2024 Grower Meeting

November 13, 2024

Agenda

- Welcome
- FERC Relicensing/VA Update
- Comprehensive Water Plan
- Water Projects
  - Upper Main Canal Rehabilitation
  - Turlock Lake Dam Rehabilitation
  - Irrigation System Modernization Project
  - Lateral 5.5 Regulating Reservoir
  - Solar Over Canal (Project Nexus)
  - Lateral 8 & Ceres Main Reservoir Floating Solar
- Water Accounting Structure Agreement
- Water Rates

FERC Relicensing & Voluntary Agreement Update

FERC Relicensing & Voluntary Agreement Update

- FERC Relicensing
  - National Marine Fisheries Service (NMFS)
  - 2014 Recovery Plan
  - Goal: favorable Biological Opinion
- Voluntary Agreement
  - Bay Delta Plan 2018: 40% unimpaired flow
  - Goal: science-based, balanced alternative
  - “More flow, more habitat, more fish”
  - Spring 2025?

Comprehensive Water Plan

Irrigation System Modernization Plan

Vision: **A modernized automated irrigation system capable of delivering water to customers within 24 hours with no unintended spillage, meeting the changing needs of TID and it's customers while reducing reliance on groundwater resources and improving groundwater quality**

Priority:

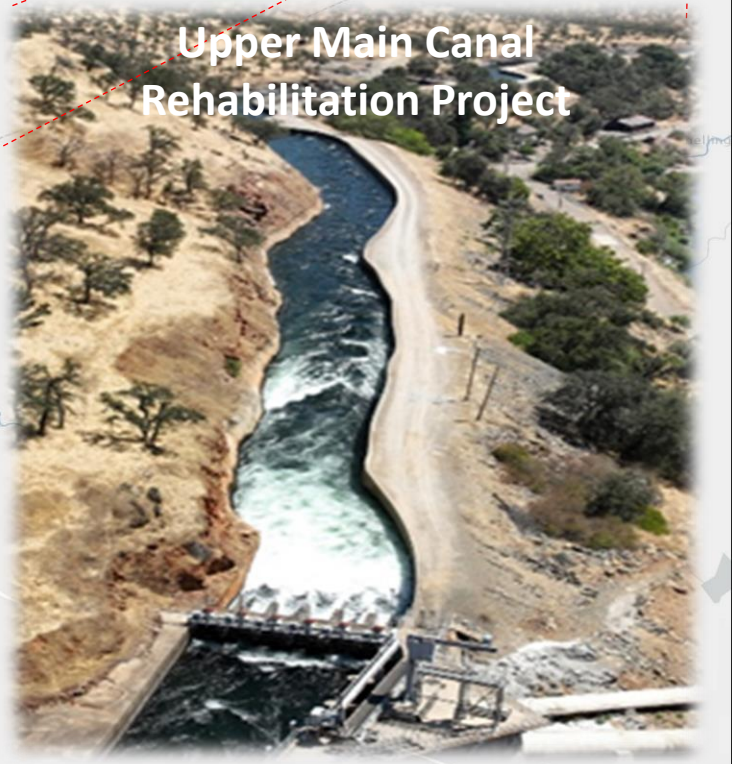
- **Water Conservation**

Timing: **20-Year Construction Period**

Irrigation System Modernization Plan

- **20-Year Construction Period**
  - Includes Ceres Main Canal Total Channel Control Pilot Project (2025-2027)
  - Automate up to one canal/service area per year
  - Focuses troubleshooting of startup and in-season issues to one canal/service area
    - Time needed for operators to transition canal operations
    - Time needed and support for customers to adapt to new system
  - Reduces impacts to winter irrigation, maintenance work and storm water routing
  - Increases usage of District construction forces instead of outside contractors
    - Reduced construction cost
    - Better quality
    - Better accommodate winter irrigation, maintenance work and storm water routing
- **Construction Period will Likely Change Based on TCC Pilot Results and Future Conditions**
  - District financial condition
  - Grant funding
  - Agricultural industry condition
  - Water availability (prolonged drought)
  - Regulatory requirements
  - Customer adaptation (change management)

Upper Main Canal & Turlock Lake Dam Rehabilitation Projects

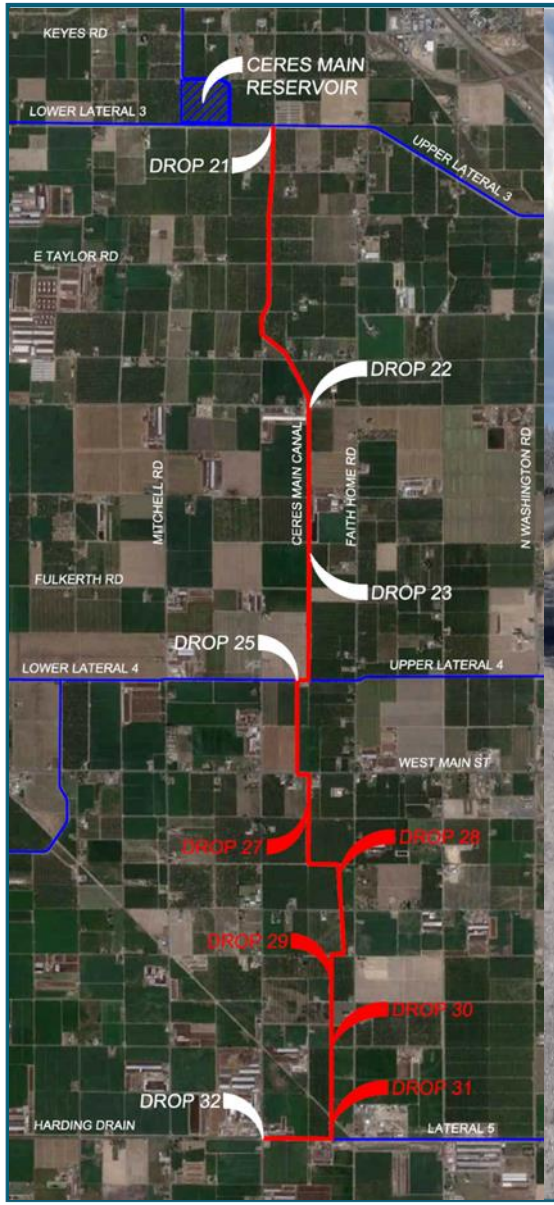


La Grange Dam
La Grange
Upper Main
Main Canal
Turlock Lake
Turlock Main Canal
Highline Canal
Cross Ditch 1
Cross Ditch 2
Waterford
Hickman
Patterson
Cortez
Ballico
Delhi
Jet
Hilmar
Crows Landing
Livingston
Timba
Stevinson
Newman
Lateral 5.5
Lateral 6
Upper Stevinson
Lateral 8 Reservoir
Lateral 7
Lateral 8
Lower Stevinson
Merced River

Rubicon Total Channel Control

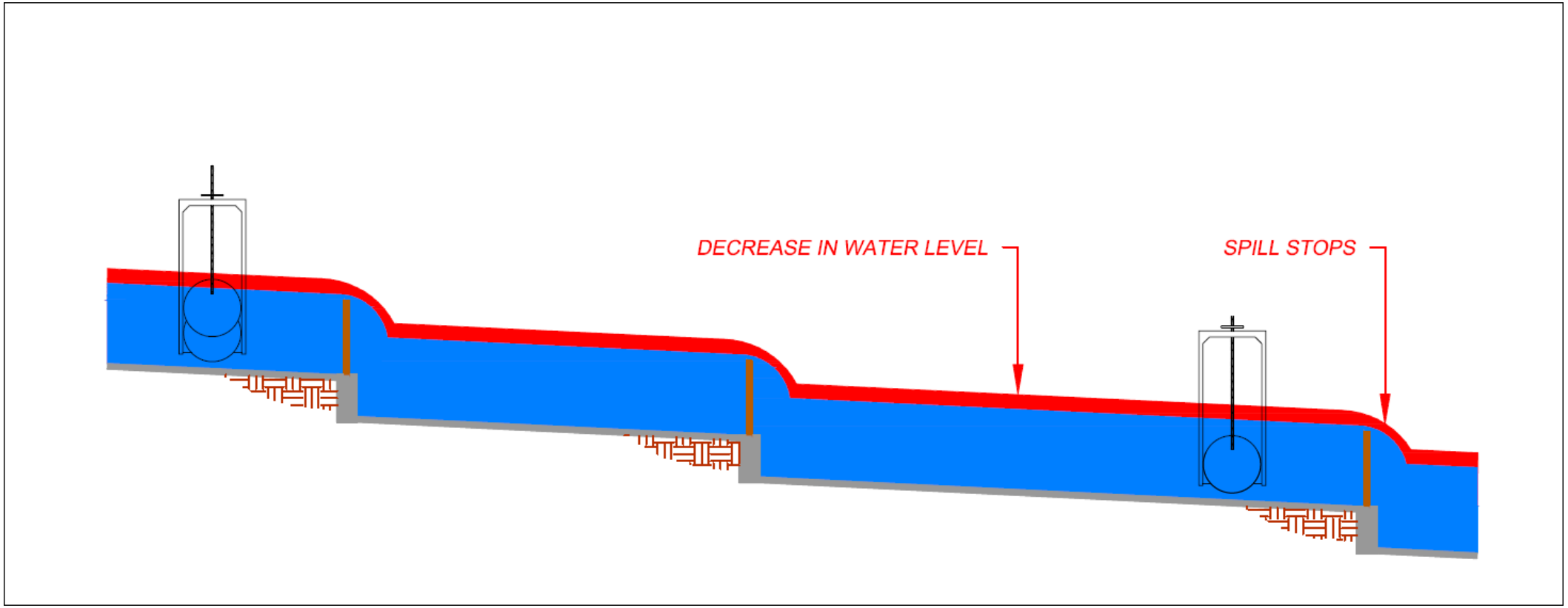
Irrigation System Modernization Plan

Ceres Main Canal Total Channel Control Pilot Project

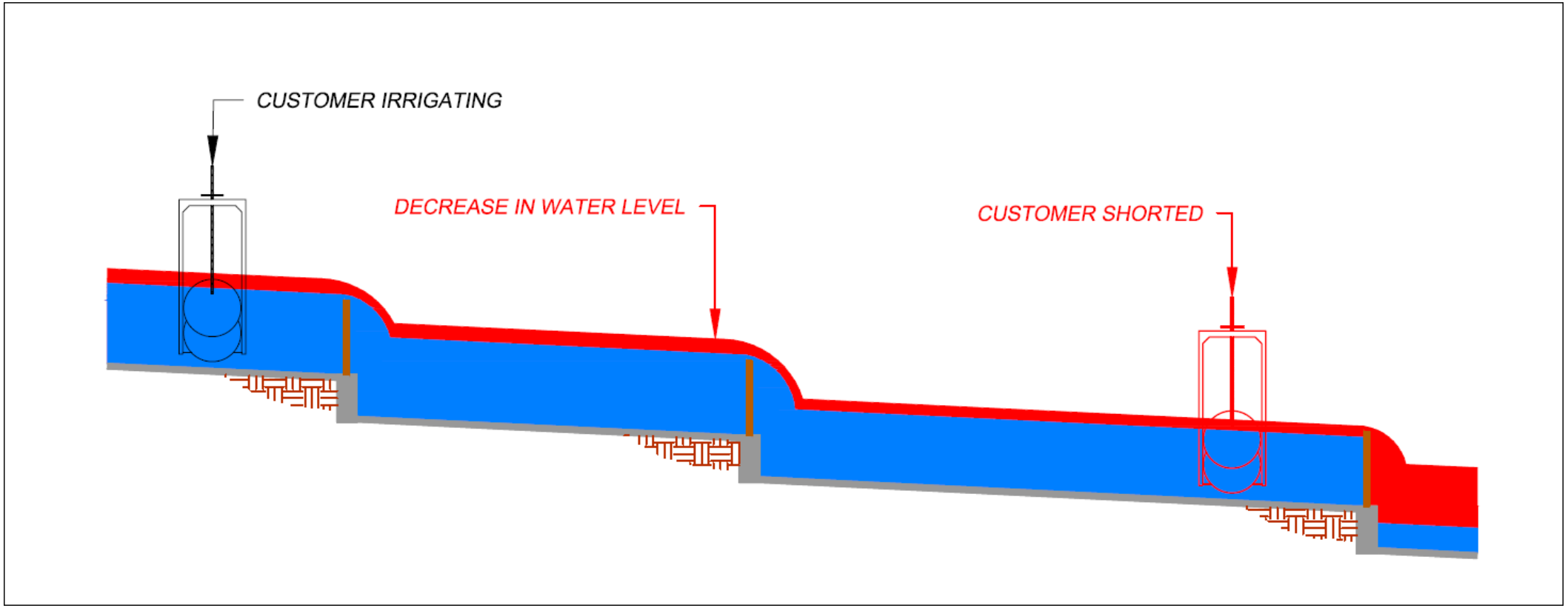


- **Background**
  - Automate 10 Canal Drops
    - 5 drops already rehabilitated
    - Rehabilitate 5 additional drops
  - Automate 60 Canal Side Gates
    - Rehabilitate gate structures
    - Install new Rubicon slip meters
  - Demand Management System
    - Customer online ordering
    - Automatic irrigation scheduling
    - Automatic irrigation delivery
- **Expected Benefits**
  - Increase in Canal Control
  - 600 AF/year in Water Savings
  - Improved Irrigation Reliability
  - Faster Response to Demand
- **Development Plan and Status**
  - Capital budget of $4.3 million
  - Construct Winter 2025-2026
  - Pilot system in 2026 and 2027

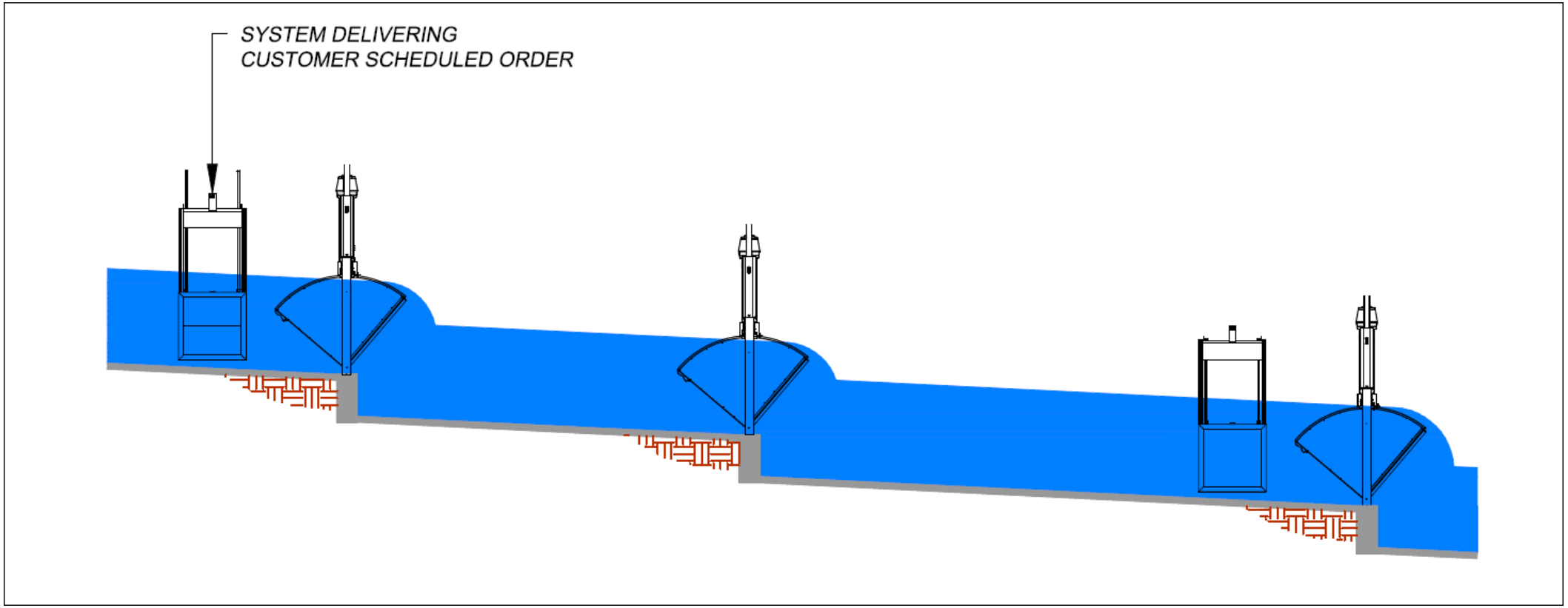
Example 1: Existing Irrigation System Spills



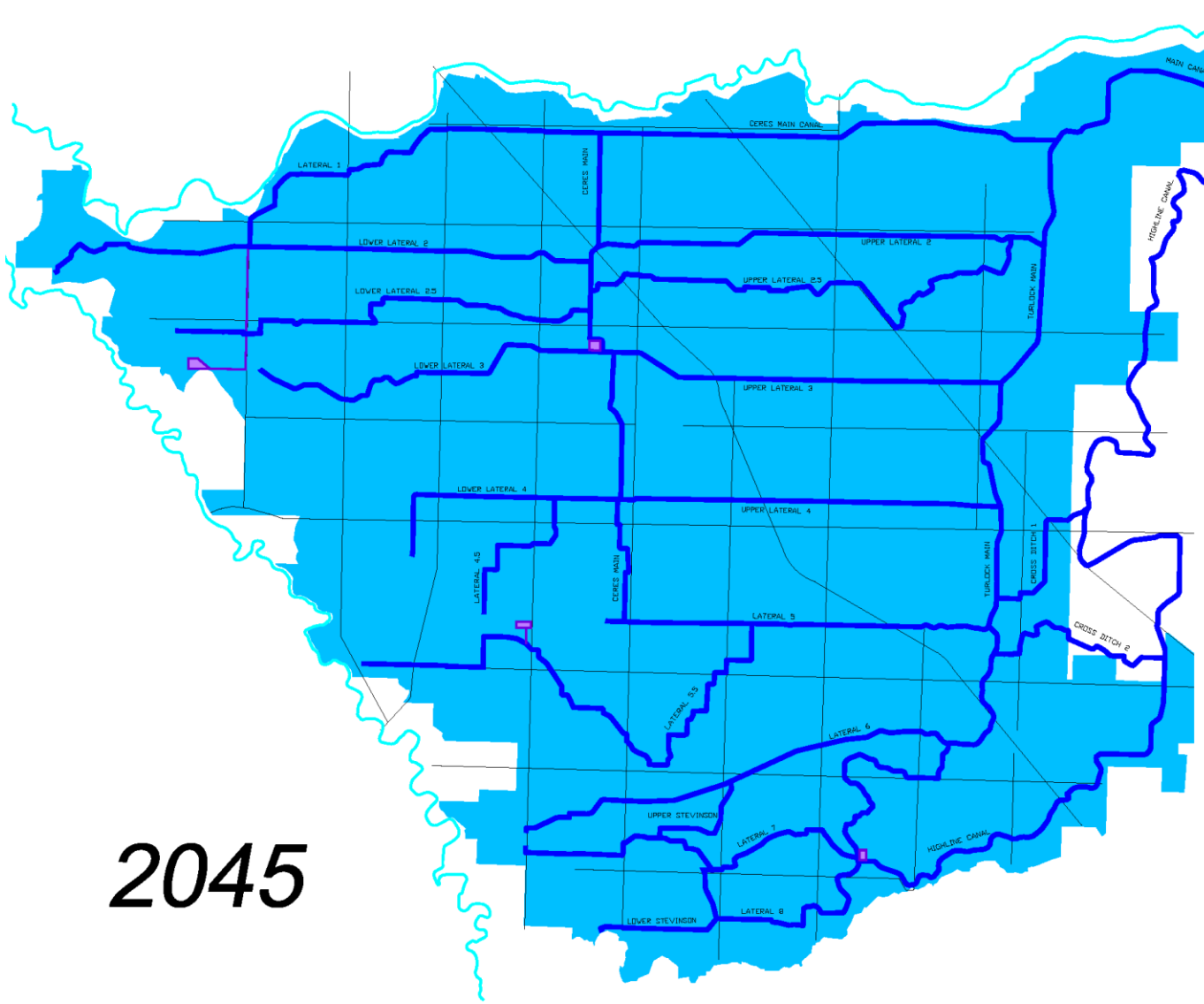
Example 2: Existing Irrigation System Shortages



Rubicon Total Channel Control System



Irrigation System Modernization Plan



2045

Projects In Progress:

- None

Completed Projects:

- Highline
- Upper Lateral 2
- Upper Lateral 4
- Upper Lateral 2.5
- Upper Lateral 3
- Lower Lateral 3
- Ceres Main

Water Savings:

- +2,300 AF/yr (44,000 AF/yr)

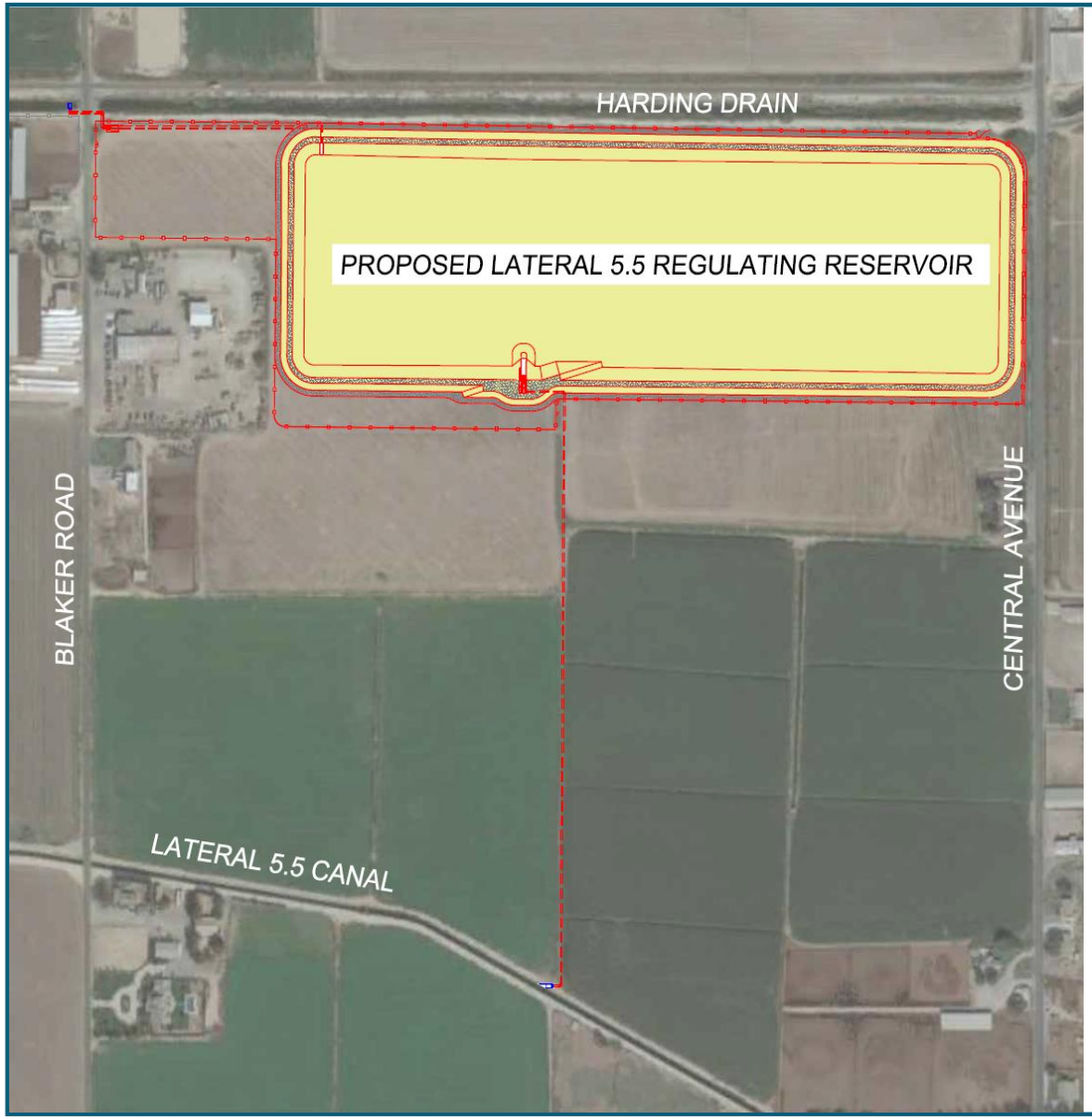
Cost

- +$45.2 Million ($160.9 Million)

Irrigation System Modernization Plan

				5-Year Combined Totals	
Year	**Facilities Automated**	**Cost (Millions)**	**Water Savings (AF/yr)**	**Cost (Millions)**	**Water Savings (AF/yr)**
2016	Lateral 8 Regulating Reservoir and Lateral 8 Level 4 TCC	NA	6,400	NA	6,400
2023	Ceres Main Regulating Reservoir and Partial Ceres Main Level 4 TCC	NA	10,000	NA	10,000
2024	Main Canal Level 4 TCC	$1.1	0		
2025	Main Canal Level 4 TCC, Ceres Main Extension Level 5 TCC	$4.4	2,000		
2026	Ceres Main Extension Level 5 TCC, Lateral 5.5 Regulating Reservoir	$12.1	4,400		
2027		$0.0	0	$30.3	7,300
2028	Lower Lateral 4, Lateral 4.5	$2.6	0		
2029	Lower Lateral 4, Lateral 4.5, Turlock Main	$5.6	900		
2030	Turlock Main, Cross Ditch 1	$4.4	0		
2031	Cross Ditch 2, Lateral 8, Lateral 1	$6.3	0		
2032	Lateral 1, Lower Lateral 2	$6.8	400		
2033	Lower Lateral 2, Lower Lateral 2.5	$8.9	2,100	$49.6	7,500
2034	Lower Lateral 2.5, Lateral 6	$7.3	1,500		
2035	Lateral 6, Lower Lateral 3 Reservoir	$20.4	3,500		
2036	Lateral 6, Upper Stevinson, Lateral 7	$7.1	4,200		
2037	Lateral 7, Lower Stevinson	$6.0	0		
2038	Lateral 7, Lower Stevinson, Lateral 5	$7.7	5,400	$35.9	10,500
2039	Lateral 5, Lateral 5.5	$6.9	900		
2040	Lateral 5.5, Highline	$8.2	0		
2041	Highline, Upper Lateral 2, Upper Lateral 4	$8.1	2,300		
2042	Upper Lateral 2, Upper Lateral 4, Upper Lateral 2.5	$9.2	0		
2043	Upper Lateral 2.5, Upper Lateral 3, Lower Lateral 3	$10.3	0	$45.2	2,300
2044	Upper Lateral 3, Lower Lateral 3, Ceres Main	$11.5	0		
2045	Ceres Main	$6.1	0		
* All costs shown are in 2024 dollar amounts			**Totals**	$160.9	44,000

Lateral 5.5 Regulating Reservoir Project



- **Background**
  - Proposed by staff in 2020 to capture spills in Harding Drain for use on Lateral 5.5
  - 40.1 acre property purchased in 2021
  - Current estimated cost of $10.8 million
- **Benefits**
  - 4,000 AF/year average water savings
  - Reduced local groundwater pumping
  - Improved water quality
  - Improved customer service on 3,750 acres
    - More stable flows
    - Increased water supply reliability
    - Faster operational response times
- **Development Plan and Status**
  - Construction plans complete
  - CEQA environmental review complete
  - USBR WaterSMART grant application submitted

Project Nexus

- **Background**
  - Solar-over-canal conceptualized in 2021 UC Merced paper
  - State budgeted $20 million for pilot project
  - TID selected as host and owner/operator of infrastructure
- **Expected Benefits**
  - Source of local, renewable energy generation
  - Less aquatic vegetation from shading
  - Water savings from reduced evaporation
  - Minimal impacts to farmland compared to other solar projects
- **Development Plan and Status**
  - Narrow-span Site
    - Adjacent to Ceres Main Reservoir
    - 1,440 linear feet of canal coverage (800 kW capacity)
    - Completion expected in January 2025
  - Wide-span Site
    - Downstream of Turlock Lake
    - Expected ~200 linear feet of canal coverage (500 kW capacity)
    - Completion expected in Summer 2025

Floating Solar Projects

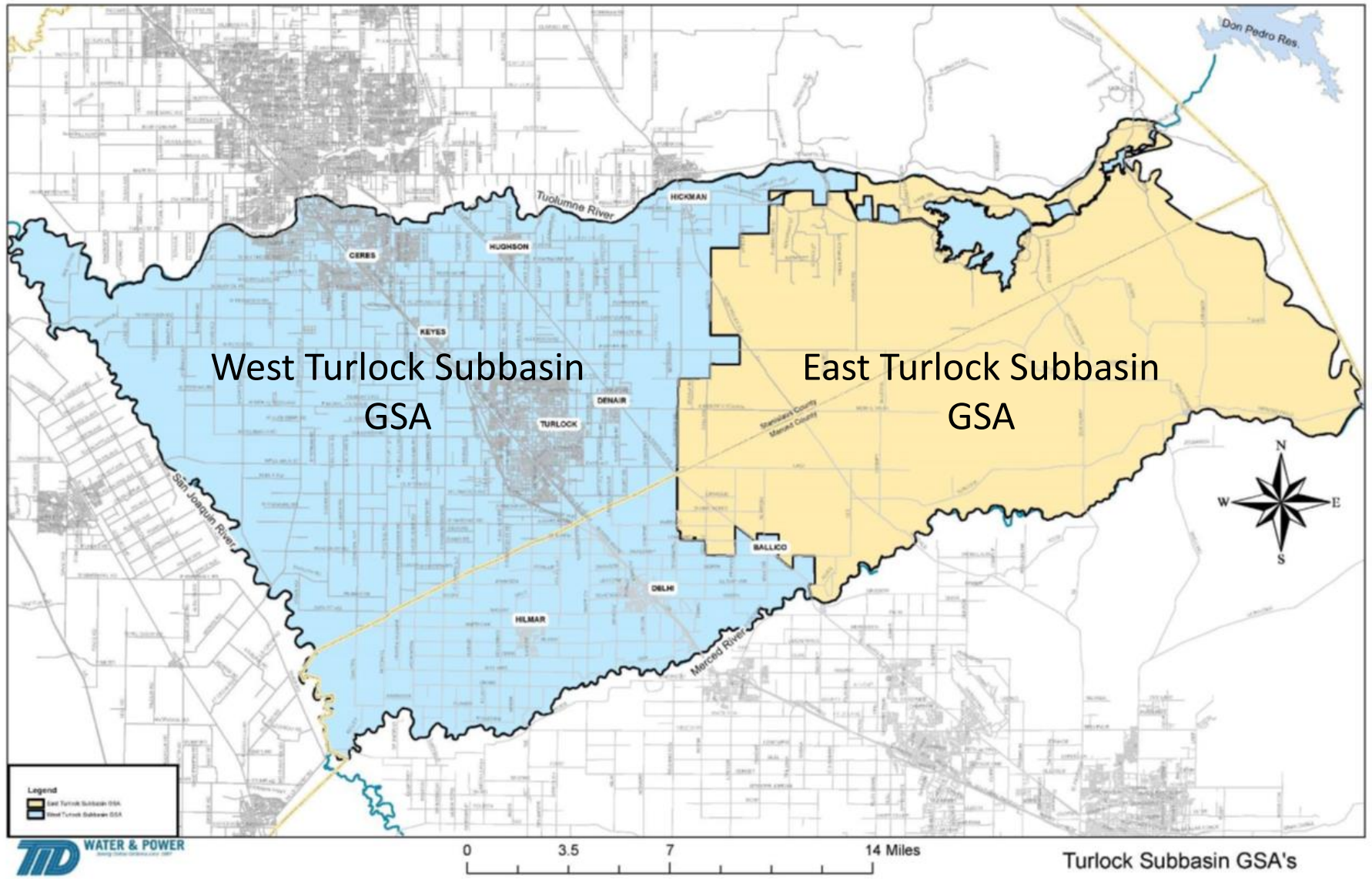
- **Background**
  - Conceptualized in 2007 in Japan
  - TID visited installation at Healdsburg in 2023
- **Expected Benefits**
  - Source of local, renewable energy generation
  - Efficient use of existing property for generation
  - Reduced evaporation loss from reservoir
  - Increased energy efficiency from solar panels
- **Development Plan and Status**
  - Lateral 8 Regulating Reservoir
    - 4 MW AC generating capacity
    - $10.8 million total estimated cost
    - Received $5 million grant from USBR
    - Construction anticipated in 2026 to 2027
  - Ceres Main Reservoir
    - 4 MW AC generating capacity
    - $10.8 million total estimated cost
    - USBR grant application submitted
    - Potential construction in 2027 to 2028

Groundwater Accounting Structure Agreement

SGMA Requirements

- Sustainable Groundwater Management Act (SGMA) - 2014
- SGMA requires GSAs to be established within each subbasin
- SGMA requires each subbasin be managed by one or more GSPs; developed and implemented by one or more GSAs
- SGMA requires sustainability by 2042
  - Defined by the avoidance of “undesirable results” in each of six sustainability indicators
- GSP must set operational criteria for each sustainability indicator
  - Groundwater Levels
  - Groundwater Storage
  - Interconnected Surface Water
  - Water Quality
  - Seawater intrusion
  - Subsidence

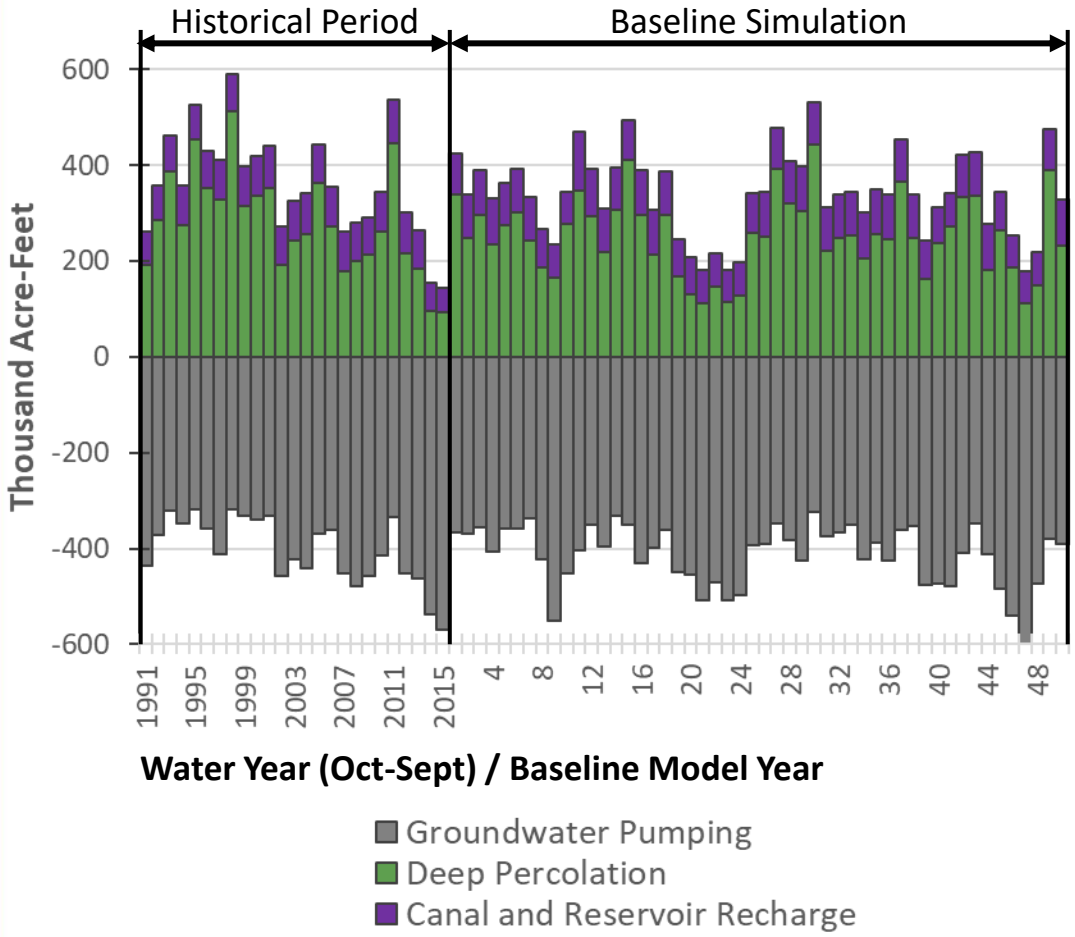
Two Groundwater Sustainability Agencies

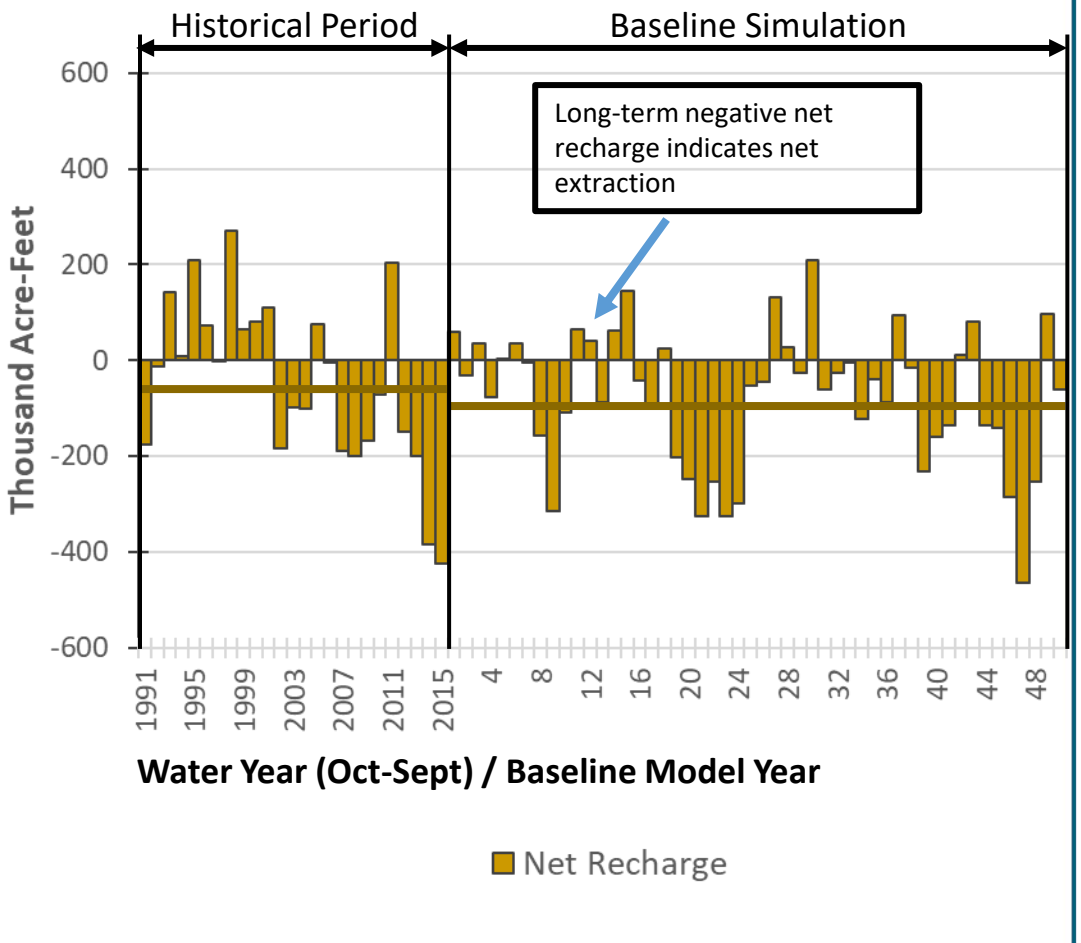


The Turlock Subbasin as a whole is a net extractor from the GW system

Historical Net Extraction: **65,000 AFY**

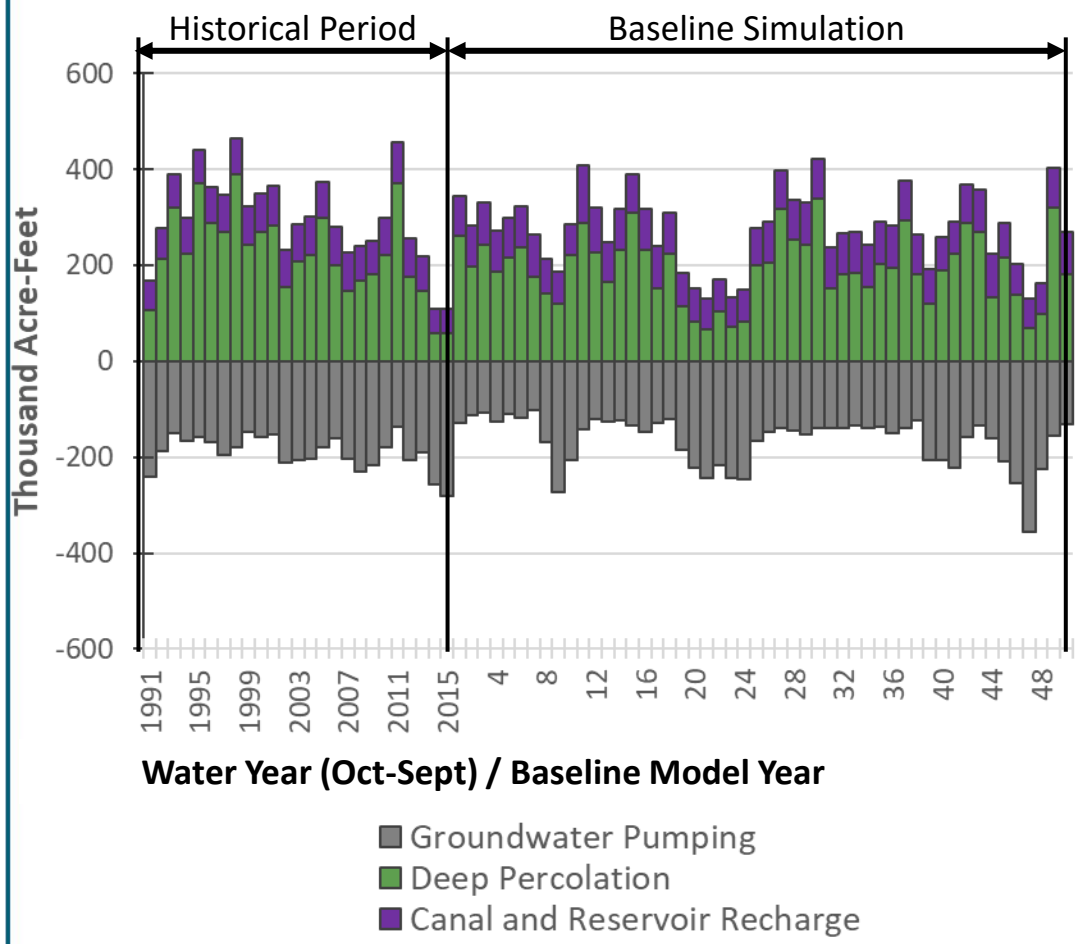
Future Net Extraction: **76,000 AFY**

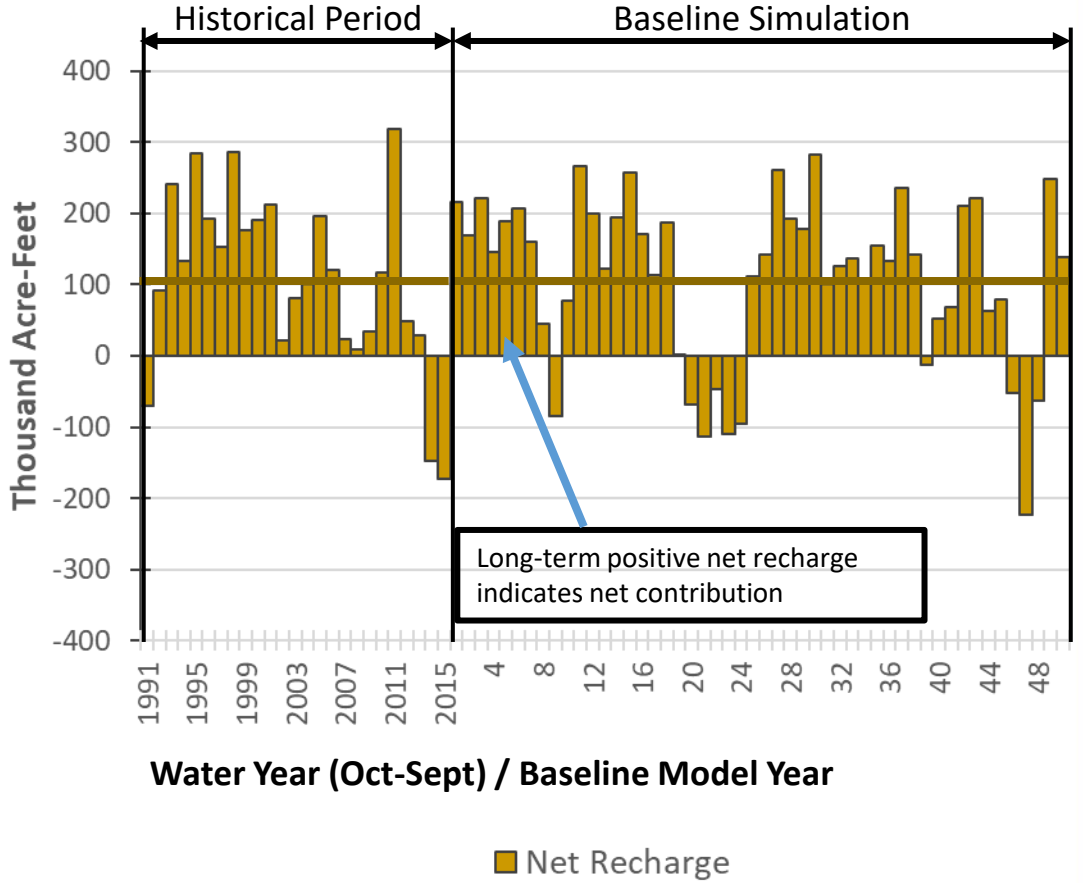




The WTSGSA is a net contributor to the GW system

Historical Net Recharge: **107,000 AFY**
Baseline Net Recharge: **109,000 AFY**

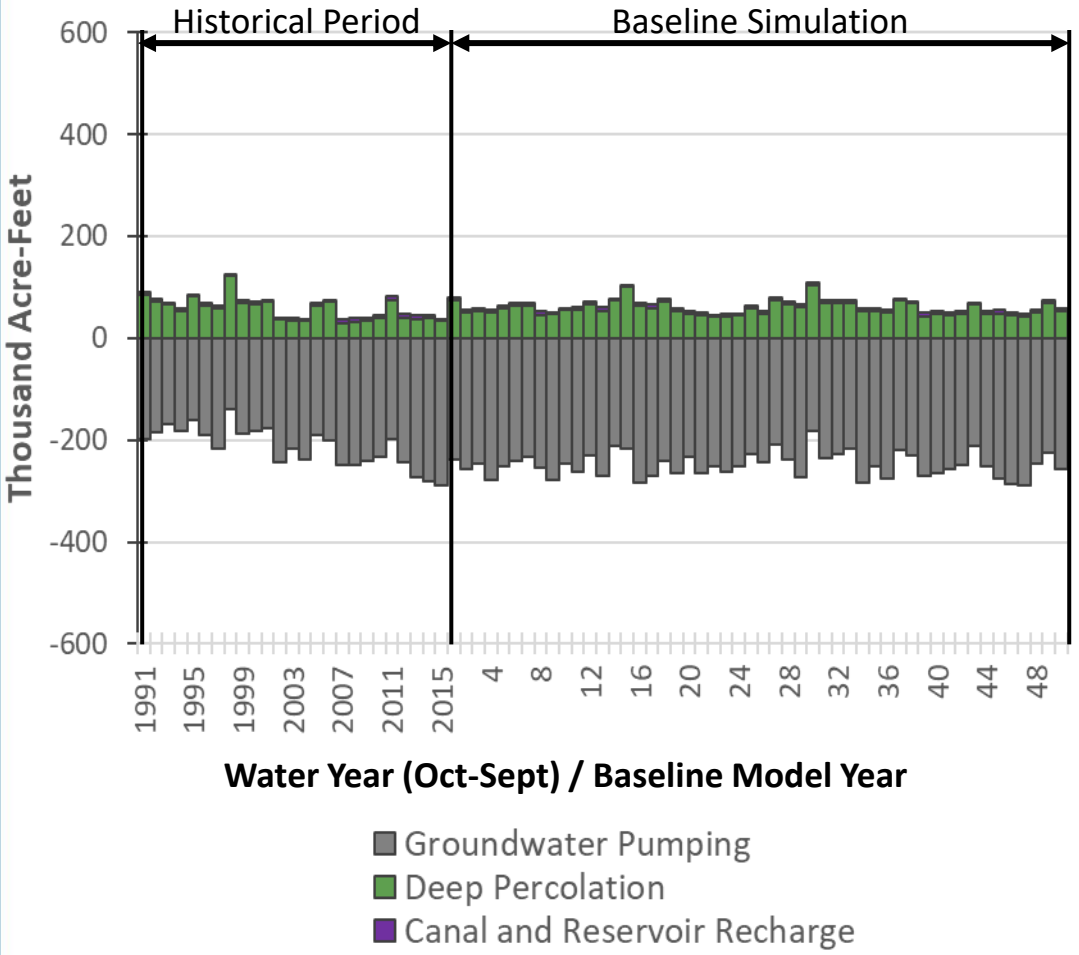


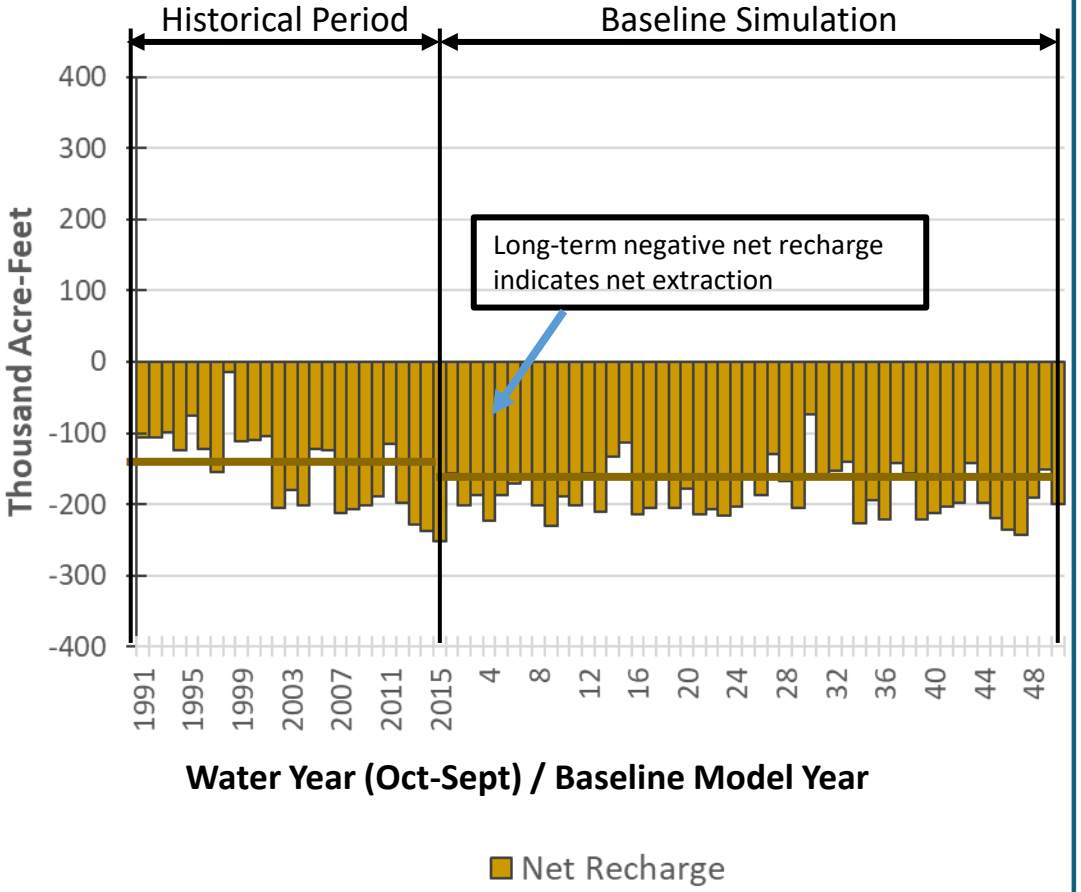


The ETSGSA is a net extractor from the GW system

Historical Net Extraction: **152,000 AFY**

Baseline Net Extraction: **185,000 AFY**





Water Accounting Structure Agreement

Objective: Collaborate to achieve groundwater sustainability

- Demand Management
  - ETSGSA: reduce overdraft by 71,000 AFY by fallowing 21,000 acres (or equivalent) = 25% of irrigated acreage
- Replenishment Water
  - TID provides up to 35,000 AFY when available (avg. 20,000 AFY)
  - Board sets price based on local market
- Transitional Water
  - Some WTS water will be allocated to ETS to cover its annual overdraft
  - ETS reduces reliance over time with projects and demand management (reduced pumping)
  - "Transitional Water:" paper water equal to annual net overdraft
  - 130,000 AFY → 44,00 AFY over 20 years
  - $50/AF ($80 million)

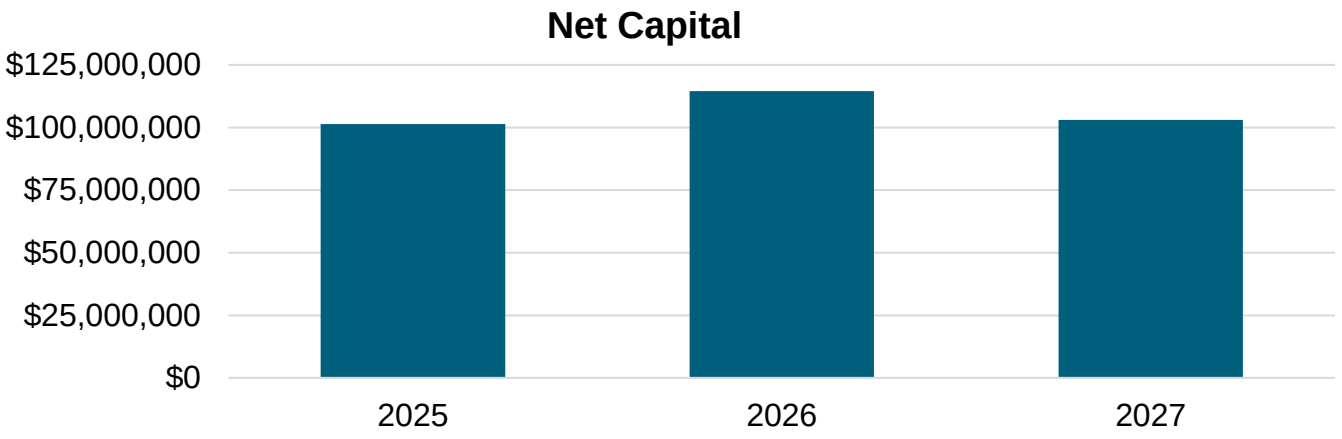
Water Rates

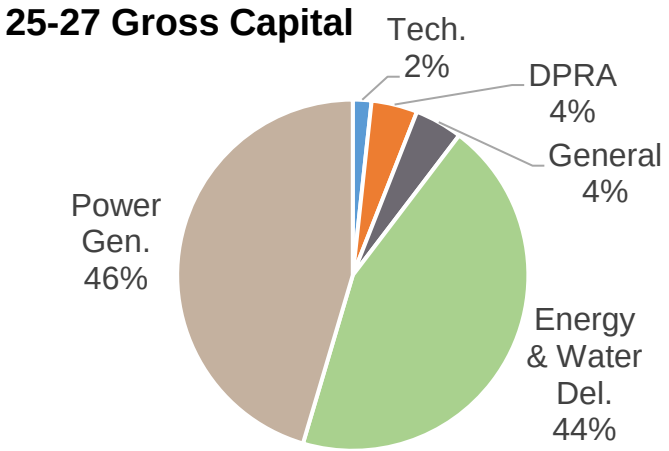
Water Rates

- When was the last water rate increase?
  - Last water rate increase was ten years ago (2015)
- What has the District done to maintain rates for 10 years?
  - Utilization of reserves
  - Controlling expenditures
- Where are we now?

Capital Budget Summary: Functional Area

Description	2025	2026	2027	Total '25 – '27
Functional Area				
DPRA	$ 5,945,000	$ 7,061,000	$ 4,873,000	$ 17,879,000
Energy & Water Delivery	46,125,000	74,921,000	65,378,000	186,424,000
General District	5,695,000	7,850,000	4,985,000	18,530,000
Power Generation	71,012,000	62,959,000	57,477,000	191,448,000
Technology	3,720,000	2,237,000	1,282,000	7,239,000
Functional Area Gross	**132,497,000**	**155,028,000**	**140,995,000**	**421,520,000**
Total Contributions	*(31,065,000)*	*(40,518,000)*	*(30,955,000)*	*(102,538,000)*
Functional Area Net	**$101,432,000**	**$114,510,000**	**$103,040,000**	**$318,982,000**





Capital Projects – Key Areas of Focus

- Reliability
  - Regulating reservoirs
  - Main Canal efficiency projects
  - Irrigation system modernization projects
- Infrastructure
  - Upper Main Canal rehabilitation
  - Turlock Lake Dam rehabilitation
- Regulatory
  - FERC Relicensing
  - Bay-Delta Plan & VA
  - Sustainable Groundwater Management Act (SGMA)
  - Water Conservation Act (SBx7-7)

Cost of Service Analysis

1. Rate Study
2. Revenue Requirement
3. Water Cost of Service
4. Proposed Rate Results
5. Customer Bill Impacts

Rate Study

STEP 1	Determine the revenue requirements of the utility (electric & water)
STEP 2	Unbundle costs by functions and services (power supply, transmission & distribution, customer, & Irrigation)
STEP 3	Classify costs (demand, energy, customer costs, irrigation, domestic etc.)
STEP 4	Allocate costs among customer classes
STEP 5	Design rates

Water Cost of Service

- Water Cost of Service
  - Total cost to service irrigation customers
- Revenue Applied to Water
  - Water for fuel (Net value of Don Pedro hydropower facility)
  - Other revenues (CCSF contribution, Water Accounting Structure Agreement, etc.)
- Revenue Requirement
  - 6.2% increase in revenue requirement over 3 years

Water Rates

- Consolidation of irrigation usage Tiers 1 – 3 into a single rate
- Cost justified Tier 4 rate
- Transition Garden Heads from fixed fee per Garden Head to the Irrigation rate structure (i.e. per acre fee + volumetric rate per AF)
- Establish a minimum fee of $200 per year per customer

Water Rates

- Current tiers vary with Normal Year and Dry Year rates:

	Current
Normal Year Fixed Fee per Acre	$60.00
Dry Year Fixed Fee per Acre	$68.00
Volumetric Rates (AF per Acre):	
Tier 1	$2.00
Tier 2	$3.00
Tier 3	$15.00
Tier 4	$20.00

- Recommended tiers vary with annual Available Water:

	FY 2025	FY 2026	TY 2027
Normal Year Fixed Fee per Acre	$60.00	$60.00	$60.00
Dry Year Fixed Fee per Acre	$68.00	$68.00	$68.00
Volumetric Rates:			
Tier 1 – Tier 3 (Up to Available Water)	$2.70	$3.23	$3.83
Tier 4 (Over Available Water)	$20.00	$20.00	$20.00

Customer Bill Impacts – Garden Head Customer

- Based on Normal Year Rate

	FY 2024	FY 2025	FY 2026	TY 2027
Garden Head – 1 AC, 4 AF	$350	$200	$200	$200
$ Difference		($150)	$0	$0
% Difference		(42.9%)	0.0%	0.0%
Garden Head – 3 AC, 12 AF	$350	$212	$219	$226
$ Difference		($138)	$6	$7
% Difference		(39.3%)	3.0%	3.3%
Garden Head – 5 AC, 20 AF	$350	$354	$365	$377
$ Difference		$4	$11	$12
% Difference		1.1%	3.0%	3.3%

Customer Bill Impacts – Typical Customer

- Based on Normal Year Rate

	FY 2024	FY 2025	FY 2026	TY 2027
Irrigator – 40 AC, 60 AF (18”)	$2,520	$2,562	$2,594	$2,630
$ Difference		$42	$32	$36
% Difference		1.7%	1.2%	1.4%
Irrigator – 40 AC, 110 AF (33”)	$2,650	$2,697	$2,755	$2,821
$ Difference		$47	$58	$66
% Difference		1.8%	2.2%	2.4%
Irrigator – 40 AC, 240 AF (72”)	$4,200	$4,432	$4,517	$4,612
$ Difference		$232	$85	$96
% Difference		5.5%	1.9%	2.1%

Next Steps

- November 5, 2024
  - Water Rate Workshop
  - Set Public Hearing
- Notices will be sent to customers by end of November
- January 14, 2025
  - Water Rate Hearing
  - Water Rate Adoption