



WATER SYSTEM IMPROVEMENT PROJECTS Project Engineering Aspects





Supply Line Replacement

- Project Benefits
 - Replaces worn out infrastructure
 - -Allows more efficient use of Tank 4
 - Provides more efficient use of spring supply
 - -Places pipeline in an accessible alignment
 - -Eliminates leaks in old supply pipeline





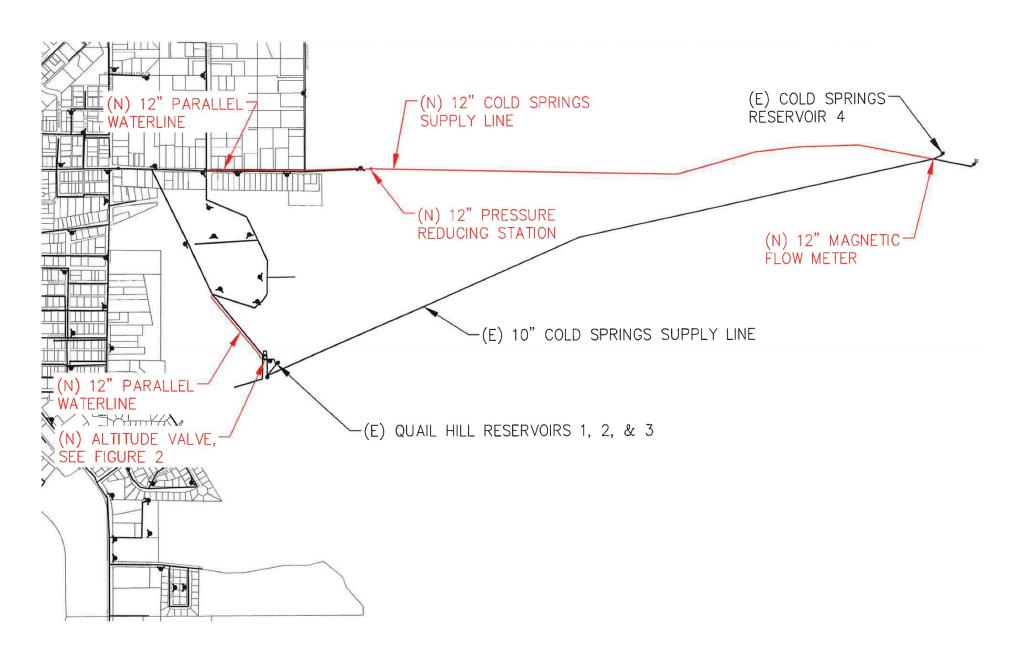


Supply Line Replacement

- PROJECT ELEMENTS
 - —9,300 feet of 12" water main replaces existing 80-year old pipeline
 - -8,400 feet in McCloud Ave
 - —900 feet between Quail Hill Drive and Quail Hill Tanks
 - -PRV Station and Altitude Valve
 - -Overall Project Cost: \$1.73M









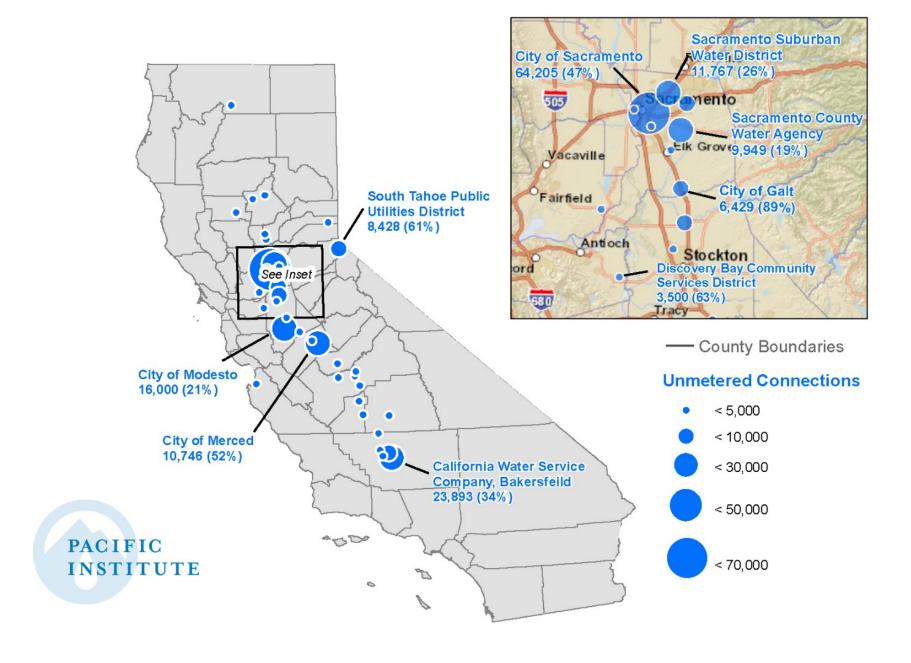


- California law requires users be charged based on consumption by 2025
- Allows City to better manage its water supply
- Provide for more equitable distribution of charges
- Data shows the presence of water meters leads to 20% to 30% reduction in consumption
- It's the responsible thing to do





Unmetered Communities in California



Unmetered Communities in California

Agency	Number of Connections	Number of Unmetered Connections	Percentage Unmetered	Source
Atwater, City of	8,000	3,500	44%	[1]
Bakman Water Company	2,234	1,775	79%	[1]
California Water Service Company, Bakersfield	69,980	23,893	34%	[2]
California Water Service Company, Chico	28,500	250	1%	[2]
California Water Service Company, Marysville	3,612	1,045	29%	[1]
California Water Service Company, Selma	6,229	2,139	34%	[1]
California Water Service Company, Willows	2,550	45	2%	[2]
Clovis, City of	31,000	500	2%	[2]
Corcoran, City of	3,277	1,656	51%	[2]
Del Oro Water Company	7,968	514	6%	[1]
Delano, City of	9,097	3,343	37%	[2]
Discovery Bay Community Services District	5,600	3,500	63%	[2]
Elk Grove Water District	12,256	305	2%	[3]
Fruitridge Vista Water Company	4,709	3,976	84%	[1]
Galt, City of	7,187	6,429	89%	[1]
Golden State Water Company Arden Cordova	16,252	2,569	16%	[3]
Hanford, City of	15,923	2,462	15%	[1]
Kerman, City of	3,318	1,277	38%	[2]
Lodi, City of Public Works Department	18,675	5,425	29%	[2]
Madera, City of	15,133	2,980	20%	[1]
Marina Coast Water District	7,816	1,090	14%	[2]
Merced, City of	20,733	10,746	52%	[2]
Modesto, City of	77,000	16,000	21%	[2]
Mount Shasta, City of	1,700	1,700	100%	[2]
Oildale Mutual Water Company	8,120	6,060	75%	[1]
Olivehurst Public Utilities District	6,483	1,209	19%	[1]
Porterville, City of	14,820	480	3%	[2]
Rio Vista, city of	4,046	3,720	92%	[1]
Ripon, City of	4,774	2,316	49%	[2]
Sacramento County Water Agency	51,381	9,949	19%	[3]
Sacramento Suburban Water District	45,853	11,767	26%	[3]
Sacramento, City of	135,580	64,205	47%	[3]
San Joaquin County	5,971	3,718	62%	[2]
Shafter, City of	4,303	3,833	89%	[1]
South Tahoe Public Utilities District	13,930	8,428	61%	[2]
Truckee-Donner Public Utilities District	12,549	912	7%	[2]
Turlock, City of	18,908	705	4%	[2]
Vaughn Water Company	9,590	667	7%	[1]
West Sacramento, City of	14,670	4,345	30%	[3]
TOTAL	729,727	219,433	30%	





- PROJECT ELEMENTS
 - -1,696 meters total
 - 1,649 ¾" & 1" meters
 - 47 1-1/2" to 6" meters
 - 182 Existing meters in system
 - Overall Project Cost: \$2.56M







METER SPECIFICS

- Sunsus iPerl/FlexNet system selected due to minimal RF impact
- —20-year meter warranty (last 10 years prorated)
- Meters are magnetic so no moving parts
- Very accurate throughout flow range, including low flows







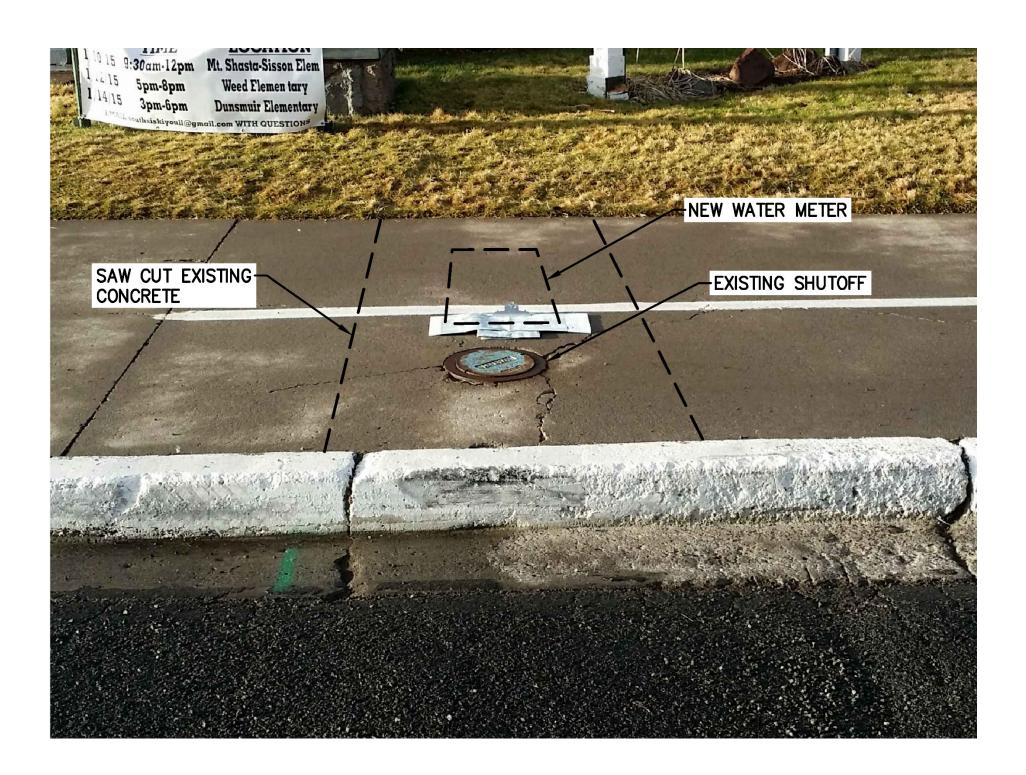
PROJECT IMPLEMENTATION

- Meters to be installed at existing meter locations or near existing shut-off valves
- Some will be installed in concrete sidewalks and driveways
- Some will be installed in grass or landscaped areas
- Will require up to 4-hour interruption in water service
- Affected residents will be notified 48-hours in advance per City requirements











Project Schedule

- Both projects currently out to bid
- Bid opening for both projects is March 18
- City to award at March 23 council meeting or special meeting on March 30
- Grant requires formal award by April 1
- Expect work will begin around May 1







Project Schedule

- Both projects will be constructed concurrently
- May have two different contractors
- Grant requires work to be completed by November 2015











