

Calaveras Public Utility District

Highlighted District Expenditures

Capital Projects, Dams, Pumping Facilities
and Debt Service Ratio
Town Hall Meeting

March 8, 2023



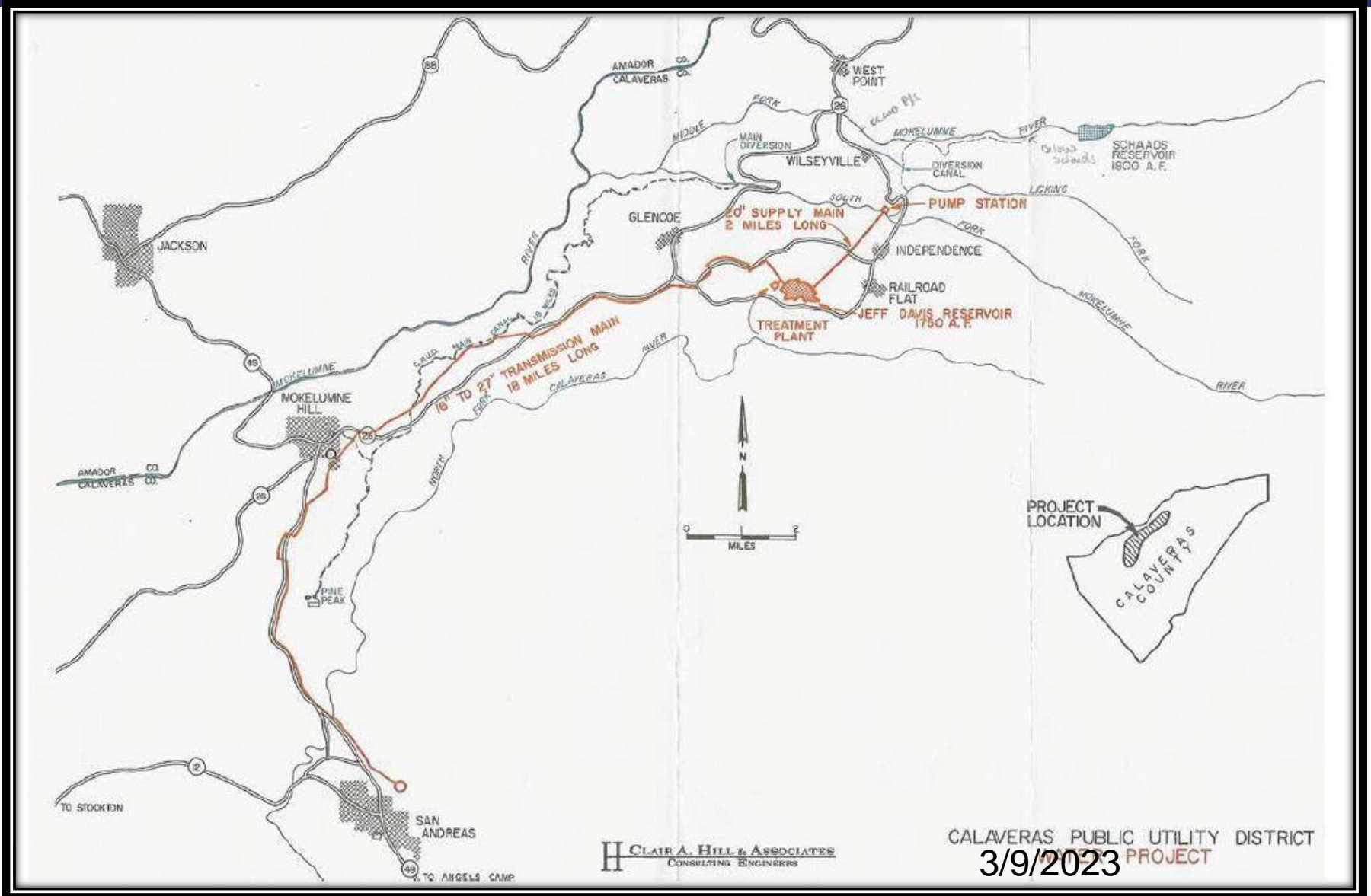
Who is CPUD?

- The District was formed in 1934 for the purpose of serving water to the communities of Mokelumne Hill and San Andreas
- Governed by a five member Board
- 13 employees (8 field and 5 office Staff members)
- Over 18 miles of transmission and 66 miles of distribution pipeline ranging from 27” down to 1” or less in our distribution system (84.76 miles total)
 - Service lines add another 20+ miles
- 1 Water Treatment Plant located at Jeff Davis Reservoir
- 6 water storage tanks (total storage available 5.16 MG)
- 3 hydro generating pressure reducing stations
- Just under 2000 water meter services
- Redhawk Dam (McCarty Reservoir)
- Middle Fork Dam Hydroelectric Project (FERC Proj. 7506)

CPUD Facilities

- The District currently provides water to a service population of approximately 6,500 in the communities of San Andreas, Mokelumne Hill, Paloma, and areas of Glencoe and Rail-Road Flat.
- District facilities include:
 - Jeff Davis Reservoir (2300 ac. ft) and Water Treatment Plant
 - Schaads Reservoir (1800 ac. ft) Middle Fork Dam
 - McCarty Reservoir (a tributary of the Calaveras River)
- Jeff Davis Reservoir is the water source for serving our customers.
- Water is pumped from the Mokelumne River South Fork Pump Station into a 20" pipeline 2 miles into Jeff Davis Reservoir.
- Schaads Reservoir, located near the town of West Point, serves as the pre-1914 water rights storage for the District. Presently used for hydro generation and supplement supply to CCWD's West Point/Wilseyville system.
- McCarty Reservoir is presently used as a storage facility and occasionally used for irrigation.

1971 CPUD Water Project



Calaveras PUD

District Challenges:

- District is spread over large geographical area with only 2,000 service connections.
 - More infrastructure per service connection than a typical water utility
- Most of District Infrastructure built pre-1971 (50+ years old)
- We are locked into a routine of reactive maintenance versus doing routine preventative maintenance.
 - Lack of Preventative Maintenance leads to inefficiency such as higher water loss, downtime of revenue generating equipment such as electric hydro-generators and water meters that have slowed with age.
 - Reactive Maintenance includes but not limited to:
 - Service line leaks, main leaks, hydro station electrical components wearing out, fixing road washouts.
 - Preventative Maintenance includes but not limited to:
 - Main replacement, Service Line Replacement, Water Meter Replacement, Pressure Reducing valve maintenance and replacement of diaphragms on a routine schedule.
 - Preventative Maintenance usually is a program. (Main Replacement Program, Meter Replacement Program, etc...)

Debt Service Ratio

Debt Service Ratio: (\$2 Million Loan)

- What is it?
 - When an agency issues debt, the agency has an obligation to maintain a Debt Service Ratio greater than what is in the loan documents. (Contractual Obligation)
 - Current Debt Service Ratio is 1.20
- How is Debt Service Ratio calculated?
 - Total Revenue is subtracted by Total Operational Expenses
 $\$2.632m - \$2.587m = \text{Net Income of } \$45,000 \text{ (FY 21-22)}$
 - Net Revenue is then divided by yearly Debt Payment
 $\$45,000 / (\text{Yearly Debt Payment of } \$132,964) = 0.34 \text{ Debt Service Ratio}$

**Not maintaining an adequate Debt Reserve Ratio can cause loan default and limit the ability for the District to obtain funding for future projects.*

District Capital Expenditures

Recent Capital Projects.

- Sunset Water Main Replacement (San Andreas) (Complete)
- Court Street Water Main Installation (San Andreas) (Complete)
- New SCADA Installation and Integration (Jeff Davis WTP) (Complete)
- Clearwell Tank Project (Pending)
 - New 500,000 Gallon Baffled Tank (For Disinfection Credits)
 - New 24" Ductile Water main from Filter Effluent to Clearwell and from Clearwell to Effluent Distribution Water Meter
 - New Filter Effluent Water Meter and Distribution Water Meter
 - New Plant Effluent Control Valve
 - New Electrical MCC (Electric components at JD WTP all up to date)
 - New PLC at Railroad Flat Pump Station.
- Main Office Improvements (Almost Complete)
 - Remodeled Board/Training Room
 - Enclosed in the Superintendent's Office
 - Replaced District Furniture and Carpet
- Business Server Replacement (Complete)
- New Billing Software to Replace old billing software that was outdated and will soon be versioned out. (non-support) (Complete)
- Water Meter Reading Software (Pending)
 - Software that will scale up from direct read to radio read at a future date.

District Capital Expenditures

Calaveras Public Utility District
Capital Outlay Fiscal Year 2021/2022

	Actual Expenditure	Budgeted
<u>Water Treatment Improvements</u> Clearwell Project		
Environmental	\$ -	\$ 26,536.12
Design (Eng., Geotech, Survey, SCADA/ELEC)	\$ 55,108.50	\$ 243,184.54
Phase 1 - Construction	\$ 365,553.35	\$ 381,853.00
Phase 1 - Construction Management	\$ 97,690.67	\$ 83,066.52
Phase 2 - Construction	\$ 650,733.77	\$ 2,018,680.00
Phase 2 - SCADA Integration (TSI Inc)	\$ -	\$ 125,100.00
Phase 2 - Construction Management	\$ 75,366.22	\$ 502,025.00
Phase 2 - 5% Unforeseen Contingency	\$ 9,456.75	\$ 132,290.25
Total Water Treatment Plant Improvements	\$ 1,253,909.26	\$ 3,512,735.43
<u>Equipment/Vehicles</u>		
New Equipment: Hydrovac Trailer	\$ 67,691.21	\$ 75,000.00
Replacement Vehicle: Replace Truck 001 with 16000-25999 GVW Truck - Utility or 2 yrd Dump Bed	\$ 88,689.00	\$ 90,000.00
Total Equipment/Vehicles	\$ 156,380.21	\$ 165,000.00
<u>Software</u>		
CUSI - New Billing and Customer Information Software	\$ 26,102.00	\$ 26,102.00
Meter Reading		
Software/Devices Needs to be completed when CUSI is integrated	\$ -	\$ 25,000.00
Total Software	\$ 26,102.00	\$ 51,102.00
<u>Building Improvements</u>		
Office Furniture	\$ 46,021.26	\$ 45,000.00
Business Server	\$ 24,000.00	\$ 24,000.00
Board Room Improvements	\$ 10,000.00	\$ 10,000.00
Total Office Improvements	\$ 80,021.26	\$ 79,000.00
<u>Water Distribution Improvements</u>		
Rich Gulch Transmission Main Replacement - Design	\$ 11,706.88	\$ 50,000.00
Unforeseen Transmission and Distribution Projects		\$ 250,000.00
Total Water Distribution Improvements	\$ 11,706.88	\$ 300,000.00
Total Capital Overlay	\$ 1,528,119.61	\$ 4,107,837.43

Dam Expenses (Regulatory)

Regulatory Expenses: Expected Future 5-year total \$750,000

- California Division Safety of Dams (5-year expected \$325,000)
 - Current Yearly Permit is \$65,000 (Combined for all 3 dams)
- Emergency Action Plans (EAP) (5-year expected \$100,000)
 - Must be updated annually and republished every 5 years
 - Each EAP is independent in cost and range from \$15,000 to \$65,000 for each every 5 years, and the District must maintain 3 EAPs.
- Inundation Maps (5-year expected \$100,000)
 - Must be included as part of an EAP, the more impact downstream the more calculations go into modeling the impact.
 - Each Inundation map can cost from \$15,000 to \$75,000 with our 3 dams, depends on the distance of flood downstream and the degree of hazard.
- Part 12D Inspection (5-year expected \$100,000+)
 - Required every 5 years, detailed inspection of dam with potential failure modes. Most Recent Cost was \$65,000 in 2022. (New Part12D requirements in 2023 will make this inspection more intensive and will be north of \$100k in 2027)
- Dam Safety Engineer (5-year expected \$125,000)
 - District required to have a Dam Safety Engineer on staff or retainer.
 - Typical cost per year is up to \$15,000 for reporting, inspections, and for staff guidance when staff observes anything unusual at the dams.

Dam Expenses (Capital)

Capital Expenses: Expected 5-year total \$380,000

- Middle Fork Spillway
 - Due to age and condition FERC/CADSOD may require replacement or rehab
 - Potential Maximum Flood Analysis (PFMA) – Spillway must accommodate the PFMA
 - **Engineering Estimate on new spillway (\$2.0 million)**
- Middle Fork Penstock
 - Condition Assessment Report by 2024
 - Replacement of Penstock (Estimate \$225,000)
- Middle Fork Powerhouse
 - Electric upgrades (Estimate \$155,000)
- Jeff Davis Reservoir and Redhawk Dam
 - Nothing Planned for Capital Projects

South Fork Pump Station

Project Facilities:

5-year Electrical total (\$1.35m) at current electric rate.

- 2 – 400hp pumps
 - Maximum flow with both pumps on 3400 gpm
- Pumps against 700 feet of head to feed water into Jeff Davis Reservoir
- Electric rates for pumping have climbed 81.4% due to rising distribution rates with PGE and higher wholesale rates with CPPA.
 - July 1, 2021, rate \$0.09 Kw/hr (\$148,877/yr)
 - January 2023 rate \$0.1633 Kw/hr (\$270,128/yr)
- Site needs Electrical Upgrades, Diversion structure repairs, and SCADA telemetry. **Est: \$385,000 Capital**

Middle Fork Dam Project Facilities



View of Middle Fork Dam



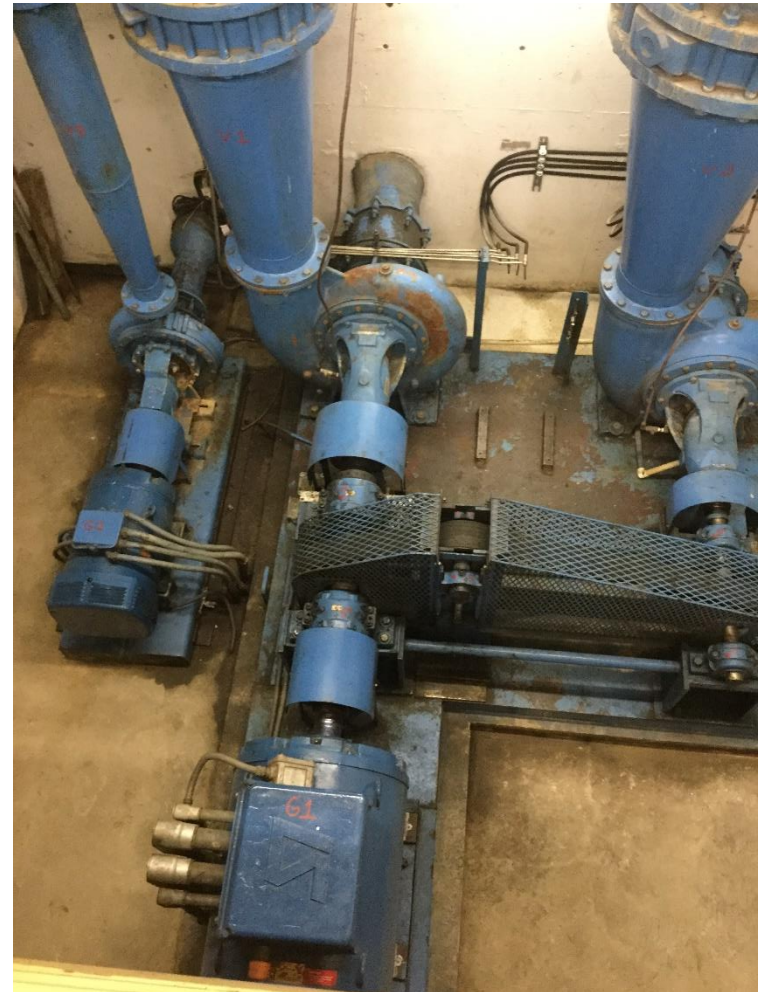
Spillway and Log Boom



Powerhouse and 27" Penstock at Middle Fork Dam



Inside the Powerhouse



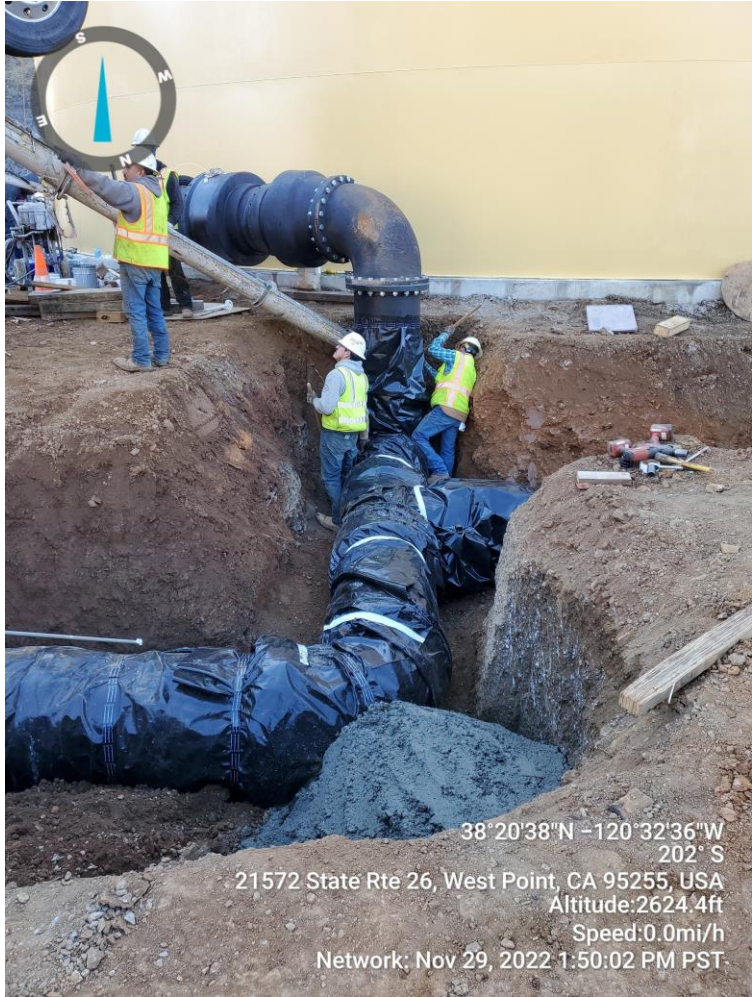
South Fork Pump Station



Clearwell Tank Project (Slide 1)



Clearwell Tank Project (Slide 2)



Clearwell Tank Project (Slide 3)



Clearwell Tank Project (Slide 4)



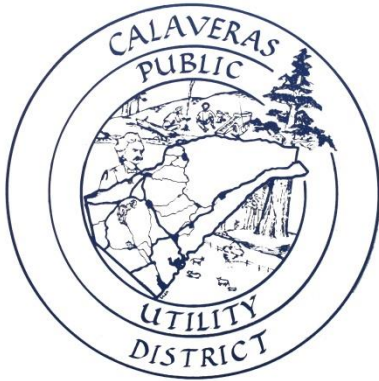
Clearwell Tank Project (Slide 5)



Clearwell Tank Project (Slide 6)



Thank you, comments or questions?



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w/photo credits to CPUD staff and WGA

