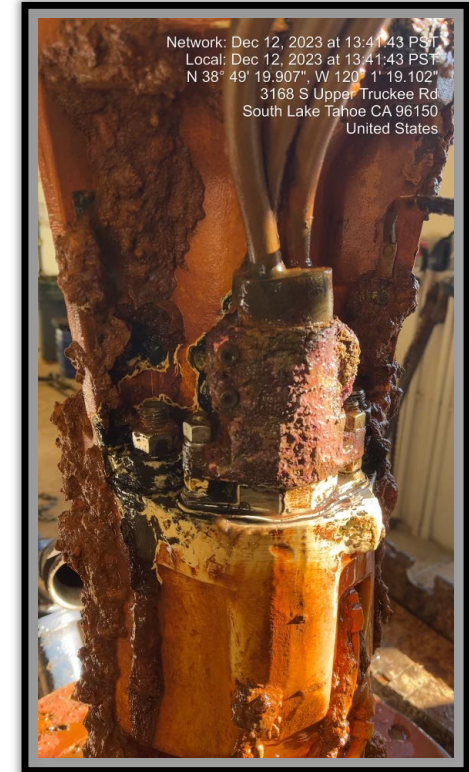
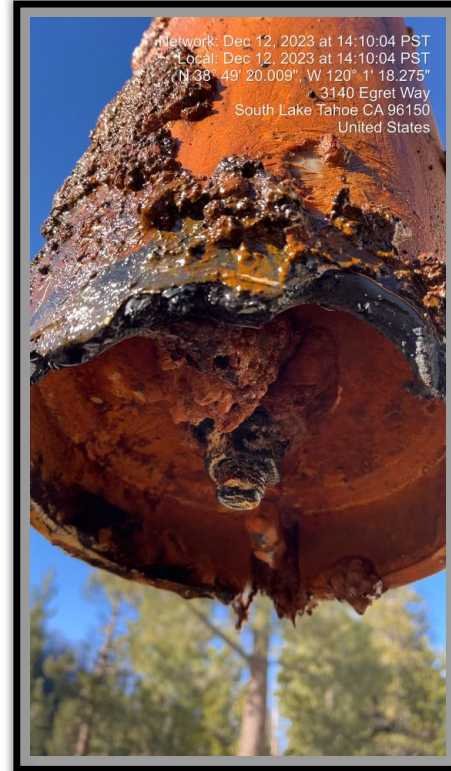
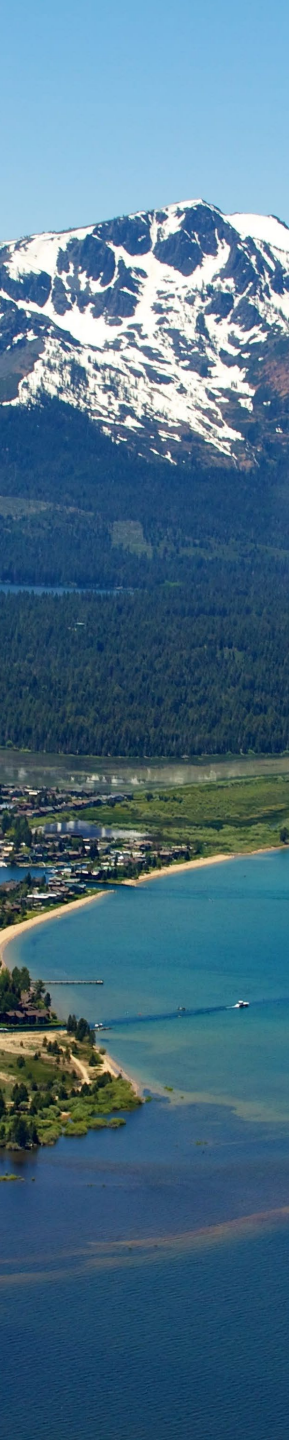


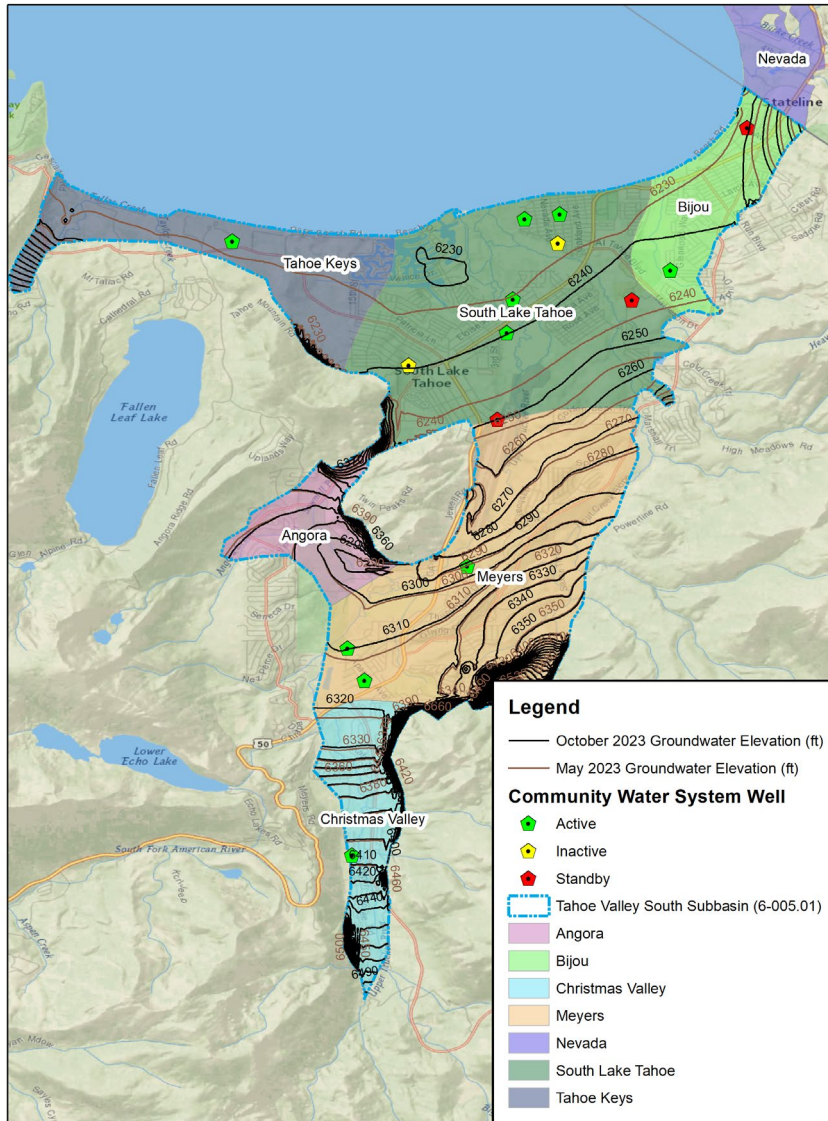
# South Upper Truckee Well Update



Mark Seelos  
Water Resources Manager  
12/21/2023

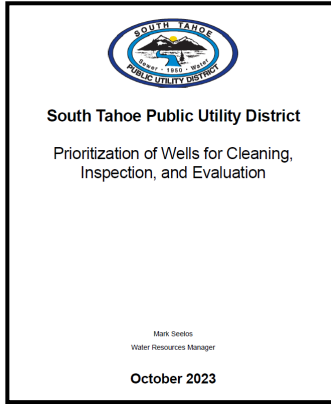


# STPUD's Production Well Network



- 11 Active Production Wells
- 3 Standby Wells
- Constructed 1959-2004
- Capacities of 90-3,600 GPM
- Asset Value >\$30 Million

# Well Asset Management Program



- Well Inspection and Rehab Program proposed in 2025-2034 CIP
- Inspection, cleaning, and light rehabilitation.
- Inform future capital projects.
- 2023 Prioritization Report





# Priority Wells for Inspection

Well	Inspection Order
South Upper Truckee Well No. 3	1
Helen Ave. Well No. 2	2
Sunset Well	3
Bayview Well	4
Glenwood Well No. 5	5
Bakersfield Well	6
Valhalla Well	7
Elks Club Well No. 2	8
Arrowhead Well No. 3	9
Blackrock Well No. 2	10
College Well	11
Airport Well	12
Paloma Well	13
Al Tahoe Well No. 2	14

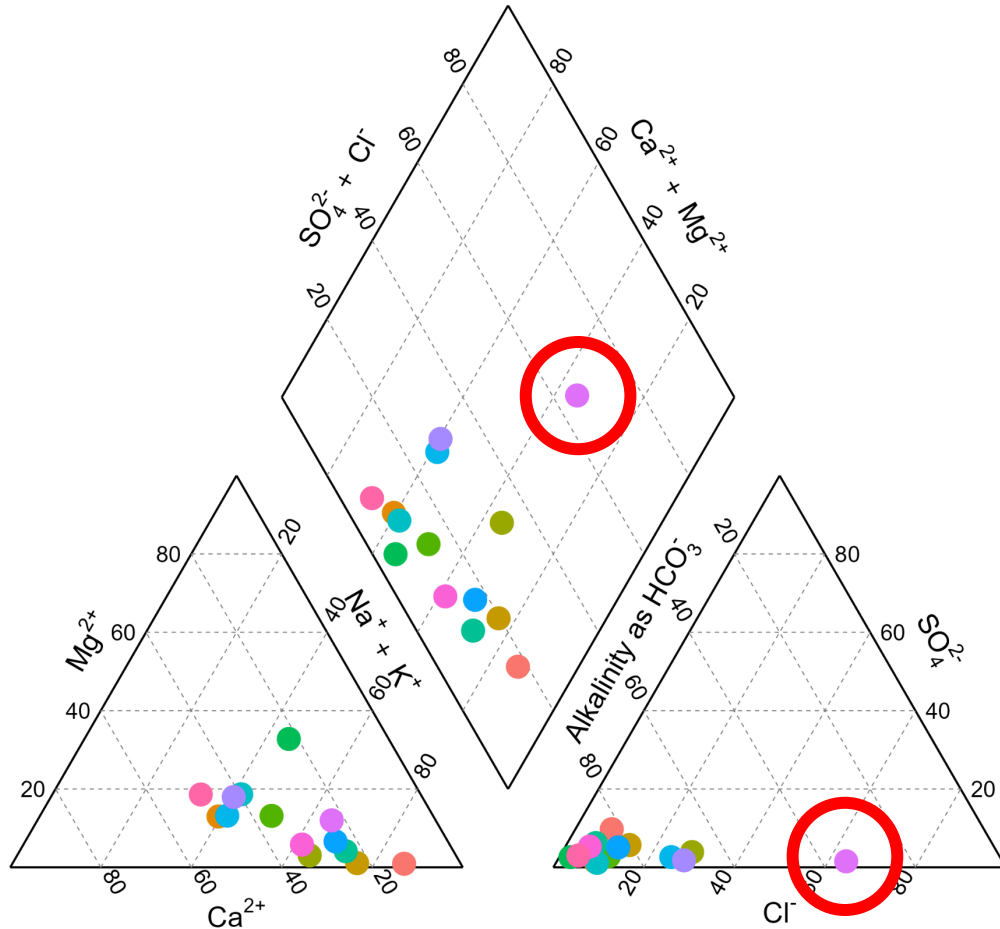
Table 22: Proposed Well Inspection Order

- Quantitative prioritization of wells based on best available data.
- Evaluation of 11 Categories Related to Likelihood and Consequence of Failure
- South Upper Truckee Well ranked highest.
- Inspection and Rehabilitation Project planned for 2024.



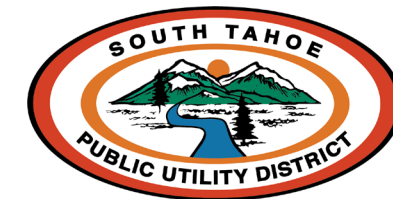
# South Upper Truckee Well No. 3

*A water quality anomaly...*



- Youngest and most problematic well.
- **Highly Corrosive**
  - pH ~6
  - Accelerated pitting corrosion of steel.
  - Wellhead treatment addresses some corrosivity in system.

# Evidence of Motor and Pump Wear



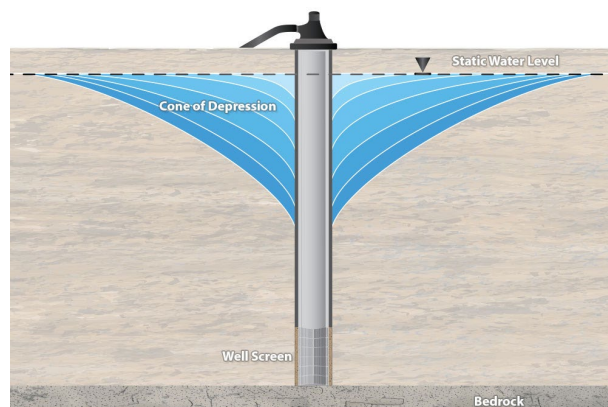
## Annual Well Testing (Engineering)

Overall Pump Efficiency: 49%

- Good: >70%
- **Needs Service: <50%**

Specific Capacity: 7% Decline.

- **>5% decline: Needs Maintenance**
- >15% decline: Needs Rehab

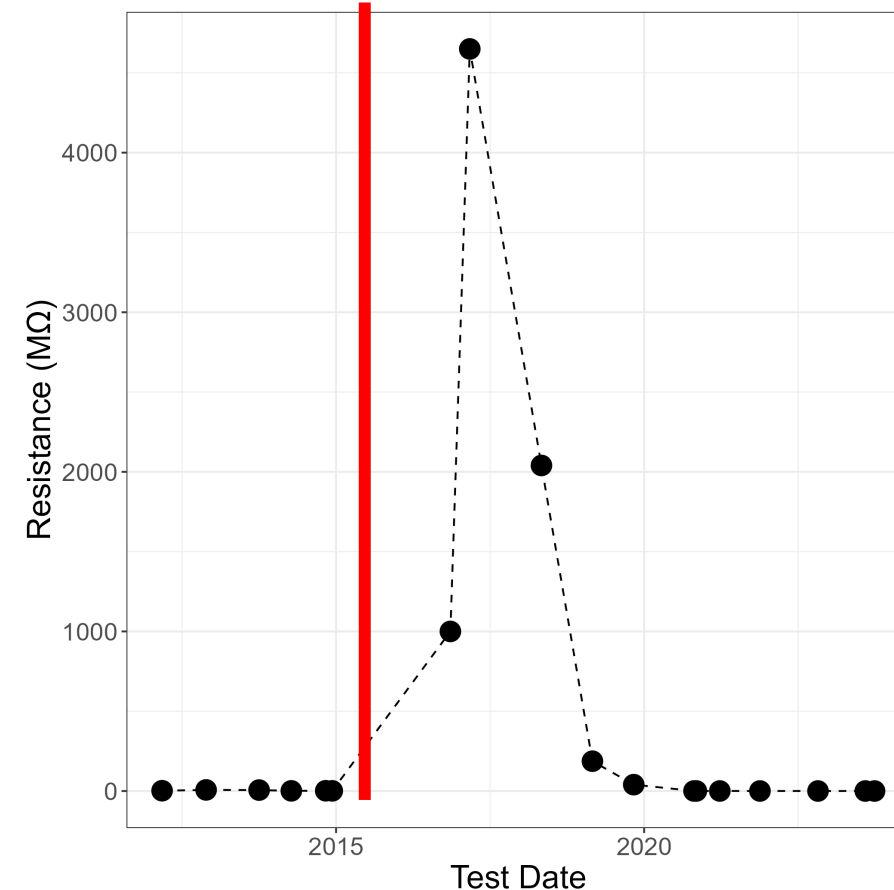


SC = GPM/ft of drawdown

Lost over 50 GPM/ft of drawdown.

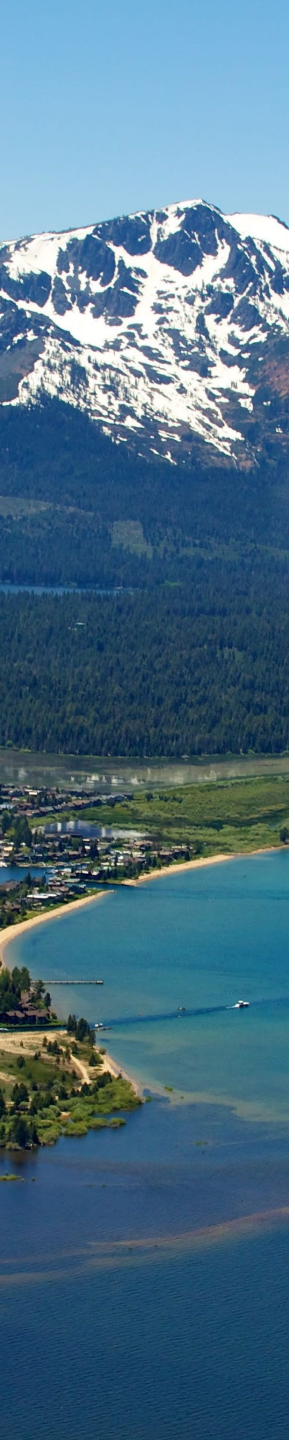
## Megger Testing (Electrical)

Pigtail Replaced





# Pre-Inspection in Advance of 2024 Project



Goal: Assess procurement needs prior to 2024 Inspection and Maintenance Project.

## Long Lead Times

- Pump
- Motor
- Column Pipe
- Epoxy-Coated/Specialty Items

## December 12 Inspection

- Carson Pump
- Pulled Pump and Column
- Inspected Column Pipe and Pump
- Meggered motor at wire, pigtail, and leads.



# Narrowly Avoided Failure



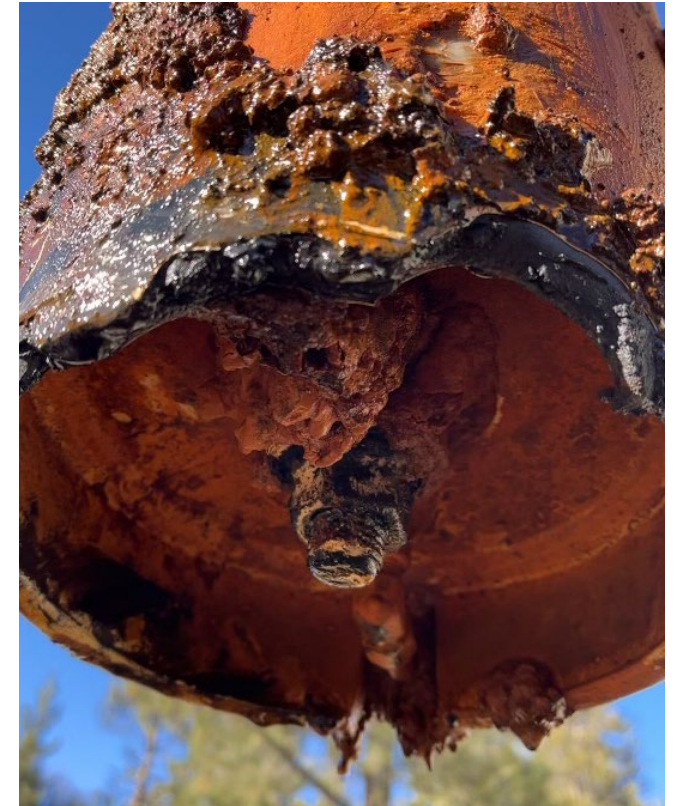
## Column Pipe



## Motor Connection



## Motor





# CCTV: Extensive Tuberculation



# Next Steps: Procurement



December  
2023: Pre-  
Procure  
Parts

January 2024:  
Informal Bid  
Process for  
Rehab Project

May 2025:  
Begin  
Rehab  
Project

## Column Pipe

- Fiberglass or Stainless Steel
- Lead Time: Weeks to 2 Months

## Motor

- Stainless Steel
- Lead Time: Weeks to 12 Months

## Pump

- Epoxy-Coated or Stainless Steel
- Lead Time: 2 weeks to 1 year.



# Cost and Procurement



Parts: \$40k-\$115k

Services: \$125-\$240k

**Total: \$165-\$355k**



## **Purchasing Policy**

- Exception to formal competitive solicitation #4: special circumstances.
- Solicit 3 quotes (Parts)
- Solicit 5 quotes (Services)
- Expect approvals brought to the board in January.

# Questions?

