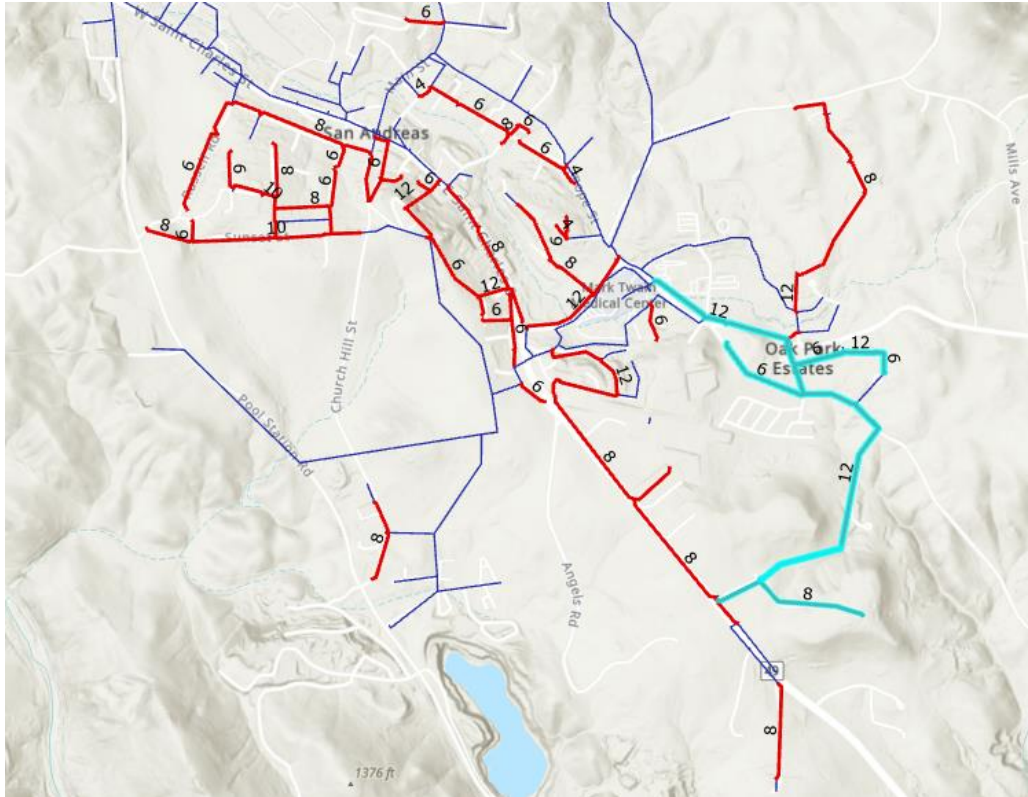
Annual Infrastructure Program

- ▶ San Andreas Fire Flow Improvements (Phase 1)



\$7.4 Million

Capital Improvement Plan – Year 4



High Priority Projects

- ▶ South Fork Pump Station
 - Replace 20” raw water pipeline (Phase 1)
- ▶ Mokelumne Hill Tank Rehabilitation
 - Remove and replace coatings
 - Upgrade ladder
 - Minor structural repairs
 - Back up power

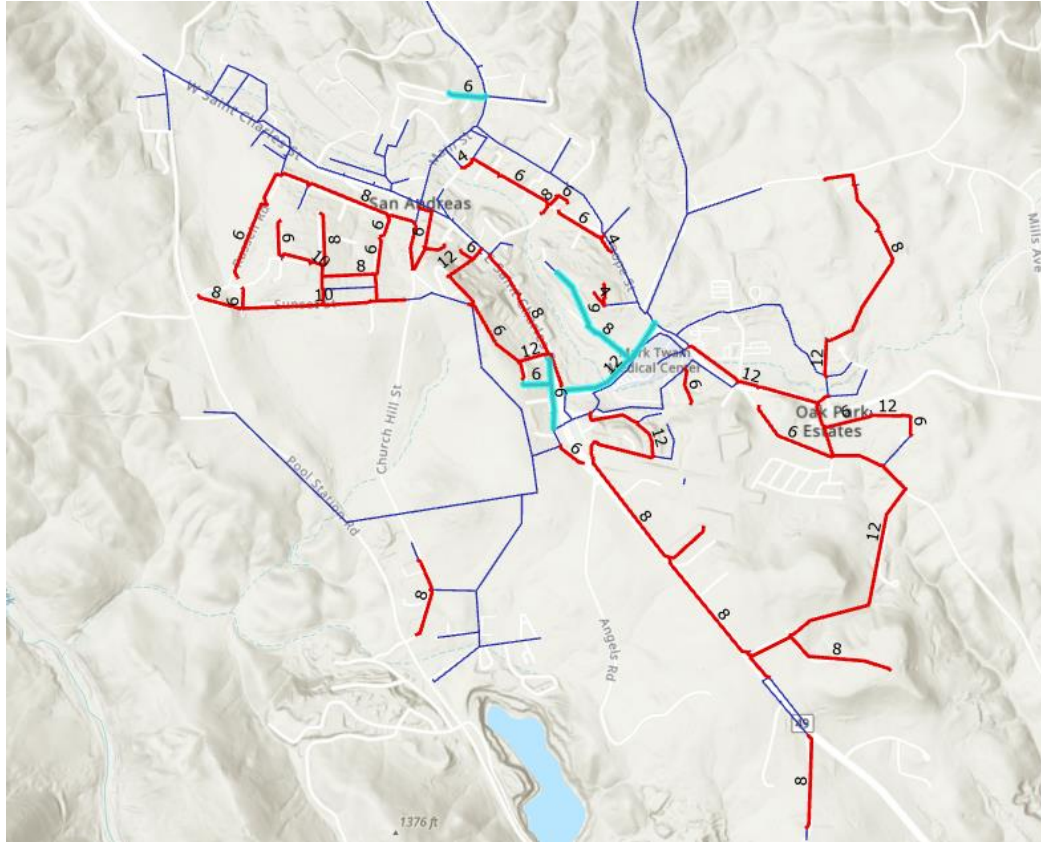
Annual Infrastructure Program

- ▶ San Andreas Fire Flow Improvements (Phase 2)



\$7.8 Million

Capital Improvement Plan – Year 5



High Priority Projects

- ▶ South Fork Pump Station
 - Replace 20” raw water pipeline (Phase 2)
- ▶ Jeff Davis WTP Clearwell #1 Rehabilitation
 - Remove and replace coatings
 - Structural repairs

Annual Infrastructure Program

- ▶ San Andreas Fire Flow Improvements (Phase 3)



Asset Management Plan – 20 Year Horizon

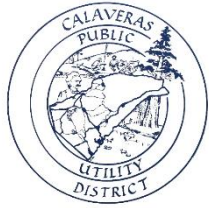
High Priority Projects

- ▶ Address ongoing projects - South Fork PS Raw Waterline Replacement

Annual Infrastructure Program

- ▶ Continue 2% Annual Pipeline Replacement
 - After priority areas are addressed, this can be scaled back to 1% annually



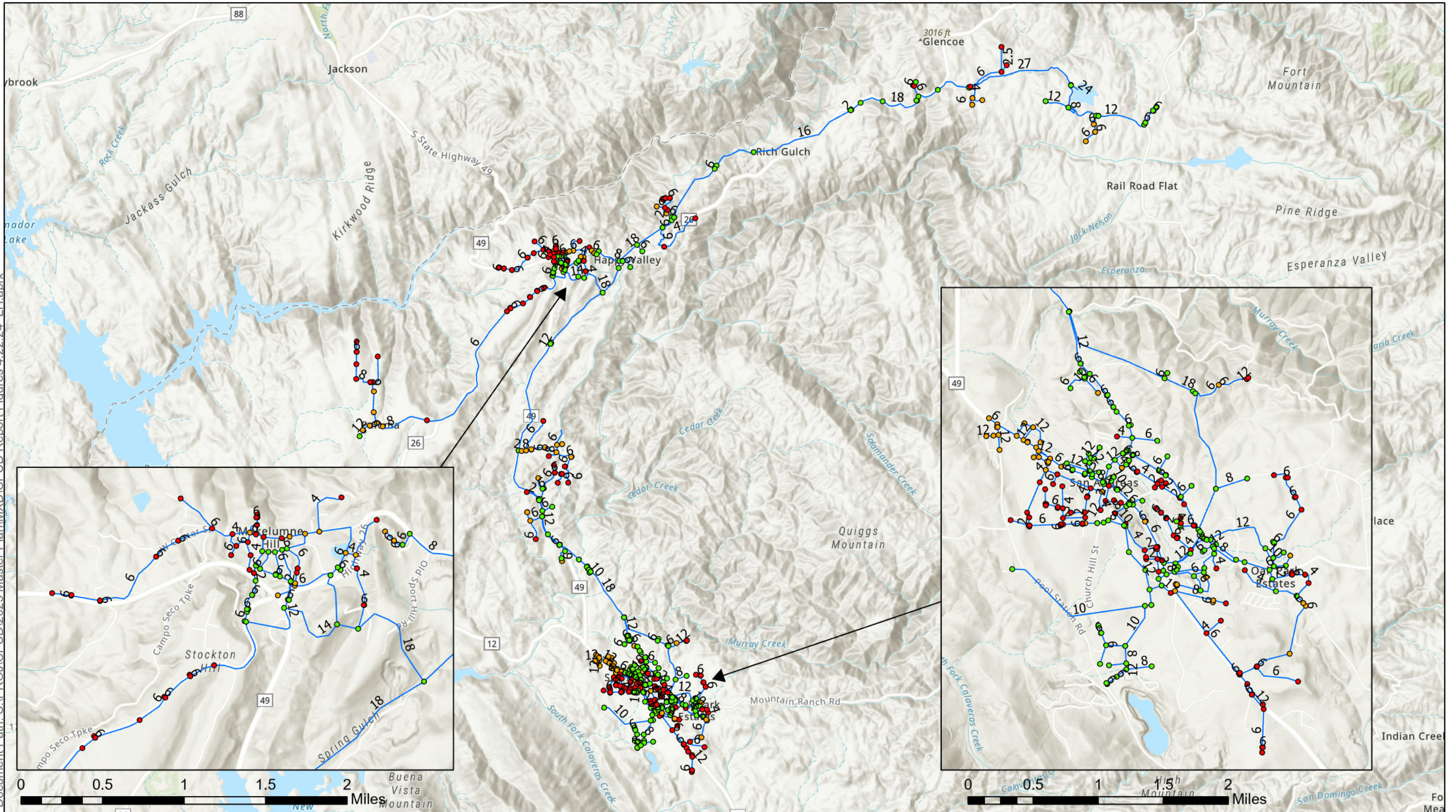


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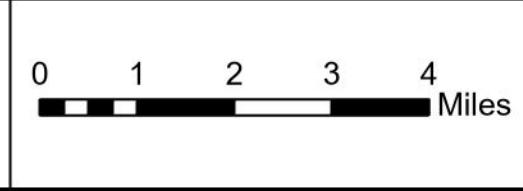
Questions?

Ashley Smith, PE

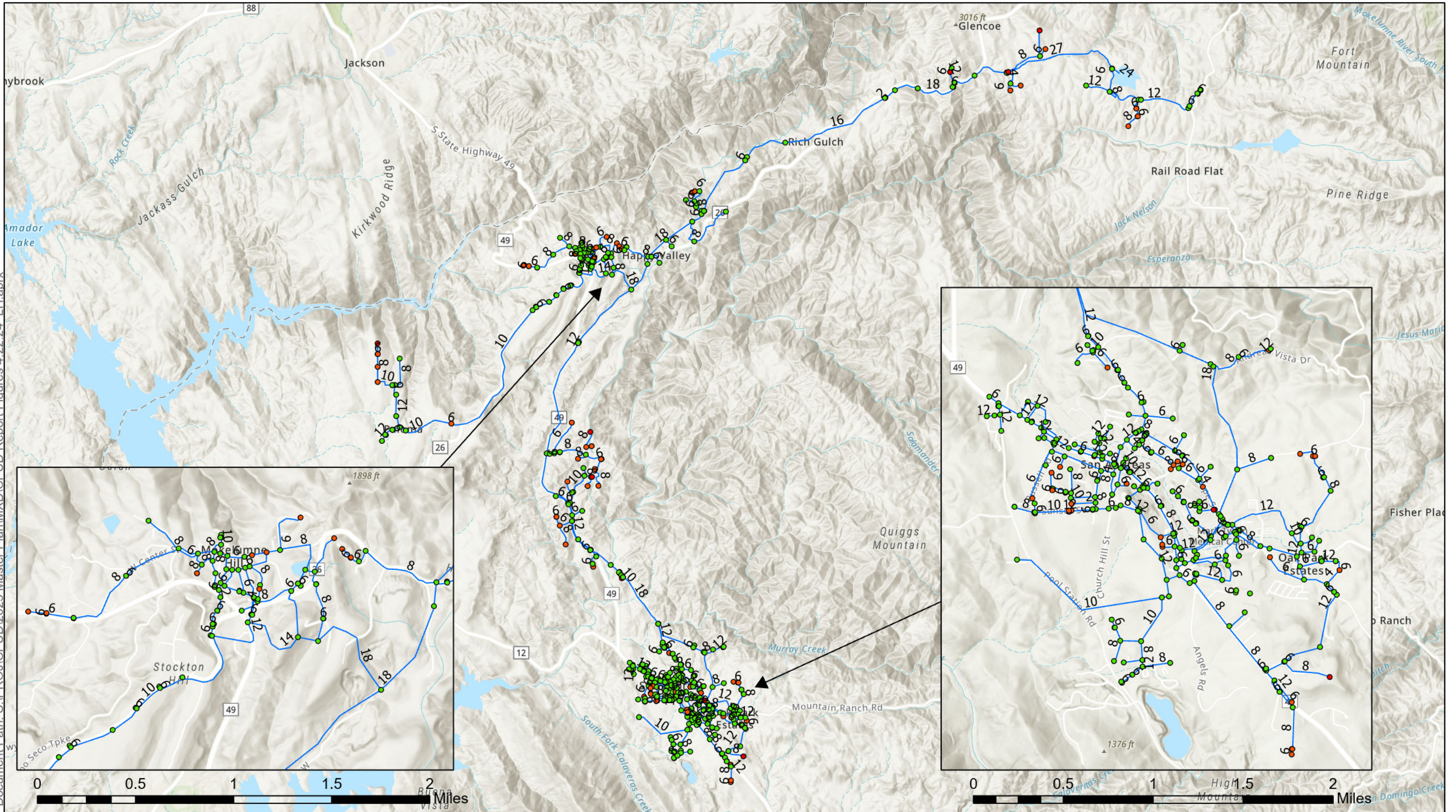
asmith@pbieng.com



Legend	
●	Fire Flow > 1,500 gpm
●	Fire Flow between 1,000 - 1,500 gpm
●	Fire Flow < 1,000 gpm
—	Pipe Network



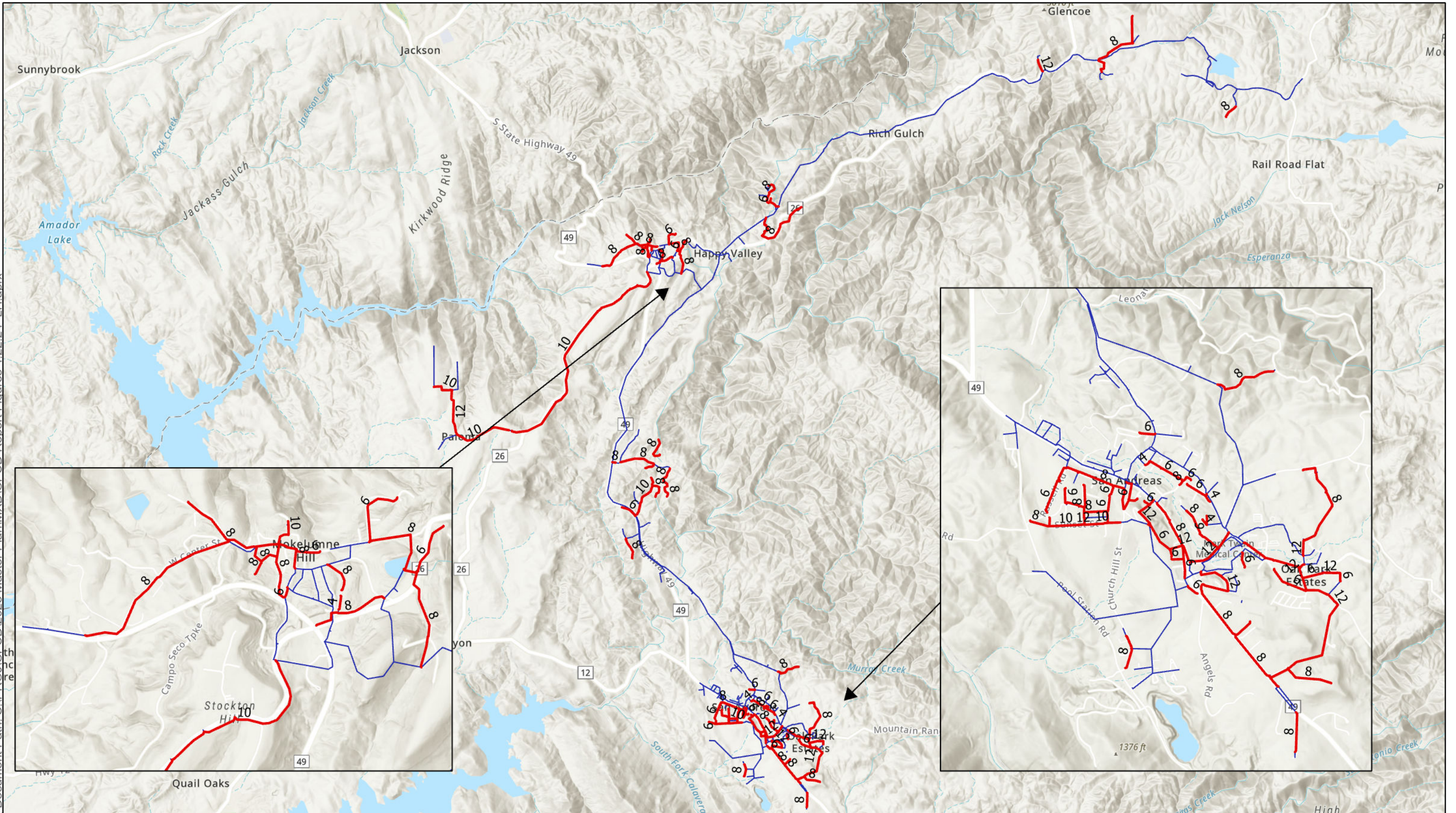
CALAVERAS PUBLIC UTILITY DISTRICT
Future Fire Flow with Existing Facilities



Legend	
●	Fire Flow > 1,500 gpm
●	Fire Flow between 1,000 - 1,500 gpm
●	Fire Flow < 1,000 gpm
—	Pipe Network



CALAVERAS PUBLIC UTILITY DISTRICT
 Future Fire Flow with Proposed Improvements



Legend
 — New Pipe Network

0 0.350.71.051.4
 Miles




Table 11-1. Capital Improvement Plan for 2025 - 2044 (\$000, 2024)

Improvement		TOTAL Estimated Construction Cost (\$000, 2023)	TOTAL Estimated Project Cost (\$000, 2023)	2025	2026	2027	2028	2029	2030-2034	2035-2039	2040-2044
South Fork Pump Station	Replace 20" pipeline to Jeff Davis Reservoir	\$5,760	\$8,064				\$2,661	\$2,661	\$2,742		
	Repair undercutting of the dam	\$200	\$280		\$280						
	Repair broken river gate	\$25	\$35		\$35						
	Address intake plugging	\$25	\$35		\$35						
	Repair hydropneumatic tank	\$10	\$14		\$14						
	Repair valve in sump	\$25	\$35		\$35						
	Electrical Upgrades	\$200	\$280						\$280		
Jeff Davis WTP	Recoat Clearwell #1 interior and exterior including structural repairs	\$375	\$525					\$525			
	Replace Piping in building	\$75	\$105			\$105					
	Add backwash reclaim system	\$1,000	\$1,400			\$1,400					
Pump Stations	Renovate Glencoe Pump Station to improve operability, address fire flows, and provide meters and SCADA for monitoring	\$380	\$532	\$532							
Hydro Stations	Provide isolation valves for station, upgrade electrical equipment at Ponderosa Hydro #1, and building repairs	\$200	\$280			\$280					
	Provide isolation valves for station at Main Control Valve Hydro #2 and building repairs	\$150	\$210		\$210						
	Provide isolation valves for station and upgrade electrical equipment at Garamendi Hydro #3 and building repairs	\$200	\$280		\$280						
Storage Tanks	Mokelumne Hill Tank – Recoat tank interior and exterior, upgrade ladder for OSHA, and provide backup power	\$375	\$525				\$525				
	Railroad Flat Tank - Structural repairs, recoat tank interior, spot repair tank exterior	\$375	\$525		\$525						
	Paloma Tank – Replace or upgrade tank and provide SCADA, recoat tank interior and exterior	\$180	\$252			\$252					
	Golden Hills Tank – System improvements to abandon tank/ tank demo	\$200	\$280		\$280						
	San Andreas Tank – Recoat tank interior and exterior, structural repairs, upgrade ladder for OSHA, modify overflow to provide airgap, provide meters and SCADA for monitoring and provide backup power	\$1,400	\$1,960	\$1,960							
Distribution System	2% Annual Pipeline Replacement	\$2,080	\$2,912	\$2,912	\$2,912	\$2,912	\$2,912	\$2,912	\$14,560	\$14,560	\$14,560
TOTAL CIP (\$000, 2024)				\$5,404	\$4,606	\$4,949	\$6,098	\$6,098	\$17,582	\$14,560	\$14,560
TOTAL CIP (\$000, escalated 5% per year)				\$5,674	\$5,078	\$5,729	\$7,412	\$7,783	\$26,038	\$27,520	\$34,756

PROPOSED CIP - YEAR 1

DESCRIPTION	EXISTING DIAMETER, INCHES	RECOMMENDED DIAMETER, INCHES	LENGTH, LINEAR FEET	UNIT COST	CONSTRUCTION COST (2024 \$)
SAN ANDREAS WEST PRESSURE ZONE (PHASE 1) - Total Length: 11,135 LF					
Parallel to E. Saint Charles St	4	6	1100	\$ 195.00	\$ 214,500.00
Mountain View Ave	4	8	250	\$ 216.00	\$ 54,000.00
Btwn Mountain View Ave and Family Cir	2	12	400	\$ 245.00	\$ 98,000.00
Catholic Cemetery Rd	10	12	500	\$ 245.00	\$ 122,500.00
Dead End Parallel to E. Saint Charles St	2	6	220	\$ 195.00	\$ 42,923.53
E Saint Charles St	6	8	2120	\$ 216.00	\$ 457,920.00
Perpendicular off Gatewood Ave	4	6	330	\$ 195.00	\$ 64,350.00
Across E Saint Charles St	8	12	620	\$ 245.00	\$ 151,900.00
Cemetery PRV	10	12	90	\$ 245.00	\$ 22,050.00
Market St	4	8	2100	\$ 216.00	\$ 453,600.00
Russell Rd	4	8	530	\$ 216.00	\$ 114,525.36
Russell Rd	4	6	1170	\$ 195.00	\$ 228,150.00
Gatewood Ave	12	8	360	\$ 216.00	\$ 77,760.00
Gatewood Ave	4	8	630	\$ 216.00	\$ 136,080.00
Off Gatewood Ave, parallel to E Saint Charles	4	6	190	\$ 195.00	\$ 37,072.31
Gatewood Ave	2	6	525	\$ 195.00	\$ 102,375.00

TOTAL \$ 2,377,706.20

PROPOSED CIP - YEAR 2

DESCRIPTION	EXISTING DIAMETER, INCHES	RECOMMENDED DIAMETER, INCHES	LENGTH, LINEAR FEET		UNIT COST	CONSTRUCTION COST (2024 \$)
SAN ANDREAS WEST PRESSURE ZONE (PHASE 2) - Total Length: 9,600 LF						
N. California St.	2	4	200		2 \$ 195.00	\$ 39,000.00
Pope St. Btwn N. California and Roberts Ave	4	6	500		2 \$ 195.00	\$ 97,500.00
Roberts Ave south of Pope St	2	6	200		2 \$ 195.00	\$ 39,000.00
Roberts Ave Btwn Berry St and Treat Ave	2	8	200		2 \$ 216.00	\$ 43,200.00
Berry St	2	6	200		2 \$ 195.00	\$ 39,000.00
Broadway St South of Market	4	6	400		2 \$ 195.00	\$ 78,000.00
Broadway St South of Market	2	6	600		2 \$ 195.00	\$ 117,000.00
Sunset Avenue	6	10	700		2 \$ 245.00	\$ 171,500.00
Sunset Avenue	6	10	1100		2 \$ 245.00	\$ 269,500.00
Oak Lane	2	6	300		2 \$ 195.00	\$ 58,500.00
Sunset Avenue	6	8	700		2 \$ 216.00	\$ 151,200.00
Oak Place	4	6	600		2 \$ 195.00	\$ 117,000.00
Mariposa St	4	8	800		2 \$ 216.00	\$ 172,800.00
Oak Street	6	10	500		2 \$ 245.00	\$ 122,500.00
Oak Street	6	10	200		2 \$ 245.00	\$ 49,000.00
Mariposa St	4	10	200		2 \$ 245.00	\$ 49,000.00
Mariposa St	4	10	300		2 \$ 245.00	\$ 73,500.00
Broadway St South of Market	2	8	200		2 \$ 216.00	\$ 43,200.00
Sunset Avenue	6	10	100		2 \$ 245.00	\$ 24,500.00
Broadway St South of Market	2	8	200		2 \$ 216.00	\$ 43,200.00
Sunset Avenue	6	10	400		2 \$ 245.00	\$ 98,000.00
Mariposa St	6	10	200		2 \$ 245.00	\$ 49,000.00
Oak Street	N/A	8	800		2 \$ 216.00	\$ 172,800.00
Total \$						2,117,900.00

PROPOSED CIP - YEAR 3

DESCRIPTION	EXISTING DIAMETER, INCHES	RECOMMENDED DIAMETER, INCHES	LENGTH, LINEAR FEET	UNIT COST	CONSTRUCTION COST (2024 \$)
SAN ANDREAS PRESSURE ZONE (PHASE 1) - Total Length: 10,610					
Highway 49 South of Buckskin Way	6	8	450	\$ 216.00	\$ 97,200.00
Off Toyanza Dr.	6	8	250	\$ 216.00	\$ 54,000.00
Highway 49	6	8	3500	\$ 216.00	\$ 756,000.00
Perpendicular to Highway 49	4	8	700	\$ 216.00	\$ 151,200.00
Saddleback Dr.	6	8	1550	\$ 216.00	\$ 334,800.00
Magers Rd	6	8	1300	\$ 216.00	\$ 280,800.00
Toyon Dr.	6	12	1350	\$ 245.00	\$ 330,750.00
Toyanza Dr.	6	12	860	\$ 245.00	\$ 210,700.00
Buckskin Way	6	12	650	\$ 245.00	\$ 159,250.00
TOTAL \$					2,374,700.00

PROPOSED CIP - YEAR 4

DESCRIPTION	EXISTING DIAMETER, INCHES	RECOMMENDED DIAMETER, INCHES	LENGTH, LINEAR FEET	UNIT COST	CONSTRUCTION COST (2024 \$)
SAN ANDREAS PRESSURE ZONE (PHASE 2) - Total Length: 10,170					
W. Oak Park Dr	4	6	700	\$ 195.00	\$ 136,500.00
Oak Park Dr	4	12	450	\$ 245.00	\$ 110,250.00
Angels Rd	1	6	400	\$ 195.00	\$ 77,916.15
Calaveritas Rd	4	6	1350	\$ 195.00	\$ 263,250.00
Oak Park Dr	4	6	400	\$ 195.00	\$ 78,000.00
Off Edgewood Dr.	6	12	1200	\$ 245.00	\$ 294,000.00
Mountain Ranch Road	6	12	2010	\$ 245.00	\$ 492,383.85
Btwn Mountain Ranch Rd and W Oak Park Dr	6	12	330	\$ 245.00	\$ 80,935.75
Btwn Calaveritas Rd and W Oak Park Dr	6	12	430	\$ 245.00	\$ 105,350.00
Calaveritas Rd	6	12	1200	\$ 245.00	\$ 294,000.00
Edgewood Dr.	6	12	1700	\$ 245.00	\$ 416,500.00
TOTAL \$					2,349,085.75

PROPOSED CIP - YEAR 5

DESCRIPTION	EXISTING DIAMETER, INCHES	RECOMMENDED DIAMETER, INCHES	LENGTH, LINEAR FEET	UNIT COST	CONSTRUCTION COST (2024 \$)
SAN ANDREAS PRESSURE ZONE (PHASE 3) - Total Length: 5,770					
Cemetery Ln	4	6	550	\$ 195.00	\$ 107,250.00
Pope St	4	12	70	\$ 245.00	\$ 17,150.00
Highway 49	6	8	70	\$ 216.00	\$ 15,120.00
Perpendicular off Saddleback Dr.	6	12	30	\$ 245.00	\$ 7,350.00
Off Hindebrant St	2	6	350	\$ 195.00	\$ 68,250.00
Mountain Ranch Road	4	12	1100	\$ 245.00	\$ 269,500.00
Marshall Avenue	6	8	700	\$ 216.00	\$ 151,200.00
Marshall Avenue	6	8	700	\$ 216.00	\$ 151,200.00
Marshall Avenue	6	8	100	\$ 216.00	\$ 21,600.00
Marshall Avenue	6	8	300	\$ 216.00	\$ 64,800.00
Angels Rd	2	6	300	\$ 195.00	\$ 58,500.00
Angels Rd	2	6	500	\$ 195.00	\$ 97,500.00
Angels Rd	2	6	400	\$ 195.00	\$ 78,000.00
Angels Rd	1.5	6	400	\$ 195.00	\$ 78,000.00
Marshall Avenue	6	8	200	\$ 195.00	\$ 39,000.00
TOTAL \$					1,224,420.00