

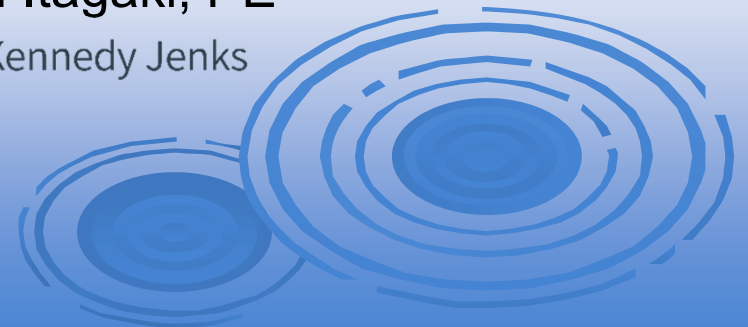
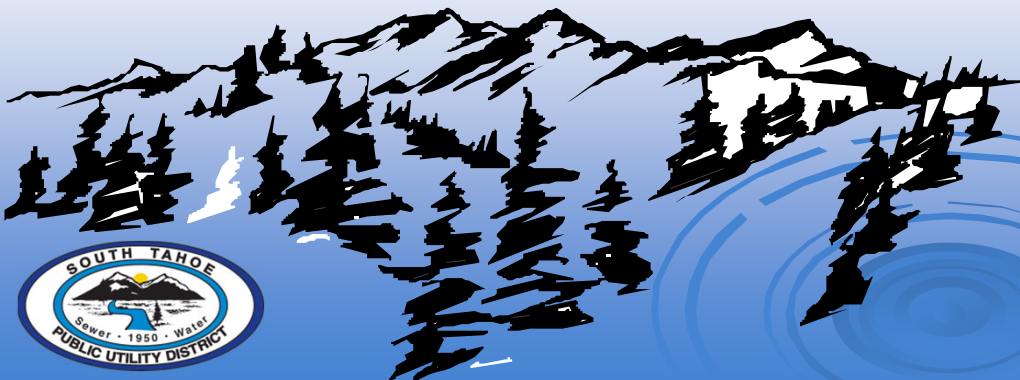
# South Tahoe Public Utility District

## TAHOE VALLEY SOUTH SUBBASIN (6-005.01) ANNUAL REPORT Water Year 2022

*6 April 2023*

Sachi Itagaki, PE

 Kennedy Jenks



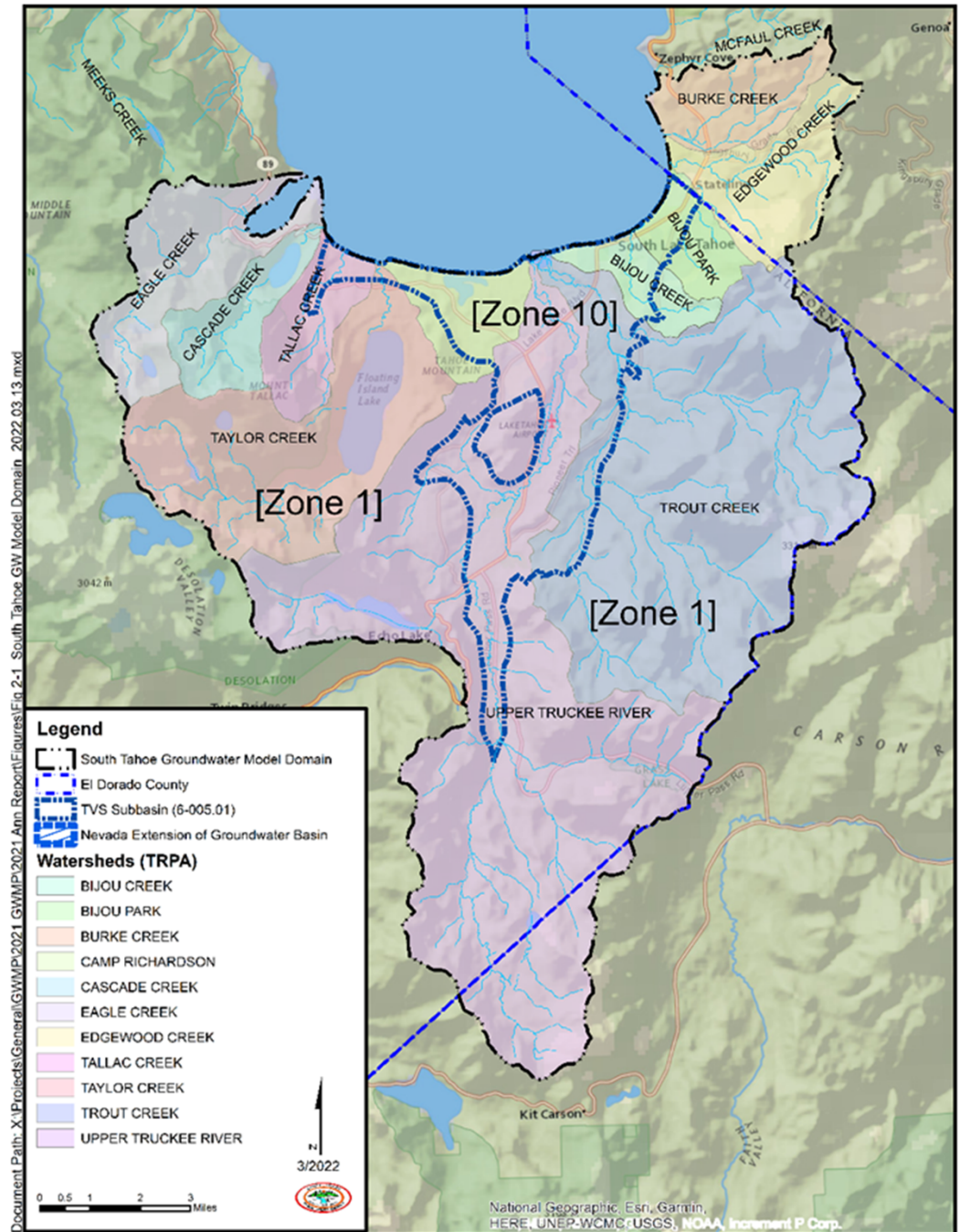
# AGENDA

- \* Basin Overview
- \* Summary of WY2022 (Oct 1, 2021 – Sept 30, 2022) Conditions
- \* WY2023 Precipitation Accumulation To Date



# TVS SUBBASIN

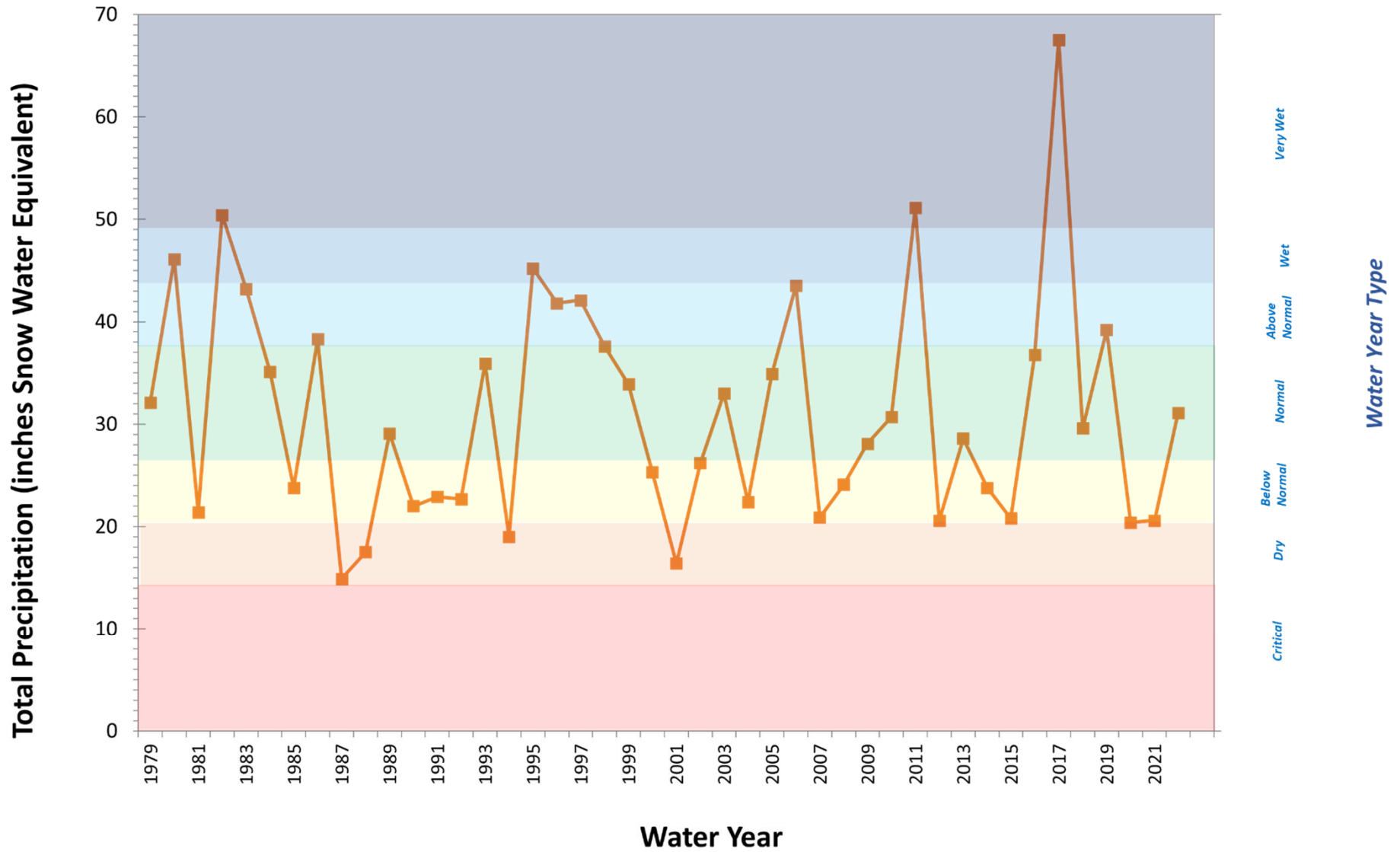
- \* Elevations:
  - \* Groundwater Basin:
    - \* 6225- 6500 ft msl
  - \* Mountain Block
    - \* (> 6500 ft msl – Watershed Divide)
- \* South Tahoe Groundwater Model (STGM)
  - \* Mountain Block (Zone 1)
  - \* TVS Subbasin (Zone 10)





### TVS SUBBASIN WATER YEAR TYPE

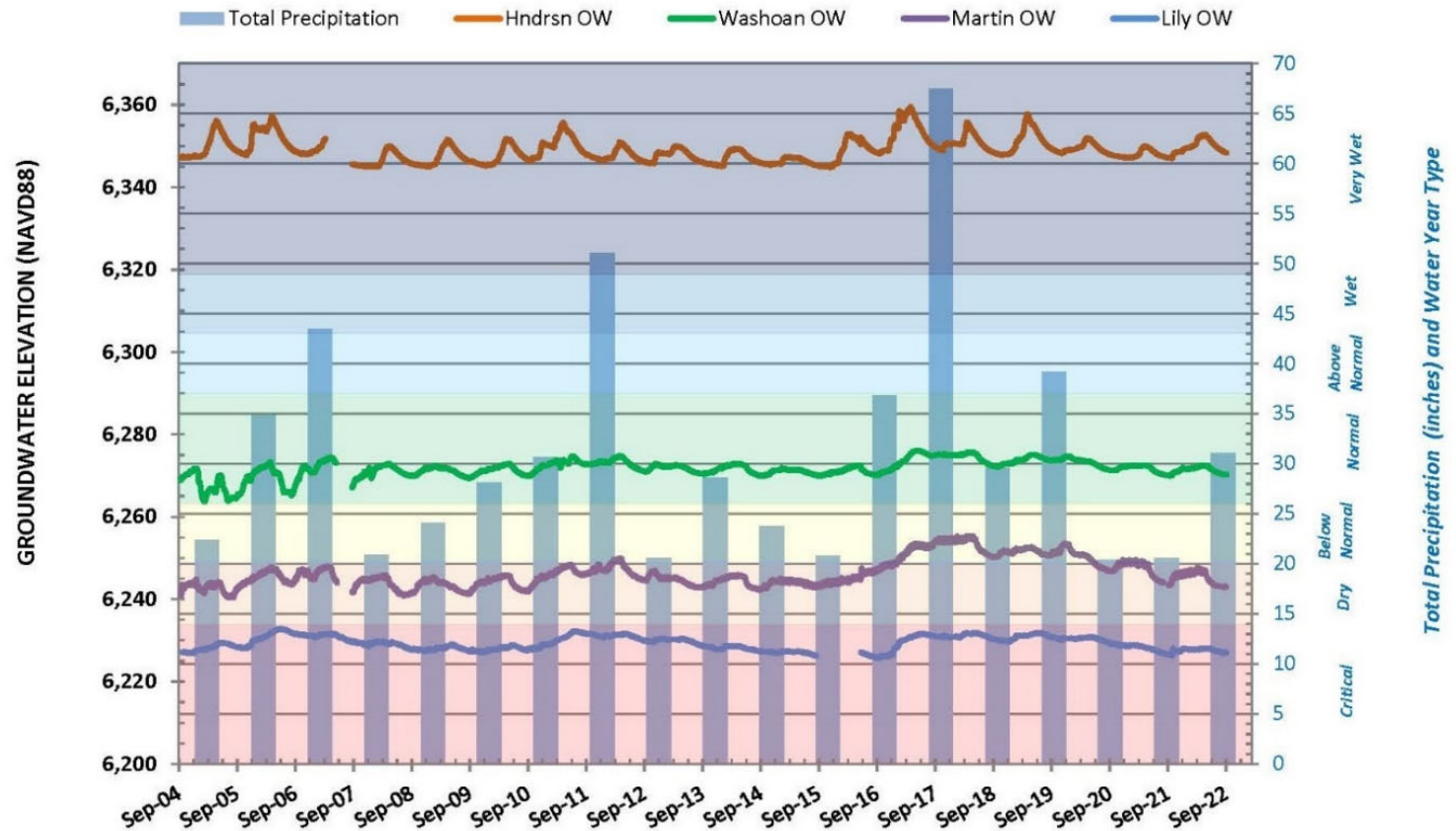
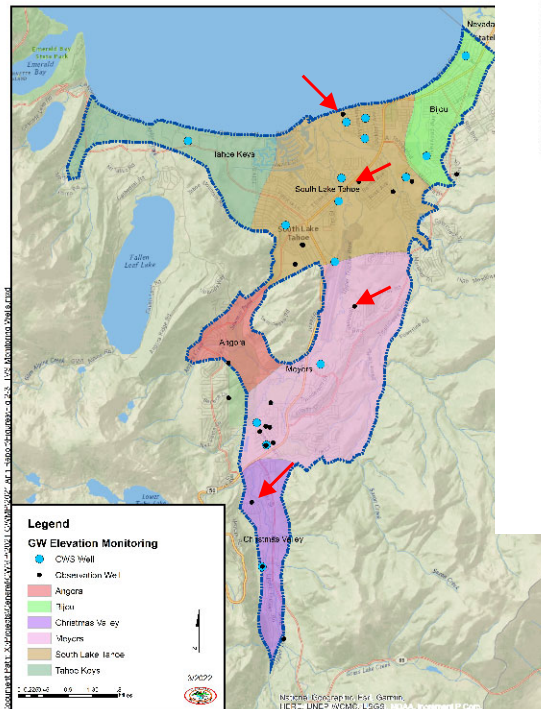
Snotel 508: Hagans Meadow, CA



Water Year 2022 had normal precipitation

# GROUNDWATER LEVELS

## TAHOE VALLEY SOUTH SUBBASIN (6-005.01)



Measured water levels are generally stable over a range of hydrologic conditions

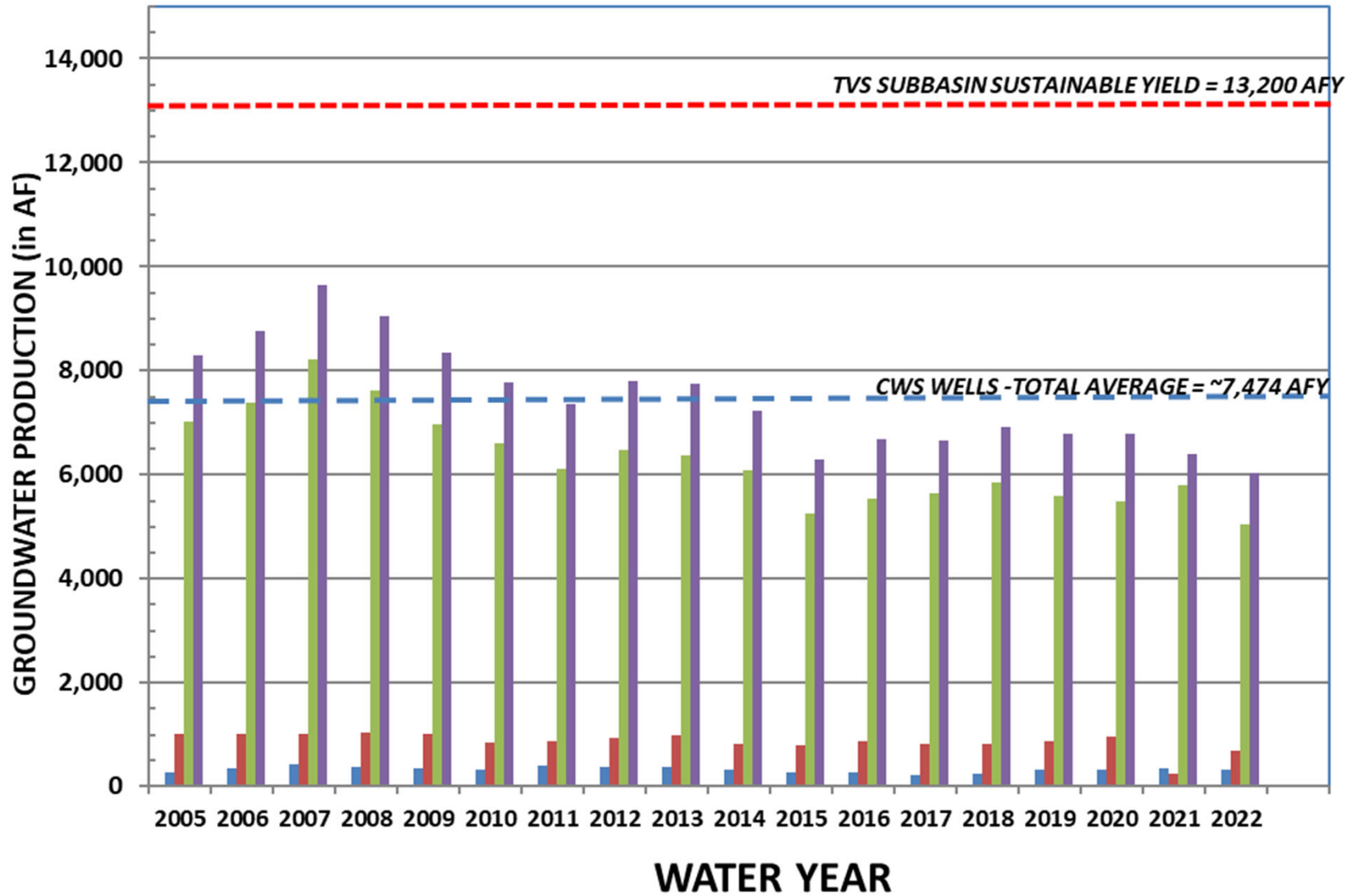






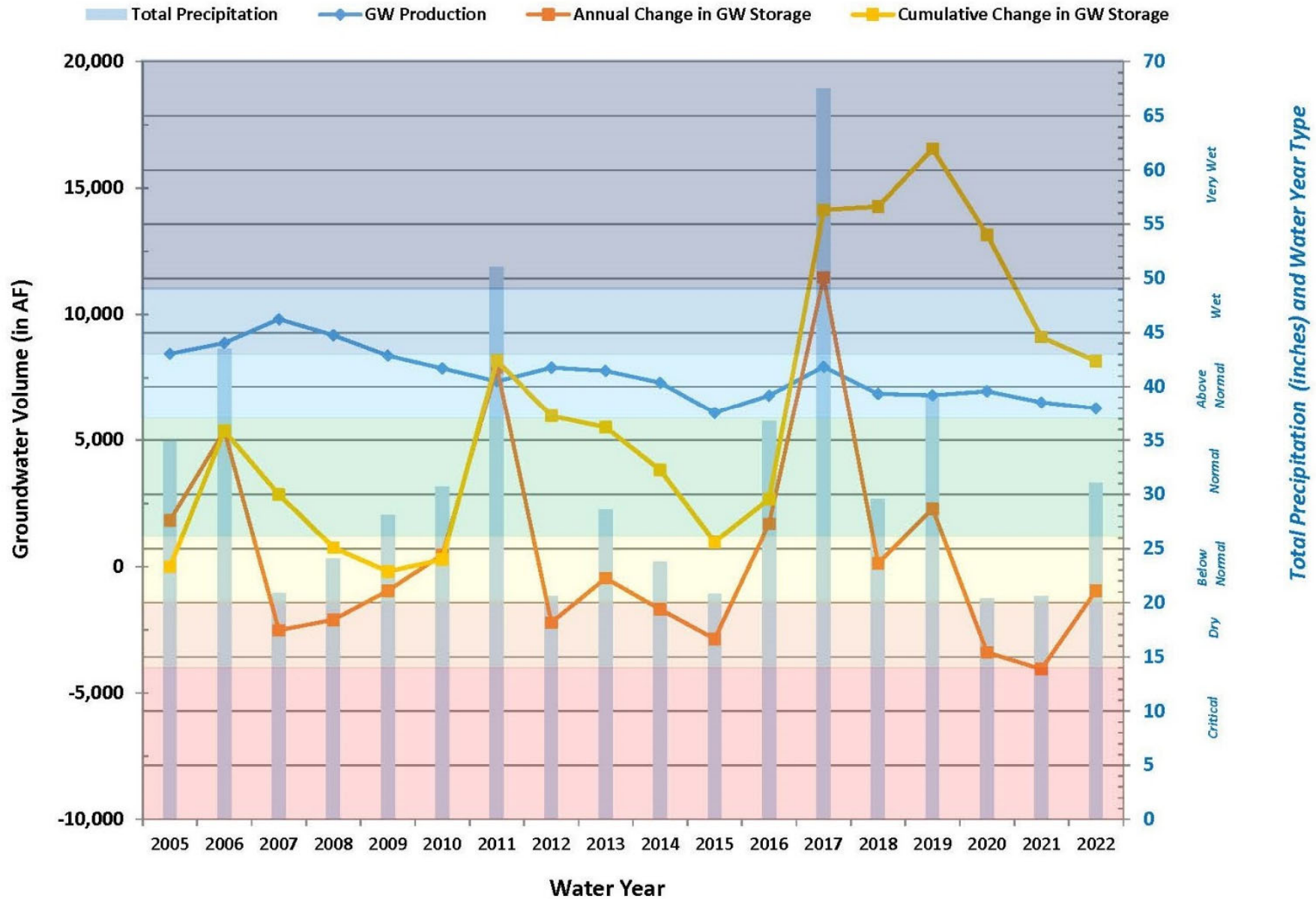
# TVS Subbasin Community Water System Pumpage

■ LPA ■ LBWC ■ TKWC ■ STPUD ■ CWS WELLS - TOTAL





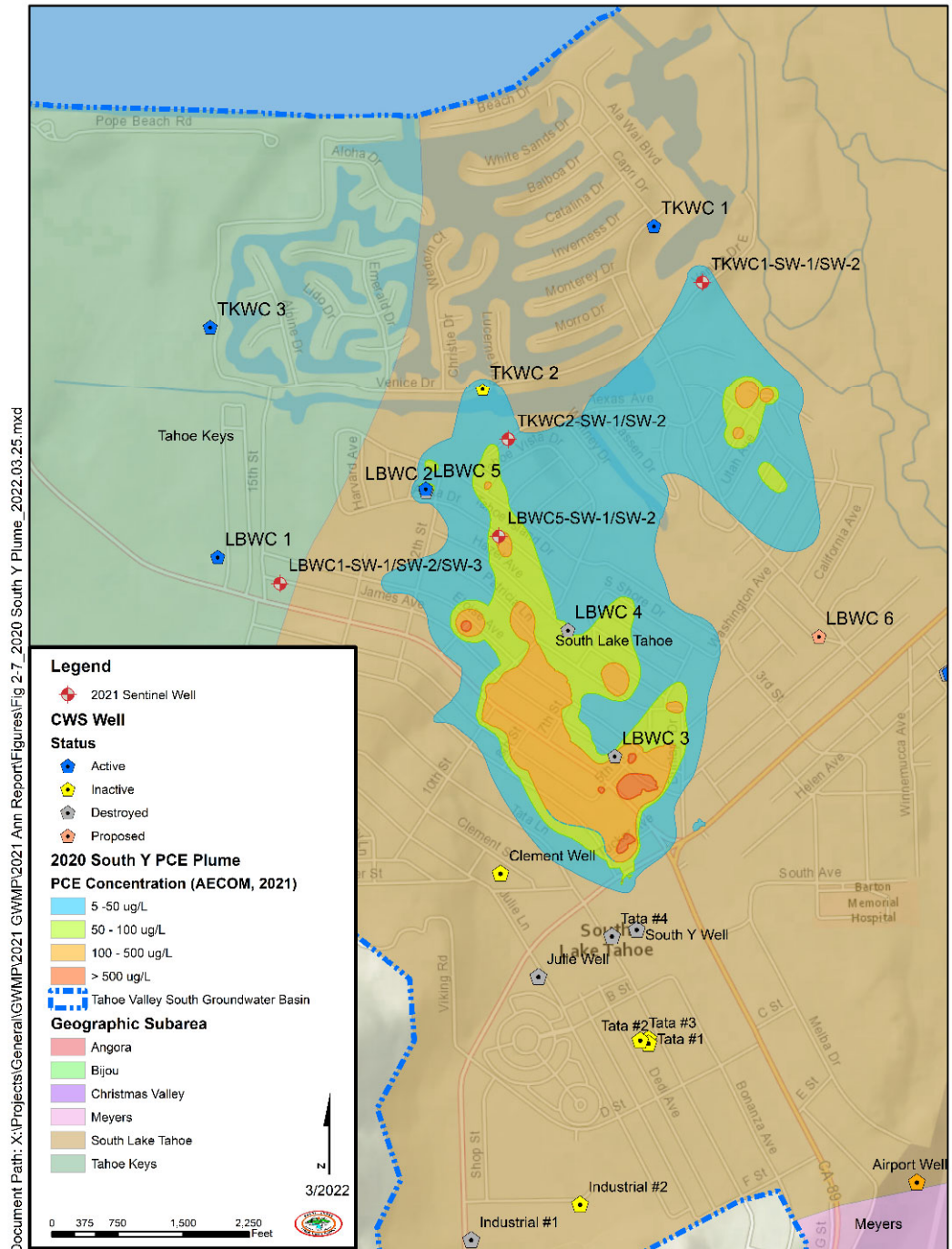
### TVS SUBBASIN GROUNDWATER USE and STORAGE



Modeled GW Storage has increased with normal precipitation because of increased recharge

# Degraded Groundwater Quality

- \* Oct 2021 /April 2022 Sentinel Well Monitoring
- \* PCE @ TKWC 1 –SW-1 = 120 ppb
- \* PCE @ TKWC 2 –SW-1 = 43 ppb
- \* PCE @ LBWC 1 –SW-1 = ND
- \* LBWC 5 –Sw-3 = 160 ppb
- \* LRWQCB Soil gas sampling
- \* Arsenic still present
- \* Uranium/Gross alpha activity
- \* Treatment at TKWC 2 and 3





# Accomplishments (WY 2022)

- \* Fulfilled Alternative Annual Reporting Requirements (SGMA)
- \* Fulfilled GW Elevation Monitoring Requirements (CASGEM)
- \* Collaboration with the Alternative Plan Stakeholders Advisory Group
- \* Alternative Plan Submitted April 2022
  - \* Updated the South Tahoe Groundwater Model (STGM)
  - \* Conducted administrative, technical, and public engagement tasks
- \* Public Outreach
  - \* Documents posted to Groundwater Web Page
  - \* Board Meeting Presentations/Updates (November 2021)
  - \* SAG Workshops (January and August 2022)



# Proposed Actions (WY 2023)

- \* On-Going:
  - \* Monitor regulations and BMP guidance
  - \* Monitor basin conditions & groundwater supplies
  - \* Update and Maintain the STGM
  - \* Collaborate with EDWA & SAG
  - \* Public Outreach
  - \* Support Annual Water Supply and Demand Assessment (WSDA)
- \* New (Planned):
  - \* Apply for Round 2 SGM Grant Funding (*complete in Dec 2022*)
  - \* Evaluate potential new shallow groundwater Monitoring Locations (ISWs, GDEs)
  - \* Implement Actions adopted in the Alternative Plan



# Comments and Questions



**ITEM 6.b.**



# Diamond Valley Ranch

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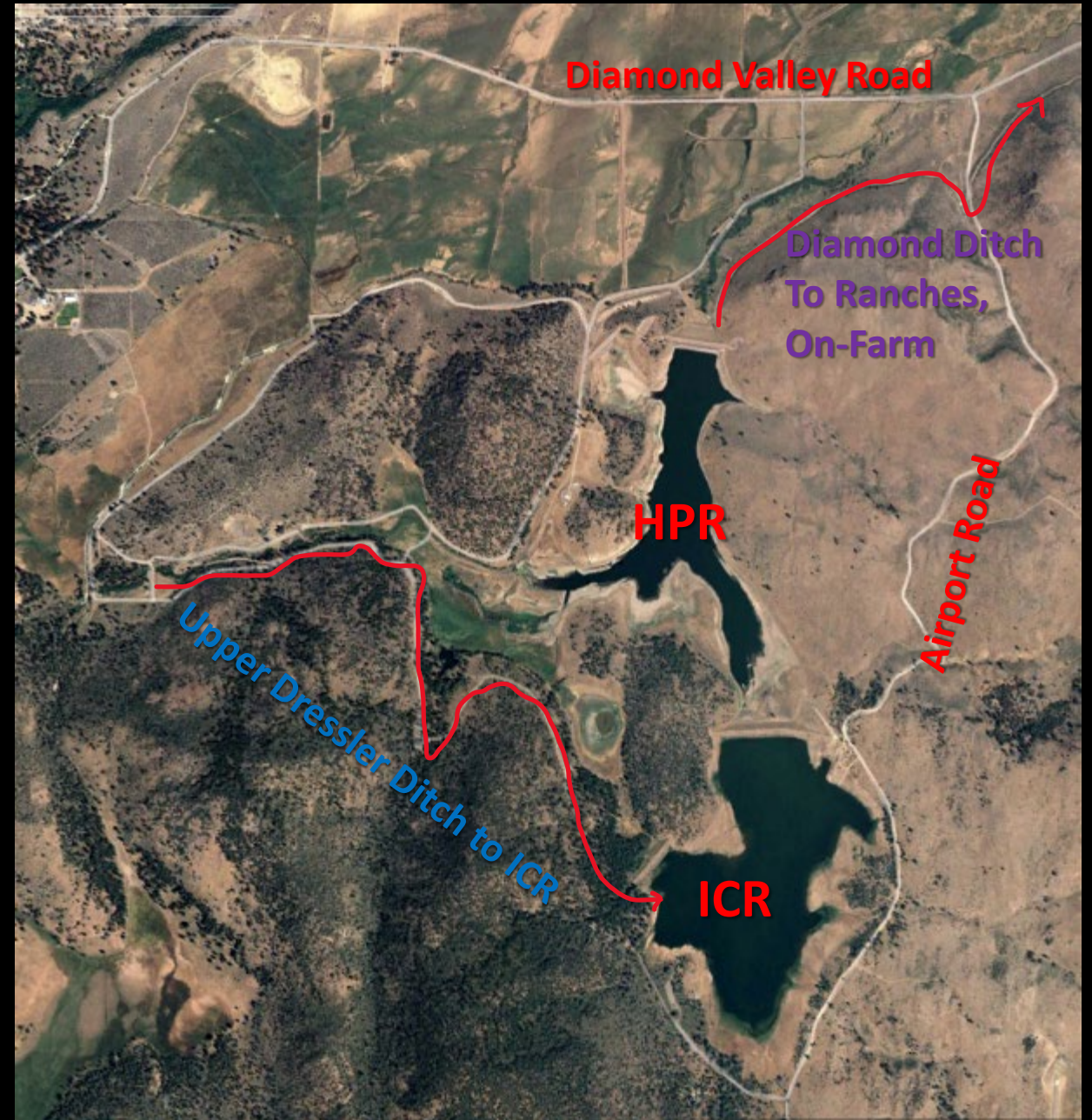
## El Dorado Storm Response

Status and Current Activities  
Trevor Coolidge - Senior Engineer  
April 6, 2023



# DVR Overview

- Harvey Place Reservoir
  - Releasing @ 5 cfs since April 1<sup>st</sup>
  - 5' below overflow, minimal level change
- Indian Creek Reservoir – 11 cfs flushing flow
- On-farm System - Emergency release location and conveyance to downstream ranches
- Ditches (canals), roads, and culverts impacted by heavy runoff, current debris removal & repair work





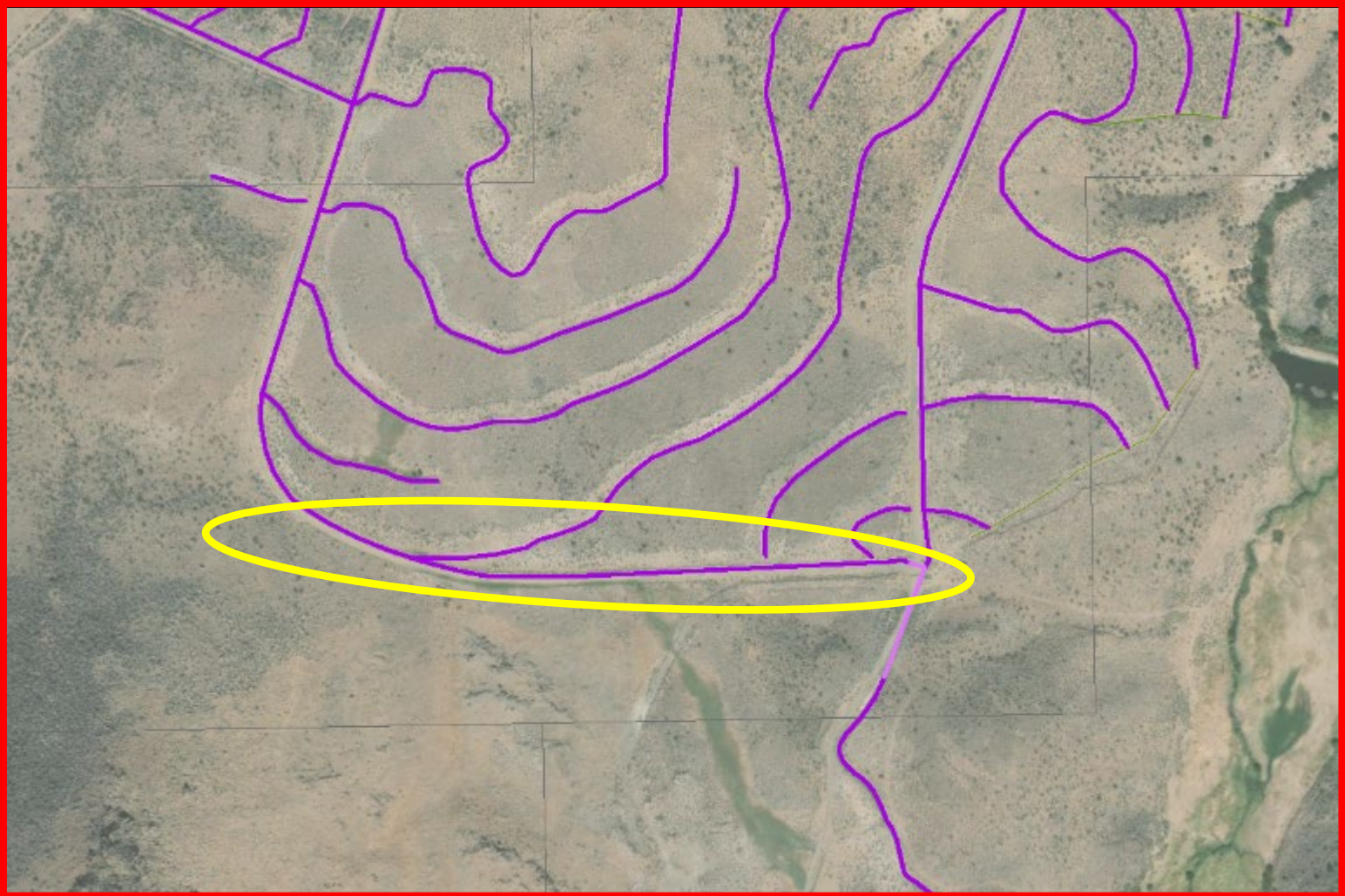
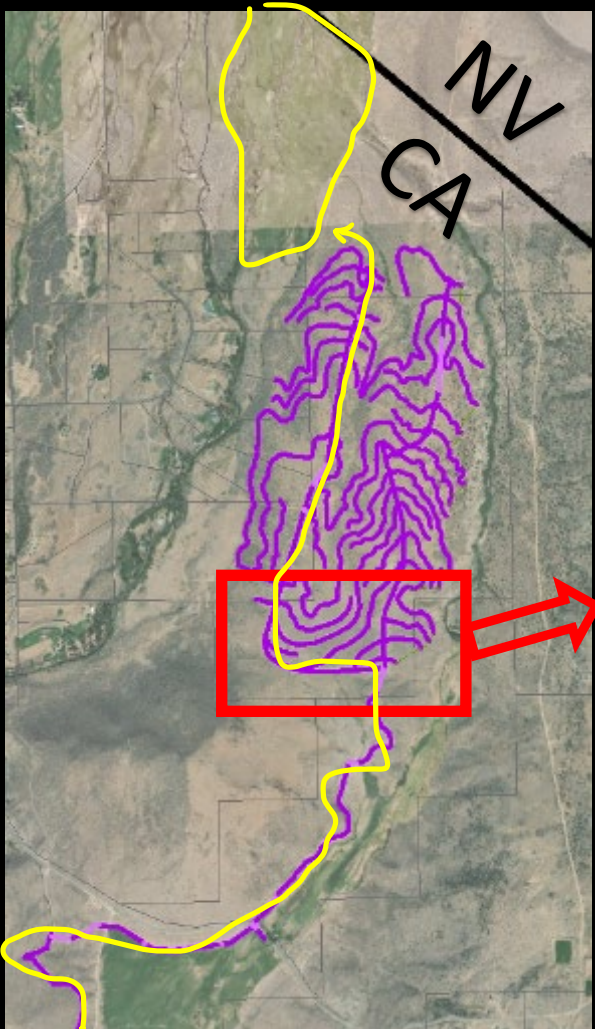
# Diamond Ditch

- Conveys recycled water from HPR
- Currently Restricted to 5 cfs, pending repair from snow removal work





# On-Farm System



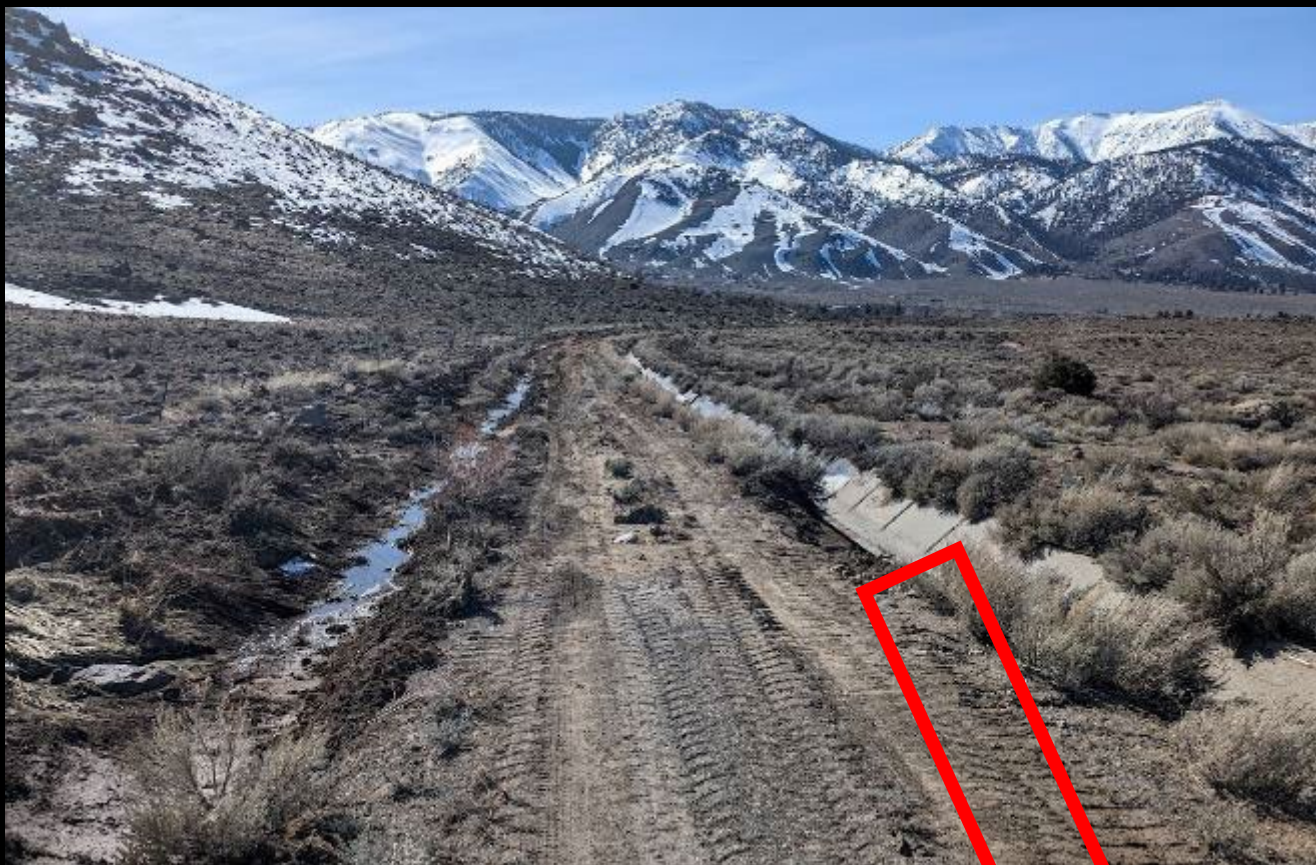


# On-Farm System

- Ditches, Canals
- Roads
- Monitoring Wells







On-Farm System





# On-Farm System





# Dressler Ditch

- Intercepts natural runoff, conveys freshwater to ICR
- Functioning, but major access road and drainage issues





# General DVR Erosion, Debris Issues – Ongoing Work

- District & Contractor Crews







Harvey Place Reservoir

# South Tahoe

Public Utility District

## Memorandum

Date: April 4, 2023

To: Board of Directors  
John Thiel, General Manager

From: Brent Goligoski, Associate Engineer

Subject: Recommendation for Bid Award  
Secondary Clarifiers No. 2 Rehabilitation Project

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As indicated in the attached memorandum and summary by the Contracts Administrator, Staff has found irregularities in all three bids received. There is an important distinction, however, between irregularities that are immaterial and ones that are material. Immaterial irregularities may be waived by the Governing Board, in its discretion. Material irregularities generally give the bidder an unfair competitive advantage or contain errors that would permit the bidder to withdraw its bid. Material irregularities may not be waived.

The apparent low bid received from T&S Construction Co., Inc. (T&S) contained minor irregularities as listed in the attached memorandum by the Contracts Administrator.

A requirement of the District's funding source is that the bidders perform a Good-Faith Effort (GFE) to seek participation by Disadvantaged Business Enterprises (DBE). Staff performed a review of the low bidder's DBE documentation and was able to address all irregularities with T&S and staff is satisfied that the DBE GFE requirements have been met.

Staff recommends that the Board 1) Find minor irregularities in the bid from T&S Construction Co., Inc. (T&S) to be immaterial and waive immaterial irregularities; and 2) Award Project to the lowest responsive, responsible bidder, T&S Construction Co., Inc. in the amount of \$2,064,900.00.

# South Tahoe

## Public Utility District

1275 Meadow Crest Drive  
South Lake Tahoe, CA 96150

Telephone: (530)544-6474 Fax: (530)541-4319

## Memorandum

Date: April 4, 2023  
To: Board Members, John A. Thiel  
From: Starlet Glaze, Contracts Administrator  
Subject: Secondary Clarifier No. 2 Rehabilitation Project

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At 2:00 o'clock on the afternoon of March 28, 2023, we received three (3) electronic bids via PlanetBids for the above-referenced project. Bids ranged from \$2,064,900.00 to \$2,161,619.41.

A careful review and analysis of the three (3) Bids received was completed by District Staff. See attached spreadsheet and list of deviations for full breakdown of each bid.

T & S Construction Co., Inc. is the apparent low bidder. T & S Construction Co., Inc. had only minor deviations.

I contacted the Contractors License Board and was given the following information:

License Number 301528 is current and active and expires 04/30/2025.

The company is a corporation.

T & S Construction Co., Inc. holds a Class A – General Engineering license.

I also contacted the California Department of Industrial Relations Contractor Registration site and verified that T & S Construction Co., Inc. is registered under PWCR Number 1000000972.

## Bid Results for Secondary Clarifier No. 2 Rehabilitation Project

Bid Advertised: on February 10, 2023

Bid Opening: March 28, 2023 2:00 PM (Pacific)

Item Num	Description	Unit	Quantity	T & S Construction Co., Inc.	KG Walters Construction	Farr Construction Corporation dba Resource Development Company	Initial Engineer's Estimate	Revised Engineer's Estimate
<b>Bid Schedule A Secondary Clarifier No. 02 Rehabilitation Project</b>								
1	Mobilization and demobilization including bonds and insurance, and cleanup. (Note: this lump sum figure cannot exceed 10 percent of the total amount of Bid Schedule B (excluding this item).	LS	1	\$ 150,000.00	\$ 175,000.00	\$ 105,000.00	\$ 150,000.00	\$ 150,000.00
2	Secondary Clarifier No. 2 Rehabilitation work including demolition work, launder covers, concrete rehabilitation work, and installation of new RAS piping, electrical and instrumentation work, and all ancillary work associated with these facilities, complete as shown and as specified in these Contract Documents, excluding only work listed in the other bid items herein.	LS	1	\$ 970,000.00	\$ 866,000.00	\$ 736,600.91	\$ 800,000.00	\$ 825,000.00
3	Secondary Clarifier No. 2 Damaged Expansion Joint Material Removal and Replacement, including preparation, labor, materials, and necessary equipment.	LF	60	\$ 7,500.00	\$ 2,400.00	\$ 21,810.00	\$ 12,000.00	\$ 12,000.00
4	Secondary Clarifier No. 2 Sludge Collector Mechanism Equipment installation, including startup and testing for a fully functional system.	LS	1	\$ 225,000.00	\$ 368,000.00	\$ 219,000.00	\$ 150,000.00	\$ 250,000.00
5	Secondary Clarifier No. 2 Sludge Collector Mechanism concrete foundation including inlet piping, sump, subgrade preparation, formwork, concrete, and all materials and labor associated with installation of the new foundation.	LS	1	\$ 200,000.00	\$ 160,000.00	\$ 524,500.00	\$ 150,000.00	\$ 165,000.00
6	Externally bonded fiberglass reinforced plastic reinforcement as specified in Section 03_01_30.72, including surface preparation prior to application of the material, for Secondary Clarifier No. 2.	SF	1435	\$ 57,400.00	\$ 34,440.00	\$ 33,148.50	\$ 71,750.00	\$ 71,750.00
7	Provide, install, and maintain erosion control measures and other required BMPs complete and in place.	LS	1	\$ 5,000.00	\$ 15,000.00	\$ 4,600.00	\$ 15,000.00	\$ 25,000.00
8	Dewatering of excavations.	LS	1	\$ 40,000.00	\$ 85,000.00	\$ 104,500.00	\$ 60,000.00	\$ 55,000.00
9	Installation and maintenance of shoring and soil stabilization for worker safety in accordance with OSHA and District requirements.	LS	1	\$ 15,000.00	\$ 54,000.00	\$ 7,300.00	\$ 40,000.00	\$ 40,000.00
10	Structural concrete repairs for tank walls and floor.	SF	100	\$ 15,000.00	\$ 10,500.00	\$ 19,000.00	\$ 11,000.00	\$ 25,000.00
11	Concrete crack repair using hydrophobic foam polyurethane resin injection system.	LF	300	\$ 30,000.00	\$ 39,000.00	\$ 36,960.00	\$ 30,000.00	\$ 45,000.00
12	Allowance for unknown underground conditions.	LS	1	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00
13	Removal of Sand Fill and PVC Piping, and Installation of Interstitial Wall Fill with Cellular Concrete for Secondary Clarifier No. 2.	LS	1	\$ 125,000.00	\$ 125,000.00	\$ 124,200.00	\$ 125,000.00	\$ 150,000.00
			<b>Subtotal</b>	<b>\$ 1,864,900.00</b>	<b>\$ 1,959,340.00</b>	<b>\$ 1,961,619.41</b>	<b>\$ 1,639,750.00</b>	<b>\$ 1,838,750.00</b>
<b>Bid Schedule B: Miscellaneous System Improvements</b>								
14	As-Needed Sewer System Improvements	LS	1	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00
15	As-Needed Water System Improvements	LS	1	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00
			<b>Subtotal</b>	<b>\$ 200,000.00</b>	<b>\$ 200,000.00</b>	<b>\$ 200,000.00</b>	<b>\$ 200,000.00</b>	<b>\$ 200,000.00</b>
			<b>Total</b>	<b>\$ 2,064,900.00</b>	<b>\$ 2,159,340.00</b>	<b>\$ 2,161,619.41</b>	<b>\$ 1,839,750.00</b>	<b>\$ 2,038,750.00</b>



**Secondary Clarifier No. 2 Rehabilitation Project**  
**Bid Opening: Tuesday, March 28, 2023 at 2:00 o'clock p.m.**

**Deviations and information gathered during bid analysis of the three Bids received:**

**T & S Construction Co., Inc.**

- List of Subcontractors
  - The full entity names of four of the subcontractor's listed on the Bid Form did not match either the Contractor's State License Board (CSLB) or the California Department of Industrial Relations (CA DIR) websites.
  - The full entity name of one of the subcontractors listed on the Bid Form did not match the CSLB or CA DIR websites, however, the address did match the CA DIR Registration.
  - We were, however, able to verify the correct entity names and addresses of all of the subcontractors, and that they have an active California License, and are registered and current with the CA-DIR.
- Bidder's General Information, Item 1
  - The address listed on the Bid form does not match either the CSLB or CA DIR websites. We were, however, able to verify that both addresses were current and used for mailing purposes.

**K.G. Walters Construction Co., Inc.**

- List of Subcontractors
  - The full entity names of four of the subcontractor's listed on the Bid Form did not match either the Contractor's State License Board (CSLB) or the California Department of Industrial Relations (CA DIR) websites.
  - The full entity name of one of the subcontractors listed on the Bid Form matched the CA DIR website, however, it did not match the CSLB website.
  - We were, however, able to verify the correct entity names and addresses for all of the subcontractors, and that they have an active California License, and are registered and current with the CA-DIR.
- Bidder's General Information, Item 6
  - The authorized agent provided the surety company's name but not an address or phone number. We were, however, able to verify that the Bid Bond is valid and meets District requirements.
- Certification by Contractor's Insurance Broker
  - The Certification was filled out incorrectly. The full name of the insurance company was not provided. We were, however, able to obtain the insurance company's information and verify through the California Department of Insurance and AM Best websites that the company meets District's requirements.



## **Farr Construction Corporation dba Resource Development Company**

- List of Subcontractors
  - A subcontractor's address which was listed on the Bid Form did not match either the Contractor's State License Board (CSLB) or the California Department of Industrial Relations (CA DIR) websites. We were, however, able to verify that both addresses were current and used for mailing purposes.
- Bidder's General Information, item 6
  - The authorized agent did not provide the surety company's name address or phone number. We were, however, able to obtain the information directly from the Bid Bond and verify that it is valid and meets District requirements.
- Bid Forms
  - The Contractor failed to submit Grant Form EPA 4500-3 with the Bid documents prior to the Bid Opening.

**Secondary Clarifier No. 2 Rehabilitation Project  
CONTRACTOR'S SUBCONTRACTORS**

**T & S Construction Co., Inc.**

<u>Description of Work</u>		<u>Subcontractors Name &amp; Address</u>
Electrical	5%	San Joaquin Electric PO Box 30068 Stockton, CA 30068 CA#410103; CA DIR(PWC)#1000002857
FRP Reinforcement	2%	Ichor Restoration 7601 Chester Dr. Prunedale, CA 93907 CA#850552; CA DIR(PWC)#1000005796
Rebar	1%	RCK & Associates, Inc. Reinforcing PO Box 8008 Sacramento, CA 95818 CA#936123; CA DIR(PWC)#1000030332
Cellular Fill	2%	Cell-Crete 995 Zephyr Ave Hayward, CA 94544 CA#243404; CA DIR(PWC)#1000000262

**K.G. Walters Construction Co., Inc.**

<u>Description of Work</u>		<u>Subcontractors &amp; Address</u>
Reinforcing Steel	1.5%	Camblin Steel 548 Gibson Dr. suite 150 Roseville, CA 95678 CA#218839; CA DIR(PWC)#1000003852
Crack Repair/FRP Reinforcement	3%	Ichor Restoration 7601 Chester Dr. Prunedale, CA 93907 CA#850552 C61-D12; CA DIR(PWC)#1000005796
Painting/Coating	9%	FD Thomas P.O. Box 4663 Medford, OR 97501 CA#610403; CA DIR(PWC)#1000000093
Electrical	4%	San Joaquin Electric P.O. Box 30068 Stockton, CA 95213 CA#410103; CA DIR(PWC)#1000002857
Dewatering/Drilling	2.5%	Viking Drillers, Inc. 5950 Granite Lake Dr. Granite Bay, CA 95746 CA#476668; CA DIR(PWC)#1000002722

**Secondary Clarifier No. 2 Rehabilitation Project**  
**CONTRACTOR'S SUBCONTRACTORS**

Cellular Fill	3%	Cell – Crete Corporation 135 E. Railroad Ave. Monrovia, CA 91016-4652 CA#243404; CA DIR(PWC)#100000262
AC Paving	1.5%	G.B. General Engineering P.O. Box 7858 South Lake Tahoe, CA 96158 CA#792014 A; CA DIR(PWC)#1000049509

**Farr Construction Corporation dba Resource Development Company**

<u>Description of Work</u>		<u>Subcontractors &amp; Address</u>
Dewatering	4.5%	Viking Drillers, Inc 5950 Granite Lake Drive Granite Bay, CA 95746 CA#476668; CA DIR(PWC)#1000002722
Electrical/Instrumentation	4.5%	SAN JOAQUIN ELECTRIC INC 8985 Double Diamond Pkwy B9 Reno, NV 89521 CA#410103; CA DIR(PWC)#1000002857
Cellular Concrete	2%	GONSALVES & SANTUCCI INC dba CONCO 5141 COMMERCIAL CIRCLE CONCORD, CA 94520 CA#199902; CA DIR(PWC)#1000000409
FRP Installation& Hydrophobic Foam injection	3%	ICHOR RESTORATION 7601 CHESTER DR PRUNEDALE, CA 93907 CA#850552 C-61/D12; CA DIR(PWC)#1000005796
Paving	1%	West Coast Paving Inc. P.O. Box 19102 Reno, NV 89511 CA#972431; CA DIR(PWC)#1000020405

# Annual Sewer Inspection Update

Ross Cole  
Asset Management Analyst



# Sewer Asset Management Program

## Gravity Main Condition Assessment

- 312 Miles of sewer main line total = 1.65M linear feet (LF)
- 330 Pipes on Enhanced Cleaning List (EC)
- Goal = Inspect 10% of system per year
- Current equipment: Large CCTV Truck and newer portable camera for easements
- Follow industry standard for defect coding (PACP)



# CCTV Inspection Program Overview

- Recent Inspection Progress

	Actual Inspections (LF)		Goal (10% of system = 165k LF)
2018 Total	320,310 LF		165,000 LF
2019 Total	129,931 LF		165,000 LF
2020 Total	81,170 LF		165,000 LF
2021 Total	97,513 LF		165,000 LF
2022 Total	169,516 LF		165,000 LF
<b>Total Inspected</b>	<b>798,440 LF</b>	<b>2018 – 2022 Total Goal</b>	<b>660,000 LF</b>

Our goal for 2023 is to complete at least 165,000 LF of inspections





# Corrective Action Based on Defect Type

Defect Type	Commonly Seen Defects	Repair Method
Point Defect	Holes, Fractures, Surface damage	Spot Repair
Root Defect	Roots in laterals / joints	RootX Herbicide / Spot Repair
Continuous Defect	Multiple fractures, extended surface damage	Full CIPP Lining
Sag Defects	High water levels, Change in water level	Open Trench Replacement



# Corrective Action Based on Defect Type

Defect Type	Expected Prevalence	Repair Method
Point Defect	22% of Pipes 3600 Defects	Spot Repair
Root Defect	12% of Pipes 825 Pipes	RootX Herbicide / Spot Repair
Continuous Defect	0.6% of Pipes; 40 Pipes; 13,080 LF	Full CIPP Lining
Sags & Other Defects	2.2% of Pipes; 39,151 LF	Open Trench Replacement

2023 estimates for Total Project Costs per linear foot:

- \$630 / LF for Open Trench Construction
- \$180 / LF for Cast-in-Place Pipe (CIPP)



# Comparison to Previous Analysis

## System-wide Projections

	2018-2019	2020	2021	2022
	963 Pipes Inspected (27% of System)	1,653 Pipes Inspected (32% of System)	2,104 Pipes Inspected (38% of system)	2,811 Pipes Inspected (48% of system)
% of Pipes with Point Defects	22%	23%	23%	20%
% of Pipes with Continuous Defects	1.2%	0.8%	0.8%	0.6%
% of Pipes with Sags & Other Defects	3%	2.5%	2.5%	2.2%

- Projections will continue to be refined as more of the system is inspected





# Next Steps

- Inspect Remaining EC Pipes
- Develop Data-driven Capital Projects
  - Continue using inspection data to identify geographical project areas based on condition
- Continue Refining Future Inspection Priorities
  - Continue working with local partners to inspect ahead of their construction projects
  - Focus inspections in areas with known I&I problems
- Force Main Asset Management Program
  - Inspection of the C Export line (October 2023)
- Baseform



# Questions?

