

Omochumne-Hartnell Water District

P. O. Box 211

Wilton, CA 95693

October 18, 2022 @ 10 am

8970 Elk Grove Blvd, Elk Grove, CA

Notice of meeting of the Omochumne-Hartnell Water District

Notice is hereby given that the Omochumne-Hartnell Water District calls a meeting. This meeting is open to the public. This meeting will be conducted entirely by teleconference. In Compliance with CA Executive Orders N-25-20 and N-29-20 members of the Board of Directors and members of the public will participate in this meeting by teleconference. The call-in information for the Board of Directors and the public is as follows:

Join Zoom Meeting

<https://us02web.zoom.us/j/86774305120?pwd=T1YyV2RHsk9nOHViMXBmcGNFNldHdz09>

+1 669 900 9128 US

Meeting ID: 867 7430 5120

Passcode: 865005

One tap mobile

+16699009128,,86774305120#,,,,*865005# US (San Jose)

Any member of the public on the telephone may speak during Public Comment or may email public comments to info@ohwd.org and comments will be read from each member of the public. During this period of modified Brown Act Requirements, Omochumne Hartnell Water District will use best efforts to swiftly resolve requests for reasonable modifications or accommodations with individuals with disabilities, consistent with the Americans with Disabilities Act, and resolving any doubt whatsoever in favor of accessibility. Requests for reasonable modifications under the ADA may be submitted to the same address

Call to Order:

1. Introductions
2. Determine if quorum is present

Public comments – comments are limited to 3 minutes for each presenter

(Comment will be received at this time for any items not on the agenda but are in purview of the Boards jurisdiction or any agenda item that does not specifically state public comment will be accepted)

Action Items:

1. Consideration of Findings Related to Remote Meetings Pursuant to AB361.
2. Consent Items
 - a. Review and Approve Agenda
 - b. Minutes from September 20, 2022
 - c. Financial report
 - i. Financial statement
 - ii. Invoices❖ Public Comment
3. Groundwater Recharge Project Report – Presentation – Laura Foglia, LWA
4. Discussion on Cosumnes River Flows and previous State Water Board rulings
❖ Public Comment
5. SGMA Compliance
 - a. Sacramento Valley – South American Groundwater Sub Basin (5-21.65)
 - i. GSP implementation and GSA cooperative agreement status
 - ii. Projects for GSP grant implementation Funding❖ Public Comment

b. San Joaquin Valley – Cosumnes Groundwater Sub Basin (5-22.16)

i. Update on Cosumnes Groundwater Authority

❖ Public Comment

6. Stormwater/Groundwater Recharge Permanent permit process

a. 5 year Temporary Permit Application

❖ Public Comment

Informational items:

1. SSCAWA Meeting
2. Received communications
3. Water Coordinator's Report
4. ACWA activity

General Managers Report:

1. Meetings and Correspondences

Directors:

1. Comments

Next regular meeting scheduled October 18, 2022 at 10 AM

Adjourn Meeting

Omochumne-Hartnell Water District Board

Meeting September 20, 2021 @ 10:00 AM

Meeting held by teleconference and video conference due to COVID-19

Call to Order: 10:02 am

1. Introductions
2. Determine if quorum is present
 - a. Directors Mark Wilson, Mark Stretars, Paul Hensleigh, Ken Mitchell, and Kurt Kautz were in attendance.

Public comments – Public comments were received.

Action Items:

1. Findings Related to Remote Meetings Pursuant to AB 361 – Legal Counsel reviewed findings related to remote meetings for AB 361 and the Governors current State of Emergency. The OHWD Board of Directors makes the following findings therefore will continue to meet remotely pursuant to AB361: 1. Conditions currently exist within the district, namely, that the district is included within the March 4, 2020 state of emergency declared by the Governor pursuant to Government Code section 8625, 2. And, that state or local officials have imposed or recommended measures to promote social distancing. A motion to accept findings made by Mr. Hensleigh, second by Mr. Mitchell. Roll call vote: Stretars; Aye, Wilson; Aye, Hensleigh; Aye, Kautz; Aye, Mitchell; Aye. Motion passed. 5/0/0
2. Consent Items: a.b.c. i.ii. Review and approve agenda. A motion to approve Agenda for the Regular Board Meeting on September 20, 2022, made by Mr. Hensleigh, second by Mr. Stretars. Roll call vote: Stretars; Aye, Wilson; Aye, Hensleigh; Aye, Kautz; Aye, Mitchell; Aye. Motion passed. 5/0/0
The Minutes from the Board Meeting on July 19, 2022 (no August 2022 meeting held) were reviewed. Review of all balances, accounts payable, and receivables to the district. A motion to file and accept the Meeting Minutes for the meeting on July 19, 2022, and to receive and file the monthly financial statement including invoices to be paid at this time made by Mr. Hensleigh, second by Mr. Stretars. Roll call vote: Stretars; Aye, Wilson; Aye, Hensleigh; Aye, Mitchell; Aye; Kautz. Motion passed. 5/0/0 Note- No meeting held in August 2022.
3. Resolution on Procedures to comply with Governor Newsom's Executive Order N-7-22 affirming the State of Emergency and well permitting requirements - Legal Counsel reviewed recommendation to have standardized for to use for well applications as they are received. Verifications before the new wells are issued to better protect the district and regulatory authority to exercise if necessary. Directors and public comments were received. A motion to adopt Resolution on Procedures to comply with Governor Newsom's Executive Order N-7-22 affirming the State of Emergency and well permitting requirements as presented, made by Mr. Stretars, second by Mr. Mitchell. Roll call vote: Stretars; Aye, Wilson; Aye, Hensleigh; Aye, Mitchell; Aye; Kautz. Motion passed. 5/0/0
4. Wackman Consulting Contract update – Legal Counsel reviewed contract update for Wackman Consulting. A motion to approve Wackman Consulting Contract as presented made by Mr. Hensleigh, second by Mr. Stretars. Roll call vote: Stretars; Aye, Wilson; Abstain, Hensleigh; Aye, Mitchell; Aye; Kautz. Motion passed. 4/0/1. Mr. Wilson abstains because he has not read the document.
5. Auditing Firm Selection – One incomplete proposal received back and Mr. Wackman will follow up with details. A motion to have Mr. Wackman and Treasurer Wilson to engage an auditing firm within the next month with an amount not to exceed \$8,000

made by Mr. Mitchell, second by Mr. Hensleigh. Roll call vote: Stretars; Aye, Wilson; Aye, Hensleigh; Aye, Mitchell; Aye; Kautz. Motion passed 5/0/0

6. SGMA Compliance
 - a. Sacramento Valley – South American Groundwater Sub Basin (5-21.65) –
 - i. GSP implementation and GSA cooperative agreement status- Mr. Wackman reviewed GSA meetings being held. Mr. Wackman has met with other GSA's. At this time the GSA's are close to an agreement with budget and implementation agreement.
 - ii. Projects for GSP grant implementation Funding – Mr. Wackman is working with Larry Walker and Associates on project implementation funding. A template for the grant project submittal has been drafted. Meeting will be held for potential projects in the coming weeks.
 - b. San Joaquin Valley – Cosumnes Groundwater Sub Basin (5-22.16)
 - i. Update on Cosumnes Groundwater Authority – Mr. Stretars gave an update from the meeting held yesterday September 19, 2022. Housekeeping discussions were the main topic, and potential grant application opportunities were discussed. Public comments were received.
7. Stormwater/Groundwater Recharge Permanent permit process-
 - a. 5-year Temporary Permit Application – Mr. Wackman reviewed moving forward and has been published in the Sacramento Bee for protest purposes and have received the affidavit for legal purposes. Board and public comments were received.
8. Groundwater Recharge Project update –
 - a. Sherbakoff Property – Mr. Wackman has reviewed that the project is completed. When the permit is complete the property can take water.
 - b. Laguna Del Sol –
 - i. Pilot dry well project – project is up and running currently. Running on well water, and getting information for monitoring, percolation rates, and how fast the water is going in. This project will run during the winter months and collect data to work with SMUD next winter.

Informational items:

1. SSCAWA Meeting – Mr. Wackman gave a review of last meeting attended.
2. Received communications – EBMUD BBQ will be held on October 7, 2022 at 11:30 AM at Pardee Center, Valley Springs.
3. Water Coordinator's Report – Mr. Mitchell reported the damns have been pulled out.
4. ACWA activity – No ACWA activity currently.

General Managers Report:

1. Meetings and Correspondences – Additional efforts for landowner outreach on the District expansion will be done this coming winter.

Directors:

1. Comments – Sly Park terms and status for clarity will be discussed at the October board meeting.
2. Director's meeting attendance report:
Kautz (1), Mitchell (1), Hensleigh (1), Wilson (1) Stretars (1)

The next regular meeting – **November 15, 2022 at 10 AM**

**** 8970 Elk Grove Blvd. Elk Grove CA.****

Adjourn Meeting - A motion to adjourn the Meeting at 12:02 pm, made by Mr. Hensleigh, second by Mr. Stretars. Roll call vote: Stretars; Aye, Hensleigh; Aye; Aye, Kautz; Aye, Wilson; Aye, Mitchell; Aye. Motion passed 5/0/0.

Omochumne-Hartnell Water District

A/P Aging Summary

As of October 17, 2022

| | CURRENT | 1 - 30 | 31 - 60 | 61 - 90 | 91 AND OVER | TOTAL |
|----------------------------|--------------------|---------------|---------------|---------------|---------------|--------------------|
| Chase Card Services | 1,727.02 | | | | | \$1,727.02 |
| Downey Brand Attorneys LLP | 3,371.00 | | | | | \$3,371.00 |
| Ken Mitchell | 50.00 | | | | | \$50.00 |
| Kurt Kautz | 50.00 | | | | | \$50.00 |
| Larry Walker Associates | 15,828.38 | | | | | \$15,828.38 |
| Mark L. Stretars | 50.00 | | | | | \$50.00 |
| Mark Wilson | 50.00 | | | | | \$50.00 |
| Paul Hensleigh | 50.00 | | | | | \$50.00 |
| Shasta Burns | 600.00 | | | | | \$600.00 |
| Wackman Consulting | 4,000.00 | | | | | \$4,000.00 |
| TOTAL | \$25,776.40 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$25,776.40 |

Omochumne-Hartnell Water District

Balance Sheet

As of October 18, 2022

| | TOTAL |
|-------------------------------------|---------------------|
| ASSETS | |
| Current Assets | |
| Bank Accounts | |
| LAIF | 116,822.25 |
| River City Bank | 269,514.94 |
| Total Bank Accounts | \$386,337.19 |
| Accounts Receivable | |
| Accounts Receivable | 142,763.60 |
| Total Accounts Receivable | \$142,763.60 |
| Total Current Assets | \$529,100.79 |
| Other Assets | |
| Loan Receivable - SSCAWA | 0.00 |
| Total Other Assets | \$0.00 |
| TOTAL ASSETS | \$529,100.79 |
| LIABILITIES AND EQUITY | |
| Liabilities | |
| Current Liabilities | |
| Accounts Payable | |
| Accounts Payable | 25,776.40 |
| SAFCA Bridge Loan | 0.00 |
| Total Accounts Payable | \$25,776.40 |
| Credit Cards | |
| Chase Visa | 0.00 |
| Total Credit Cards | \$0.00 |
| Total Current Liabilities | \$25,776.40 |
| Total Liabilities | \$25,776.40 |
| Equity | |
| Opening Bal Equity | 296,356.48 |
| Retained Earnings | 134,985.87 |
| Net Income | 71,982.04 |
| Total Equity | \$503,324.39 |
| TOTAL LIABILITIES AND EQUITY | \$529,100.79 |

Omochumne-Hartnell Water District

Budget vs. Actuals: 2022-23 Final Budget - FY23 P&L

July 2022 - June 2023

| | TOTAL | | | |
|---|---------------------|---------------------|-----------------------|----------------|
| | ACTUAL | BUDGET | OVER BUDGET | % OF BUDGET |
| Income | | | | |
| GSA Assessment | | 124,000.00 | -124,000.00 | |
| Interest | 147.41 | 200.00 | -52.59 | 73.71 % |
| Property Taxes | 5,083.89 | 170,000.00 | -164,916.11 | 2.99 % |
| SAFCA Reimbursements | 316,693.60 | 340,000.00 | -23,306.40 | 93.15 % |
| Total Income | \$321,924.90 | \$634,200.00 | \$ -312,275.10 | 50.76 % |
| GROSS PROFIT | \$321,924.90 | \$634,200.00 | \$ -312,275.10 | 50.76 % |
| Expenses | | | | |
| Accountant Fees | | 5,000.00 | -5,000.00 | |
| Dam Installation & Removal | | 10,000.00 | -10,000.00 | |
| Director's Per Diem | 1,000.00 | 3,000.00 | -2,000.00 | 33.33 % |
| Dues and Support Payments | 20.00 | 4,500.00 | -4,480.00 | 0.44 % |
| Election Expenses | | 500.00 | -500.00 | |
| Engineering Fees | | | | |
| General | 17,661.50 | 25,000.00 | -7,338.50 | 70.65 % |
| Grant Application Engineering | | 10,000.00 | -10,000.00 | |
| Ground Water Recharge | 4,094.40 | 30,000.00 | -25,905.60 | 13.65 % |
| Prop 68 Cost Share Cosumnes Basin - SAFCA | 13,349.38 | | 13,349.38 | |
| Total Engineering Fees | 35,105.28 | 65,000.00 | -29,894.72 | 54.01 % |
| General Manager Services | 16,000.00 | 48,000.00 | -32,000.00 | 33.33 % |
| Groundwater Recharge Project | 173,117.20 | | 173,117.20 | |
| Ground Water Recharge - Construction | | 340,000.00 | -340,000.00 | |
| Groundwater Recharge - Utilities | | 5,000.00 | -5,000.00 | |
| Groundwater Recharge Operations | | 5,000.00 | -5,000.00 | |
| Groundwater Recharge Permit Fees | 5,244.00 | 7,000.00 | -1,756.00 | 74.91 % |
| Total Groundwater Recharge Project | 178,361.20 | 357,000.00 | -178,638.80 | 49.96 % |
| Legal Fees | | | | |
| Legal - General | 11,334.00 | 15,000.00 | -3,666.00 | 75.56 % |
| Legal - Groundwater Recharge | 1,818.50 | 5,000.00 | -3,181.50 | 36.37 % |
| Legal - SGMA | 112.50 | 5,000.00 | -4,887.50 | 2.25 % |
| Total Legal Fees | 13,265.00 | 25,000.00 | -11,735.00 | 53.06 % |
| Liability Insurance | 112.50 | 2,500.00 | -2,387.50 | 4.50 % |
| Office Rent | 800.00 | 2,400.00 | -1,600.00 | 33.33 % |
| Office Supplies | 1,270.88 | 2,500.00 | -1,229.12 | 50.84 % |
| Postage-Post Office Box | 108.00 | 500.00 | -392.00 | 21.60 % |
| Secretarial Services | 2,400.00 | 7,200.00 | -4,800.00 | 33.33 % |
| SGMA Expenses | | | | |
| SGMA - Cosumnes Groundwater Basin | | 30,000.00 | -30,000.00 | |
| SGMA - South American Groundwater Basin | | 70,000.00 | -70,000.00 | |
| Total SGMA Expenses | | 100,000.00 | -100,000.00 | |
| SSCAWA - JPA Membership | 1,500.00 | 6,000.00 | -4,500.00 | 25.00 % |

Omochumne-Hartnell Water District

Budget vs. Actuals: 2022-23 Final Budget - FY23 P&L

July 2022 - June 2023

| | TOTAL | | | |
|-----------------------|---------------------|---------------------|-----------------------|----------------|
| | ACTUAL | BUDGET | OVER BUDGET | % OF BUDGET |
| Total Expenses | \$249,942.86 | \$639,100.00 | \$ -389,157.14 | 39.11 % |
| NET OPERATING INCOME | \$71,982.04 | \$ -4,900.00 | \$76,882.04 | -1,469.02 % |
| NET INCOME | \$71,982.04 | \$ -4,900.00 | \$76,882.04 | -1,469.02 % |

A photograph of a flooded vineyard. In the foreground, a large, white, cylindrical pipe runs diagonally across the frame. The pipe has some dark spots and a blue marker. To the left, there are dark metal structures, possibly part of a trellis system, with yellow caution tape tied around them. The ground is covered in brown, murky floodwater. In the background, rows of grapevines are visible, their leaves and branches partially submerged. The sky is overcast with grey clouds.

Data collection and Analysis on the Cosumnes Flood-MAR Vineyard

OHWD Board Meeting
October 18, 2022

Extensive Collaboration Between Institutions

University of California, Davis

- Laura Foglia and Helen Dahlke
 - Andrew Calderwood
 - Alisha Rodriguez
 - Brad T Gooch
 - Maribeth Kniffin
 - Elad Levintal
 - Cristina Prieto Garcia

University of California, Santa Cruz

- Andrew Fisher
 - Jenny Pensky

Lawrence Livermore National Laboratory

- Ate Visser
- Amanda Deinhart
- Erik Oerter

California State University, Sacramento

- Amelia Vankeuren
 - 19 undergraduate students

Extended Data Collection: Before and After flooding

- Continuous groundwater level and temperature
 - Evapotranspiration sensors
 - Soil moisture and infiltration data
 - 2 new stream gauges
 - Geological and geophysical information
 - Isotopes data
 - Water Quality Sampling
- Develop solid understanding of baseline condition

Water quality monitoring

Dr. Amelia Vankeuren
Sacramento State Geology

- Baseline groundwater and surface water sampling campaigns in 2019
- Water sampling during and after flooding in 2021



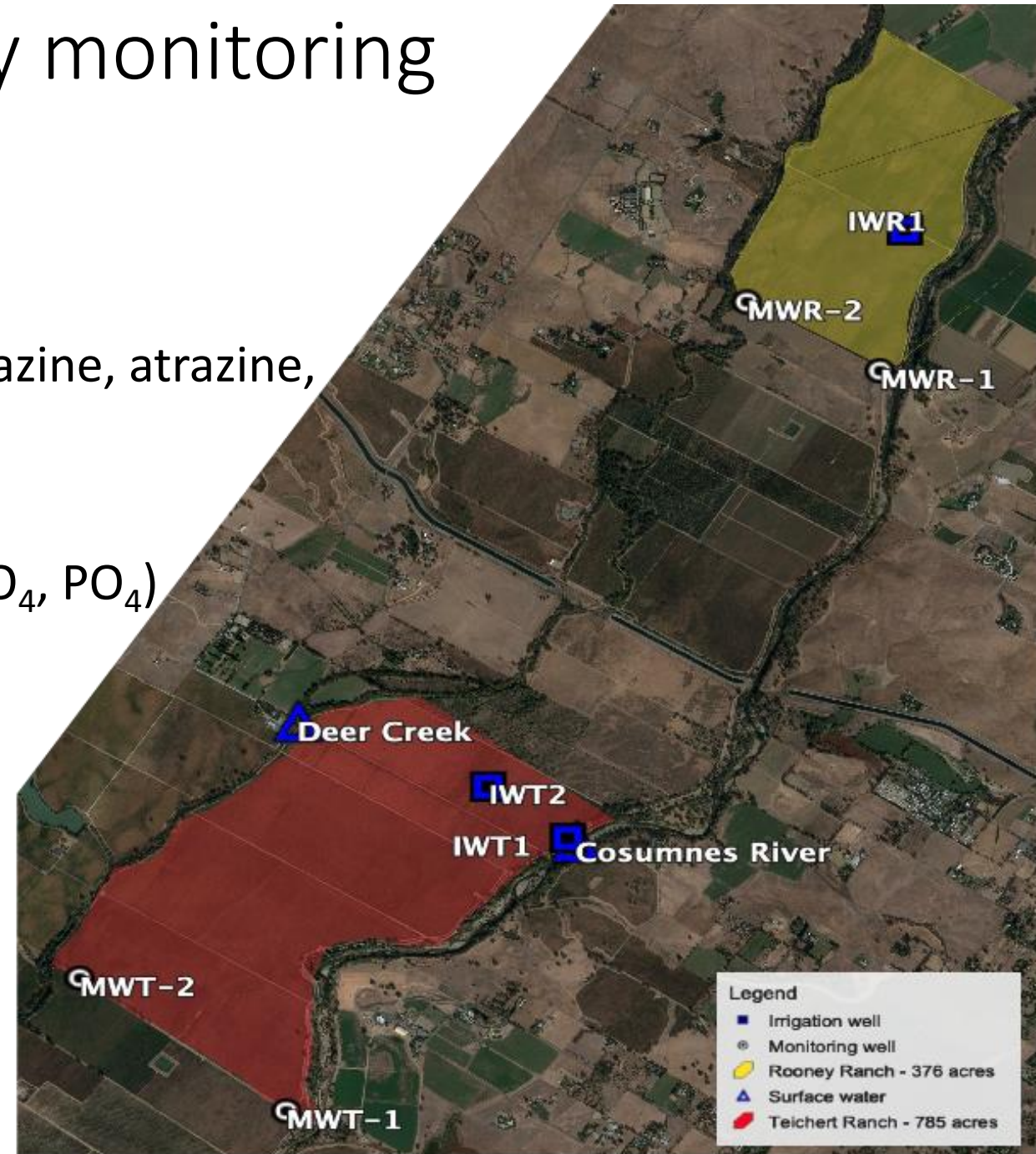
Water quality monitoring

Water samples analyzed for:

- Nutrients (nitrogen, phosphorous)
- Herbicides (glyphosate, diquat/paraquat, simazine, atrazine, cyanazine, mecoprop)
- Pesticides (imidicloprid)
- Major ion chemistry (Ca, K, Mg, Na, DIC, Cl, SO₄, PO₄)
- Stable isotopes in water ($\delta^{18}\text{O}$, $\delta^2\text{H}$)
- Trace elements (including As, U, Cr)

Samples collected from:

- 3 irrigation wells
- 4 monitoring wells
- Deer Creek
- Cosumnes River



Water quality monitoring: results

| Category | Potential contaminant | Maximum allowed in water (EPA MCL or human health reference level) | Highest measured concentration |
|--------------|-----------------------|--|--------------------------------|
| Nutrients | Nitrate mg/L as N | 10 | 4 |
| | Phosphate mg/L | | 3 |
| Herbicides | Glyphosate (Roundup) | | Below detection |
| | Diquat/Paraquat | | Below detection |
| | Simazine ug/L | 17 | 0.007 |
| | Cyanazine | | Below detection |
| | Atrazine | | Below detection |
| | Mecoprop | | Below detection |
| Pesticide | Imidacloprid ug/L | 283 | 0.002 |
| Trace metals | Arsenic ug/L | 10 | 2.5 |
| | Uranium ug/L | 30 | 0.3 |
| | Chromium ug/L | 50 | 2.0 |

No samples had contaminant levels exceeding water quality standards

Water quality monitoring: future work

- Collect and analyze groundwater after significant flooding
- Evaluate changes in water chemistry
- Evaluate changes in potential contaminant levels
- Evaluate stable isotopes in water to determine contribution of Cosumnes River water to the aquifer

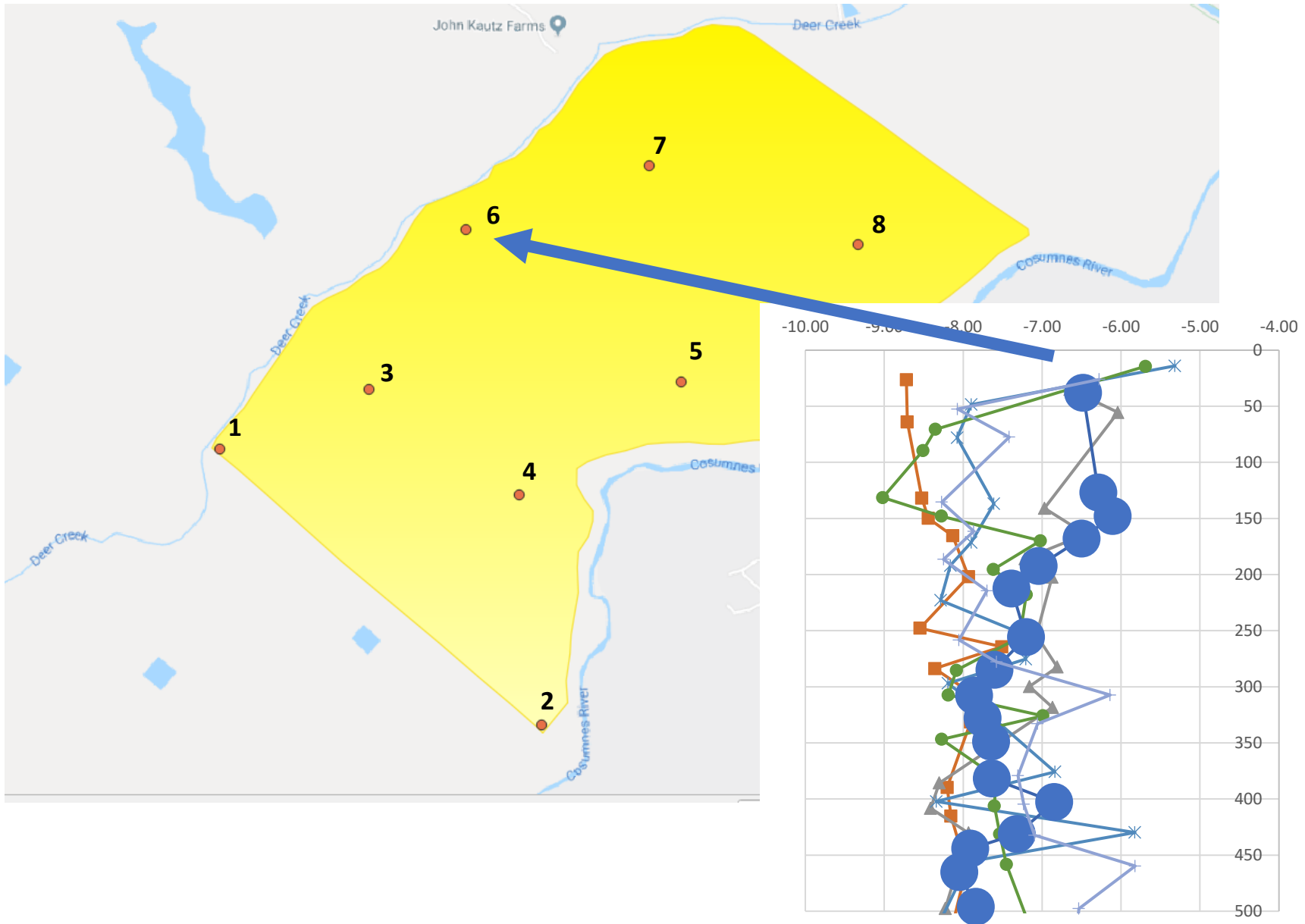


Isotope Data

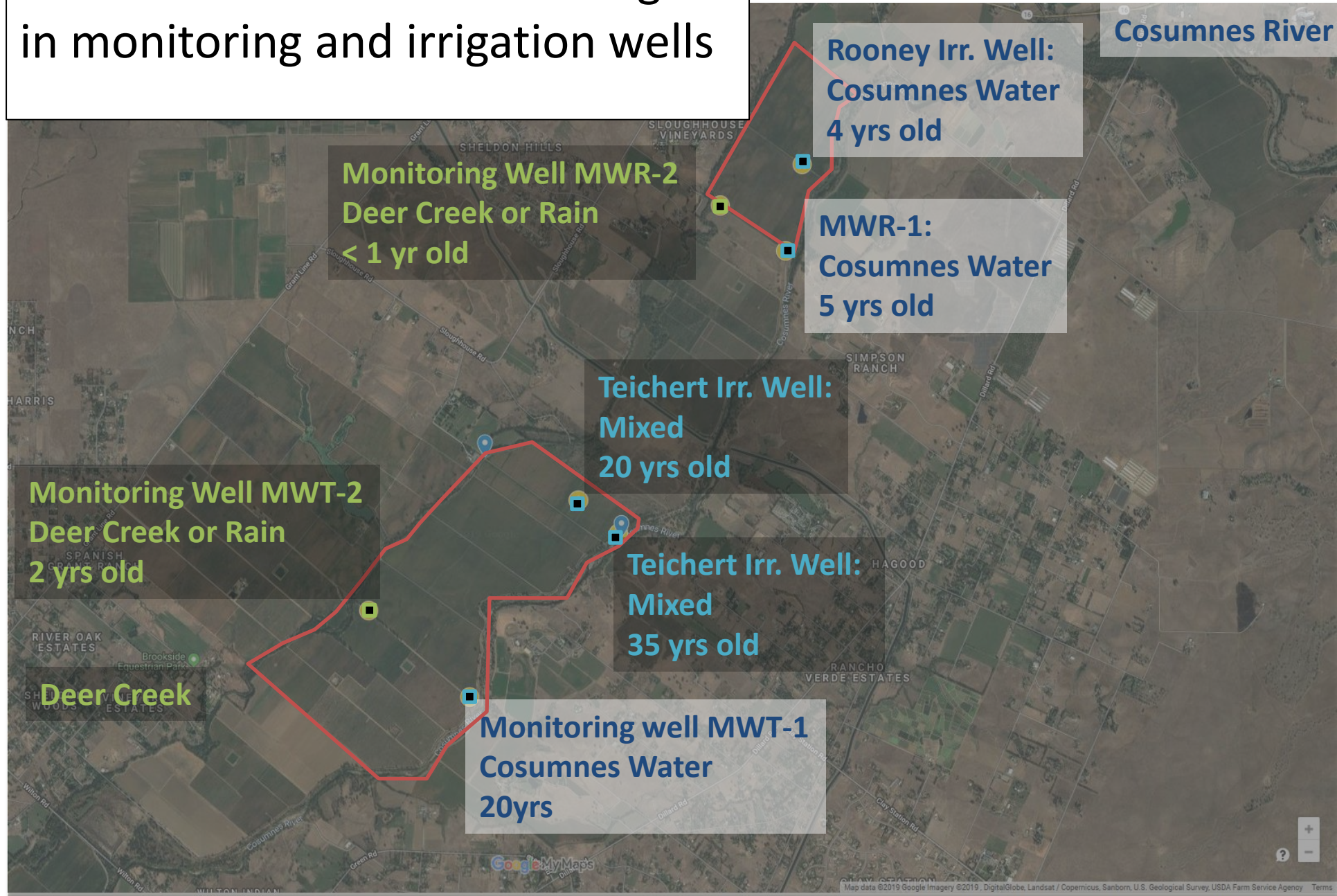
Lawrence Livermore National Laboratory

- Why?
- Study source of soil water and groundwater:
“stable isotopes”: deuterium and oxygen-18
 - Rain: low elevation → “heavy”
 - Deer Creek: low elevation → “heavy”
 - Cosumnes River: high elevation → “light”
- Study groundwater flow velocities:
“water age”: natural radioactive tritium decay
 - Unsaturated zone to water table
 - Groundwater flow

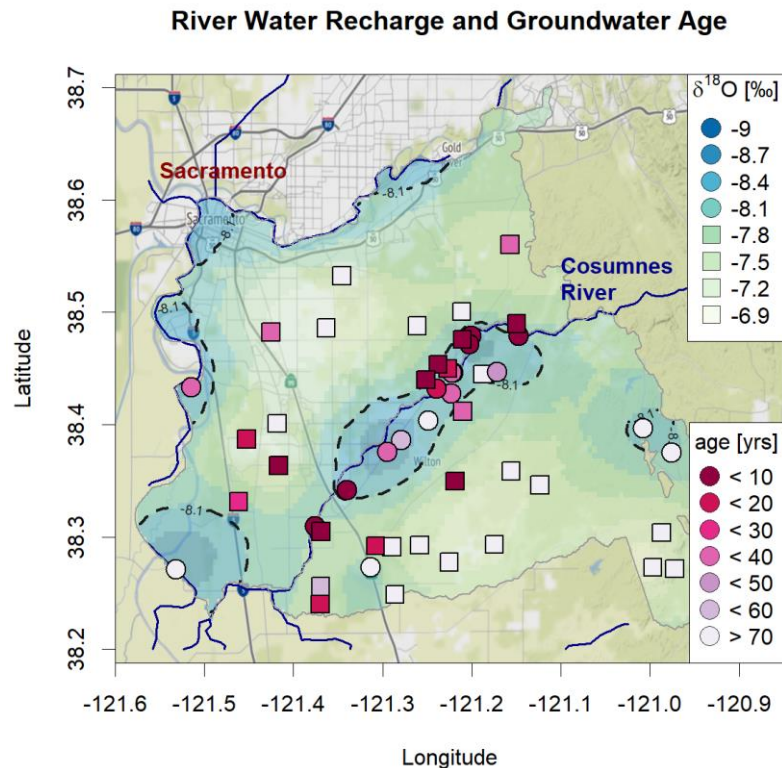
Deer Creek infiltration in soil water stable isotopes



Different water sources and ages in monitoring and irrigation wells

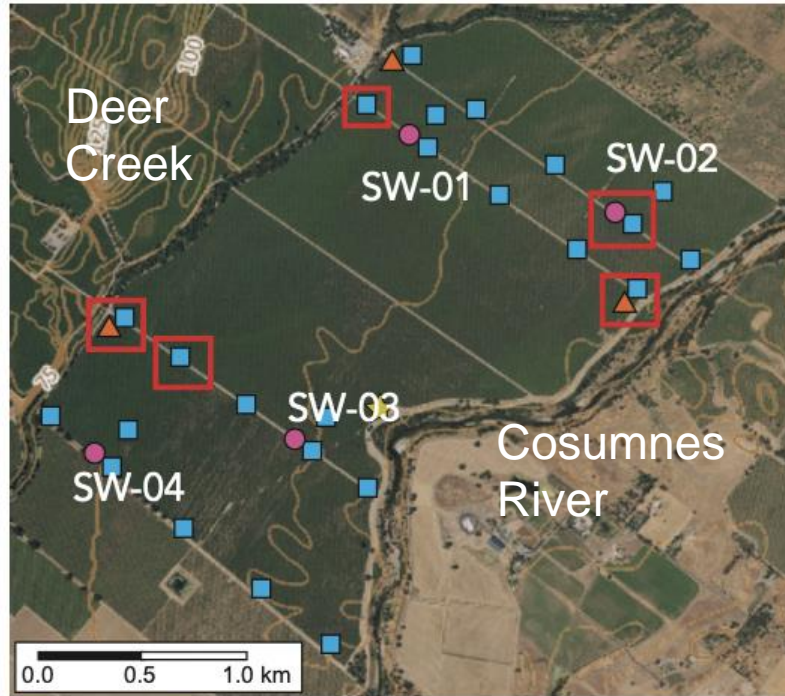


Regional groundwater isotope analyses

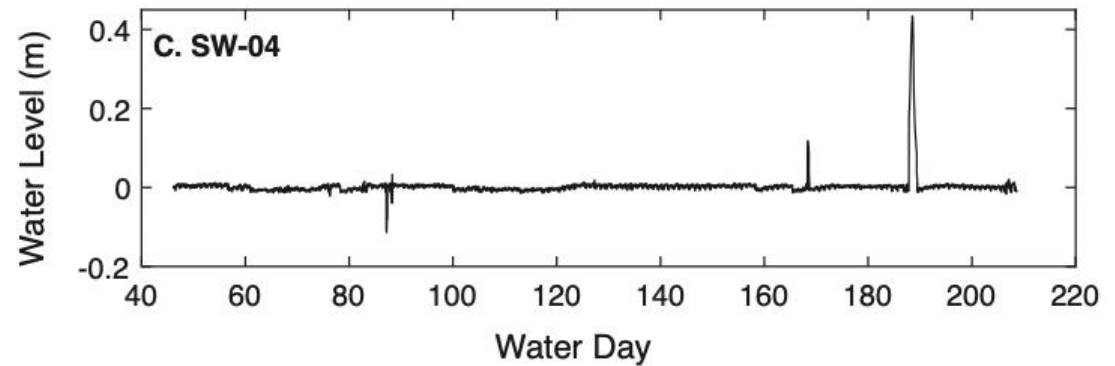
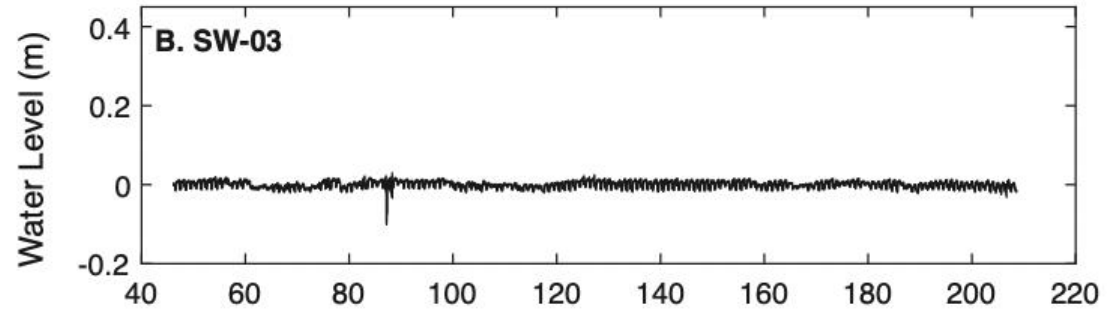
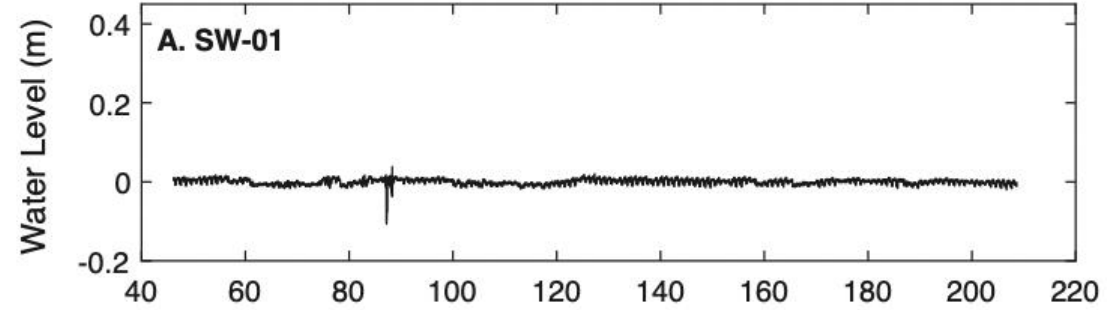


- Most young groundwater close to Cosumnes River and Deer Creek
→ active recharge
- Older fossil water in regional groundwater basin
→ no recharge

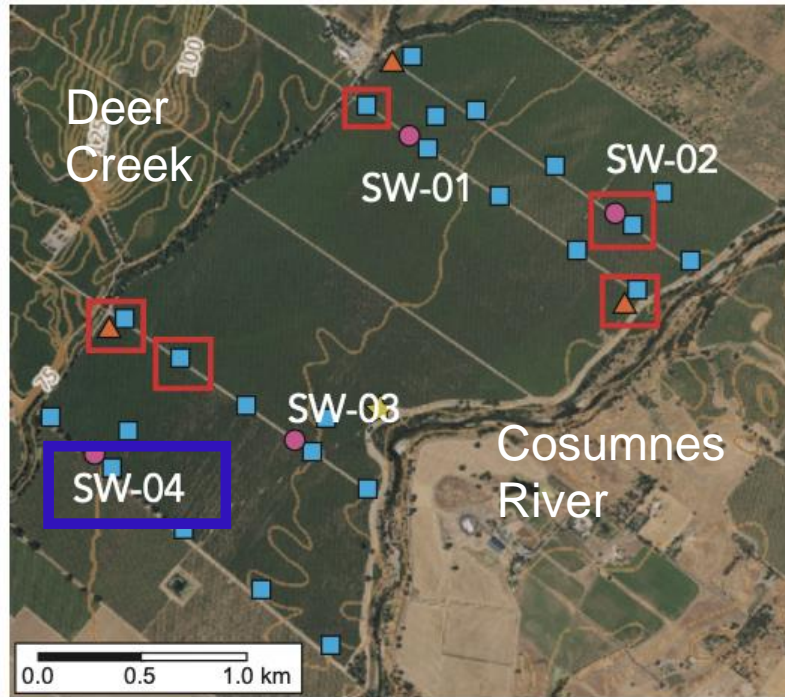
Deer Creek flooded naturally in 2020



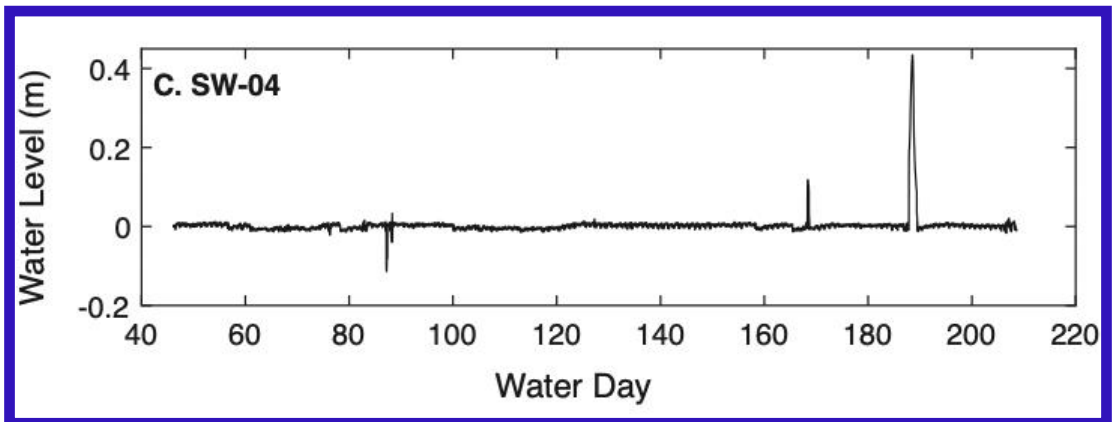
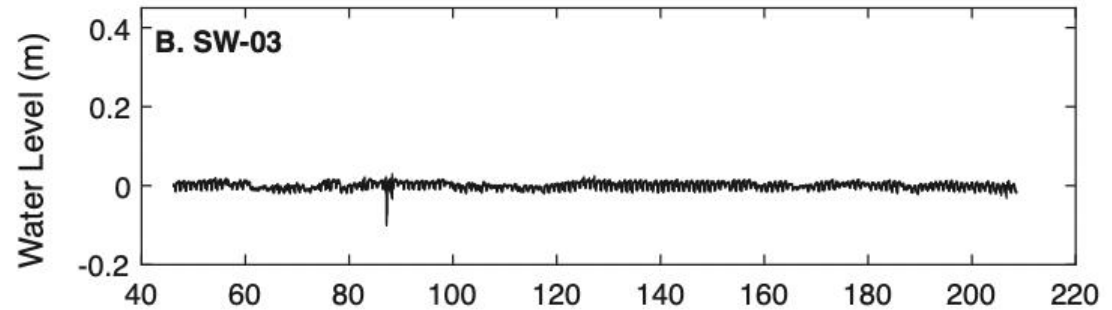
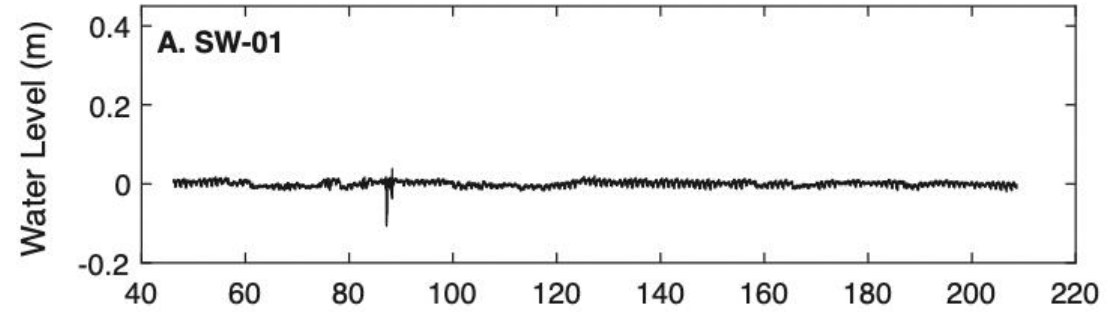
- Temperature probe, Sediment cup & tray
- Piezometer & Stilling well
- Piezometer
- Rain gauge, baro gauge, and timelapse camera
- Locations with apparent delivered sediment



Water level ranged between 5-16 in above ground surface



- Temperature probe, Sediment cup & tray
- Piezometer & Stilling well
- Piezometer
- Rain gauge, baro gauge, and timelapse camera
- Locations with apparent delivered sediment



Infiltration rates ranged between 0.5- 8 in/day

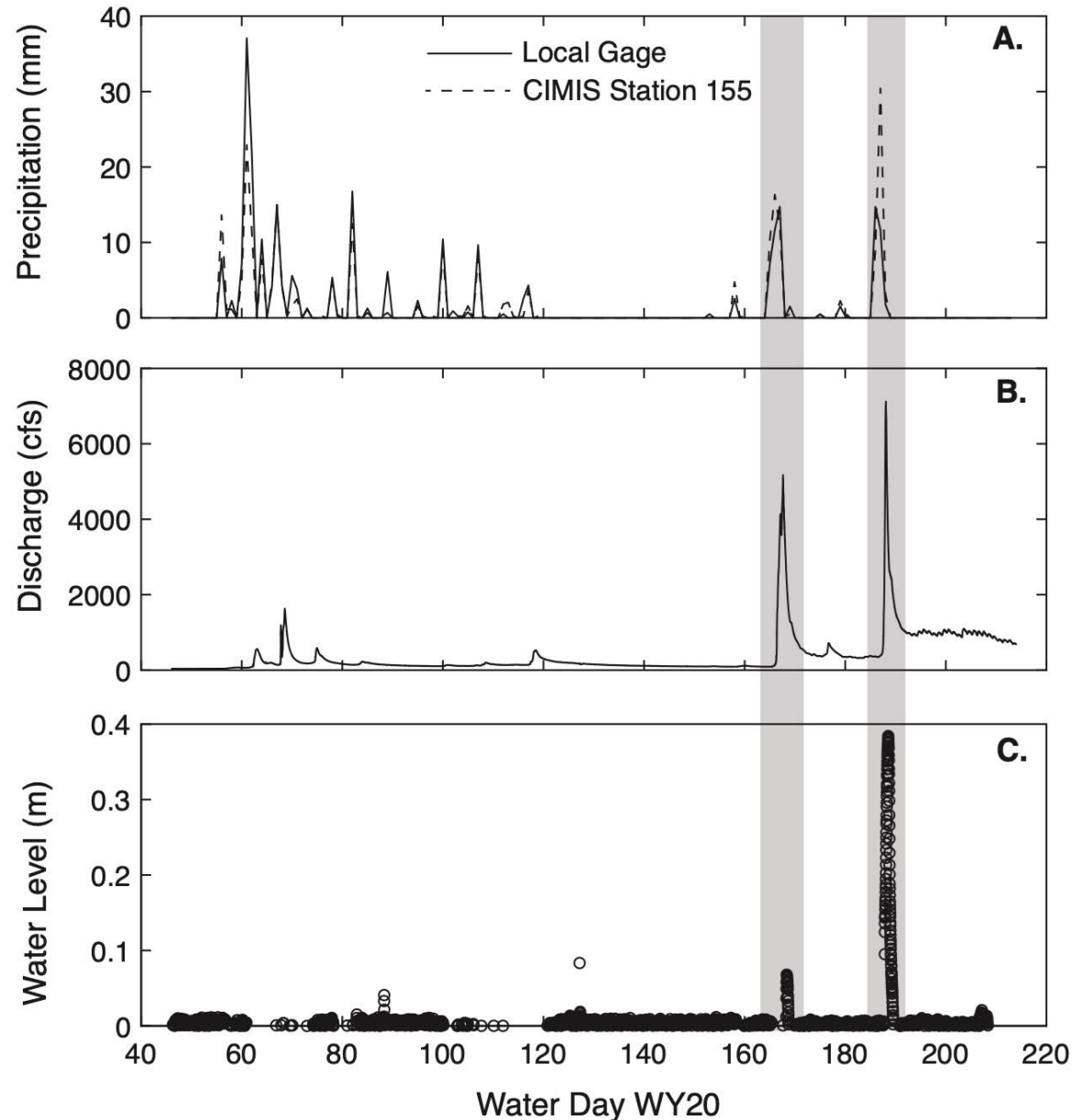
Infiltration rates:

Day 168: 19 cm/day

Day 169: 11 cm/day

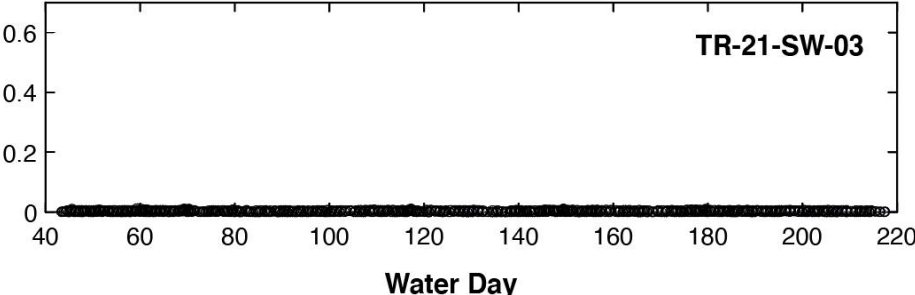
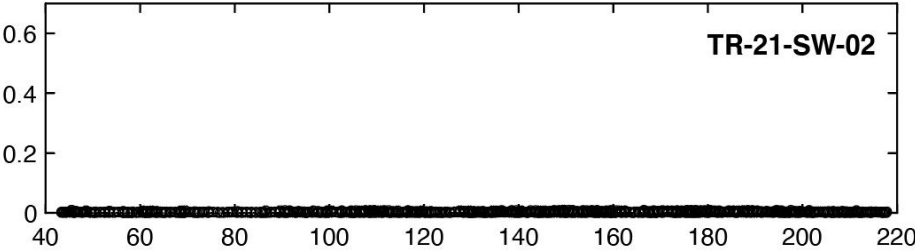
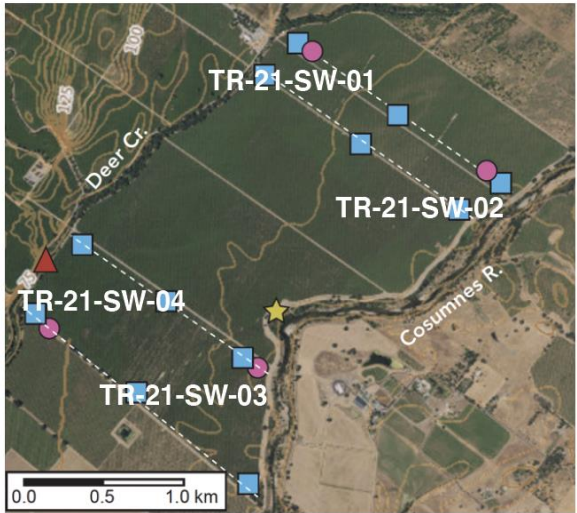
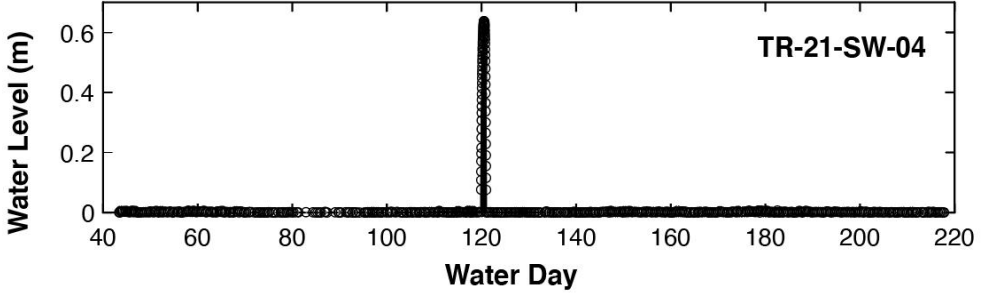
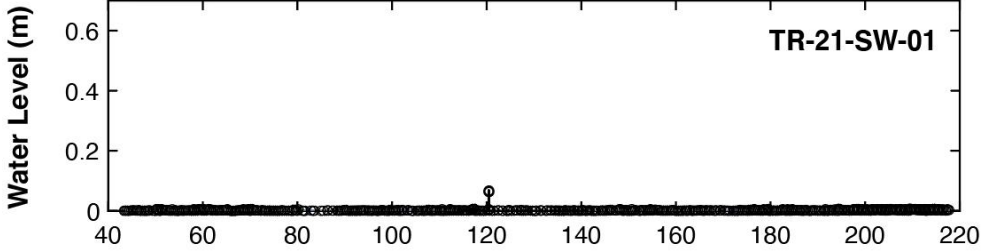
Day 188: 8 cm/day

Day 189: 1 cm/day

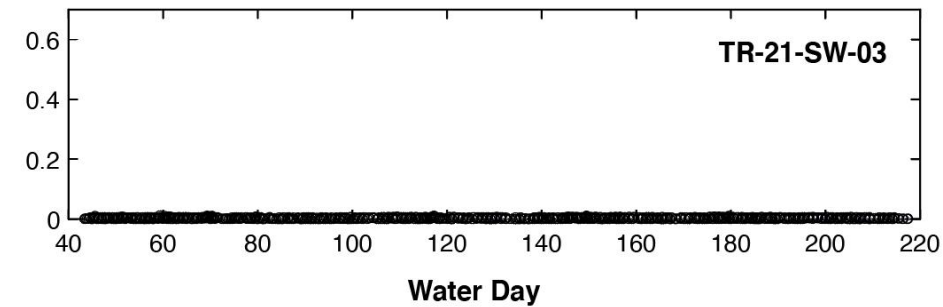
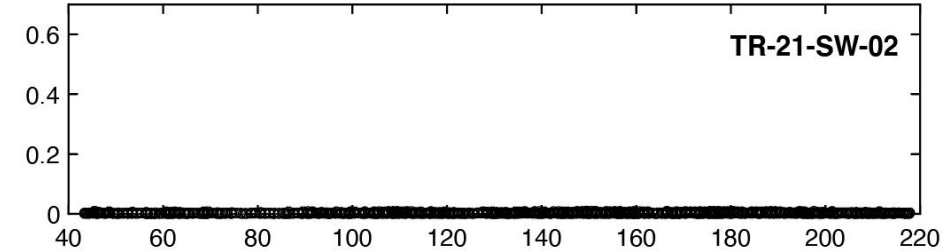
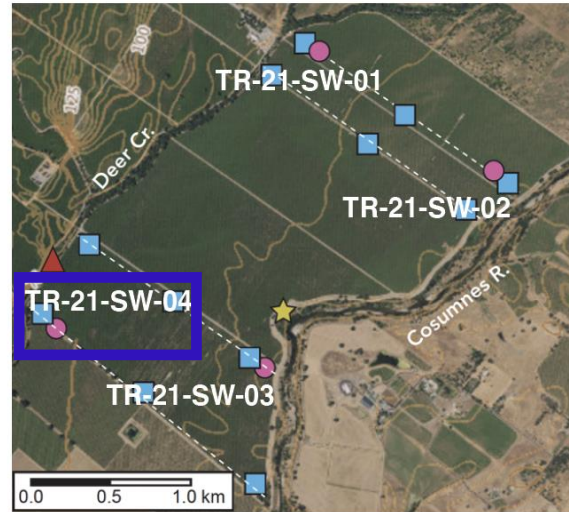
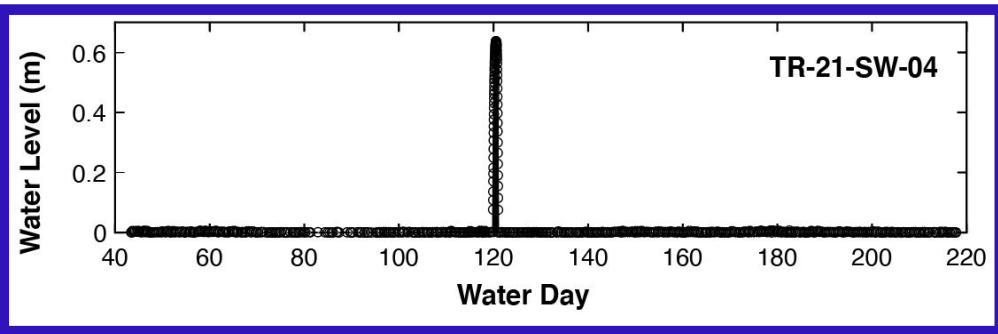
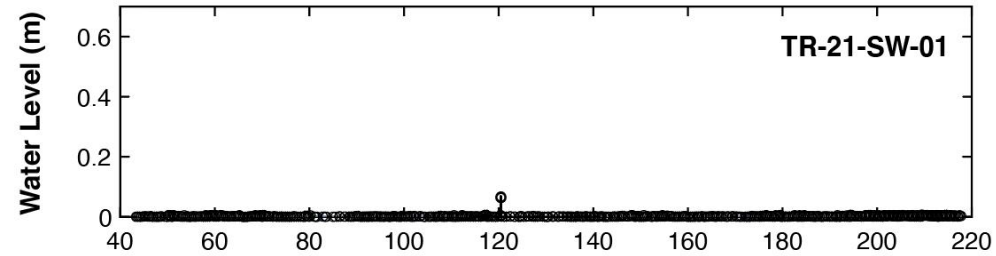


- Infiltration rates were higher during the first rain event, likely decreased due to sedimentation
- Likely a conservative estimate – a large fraction of infiltration occurs through macropores (i.e. plant roots, animal burrows)

Managed flooding from the Cosumnes River in WY21

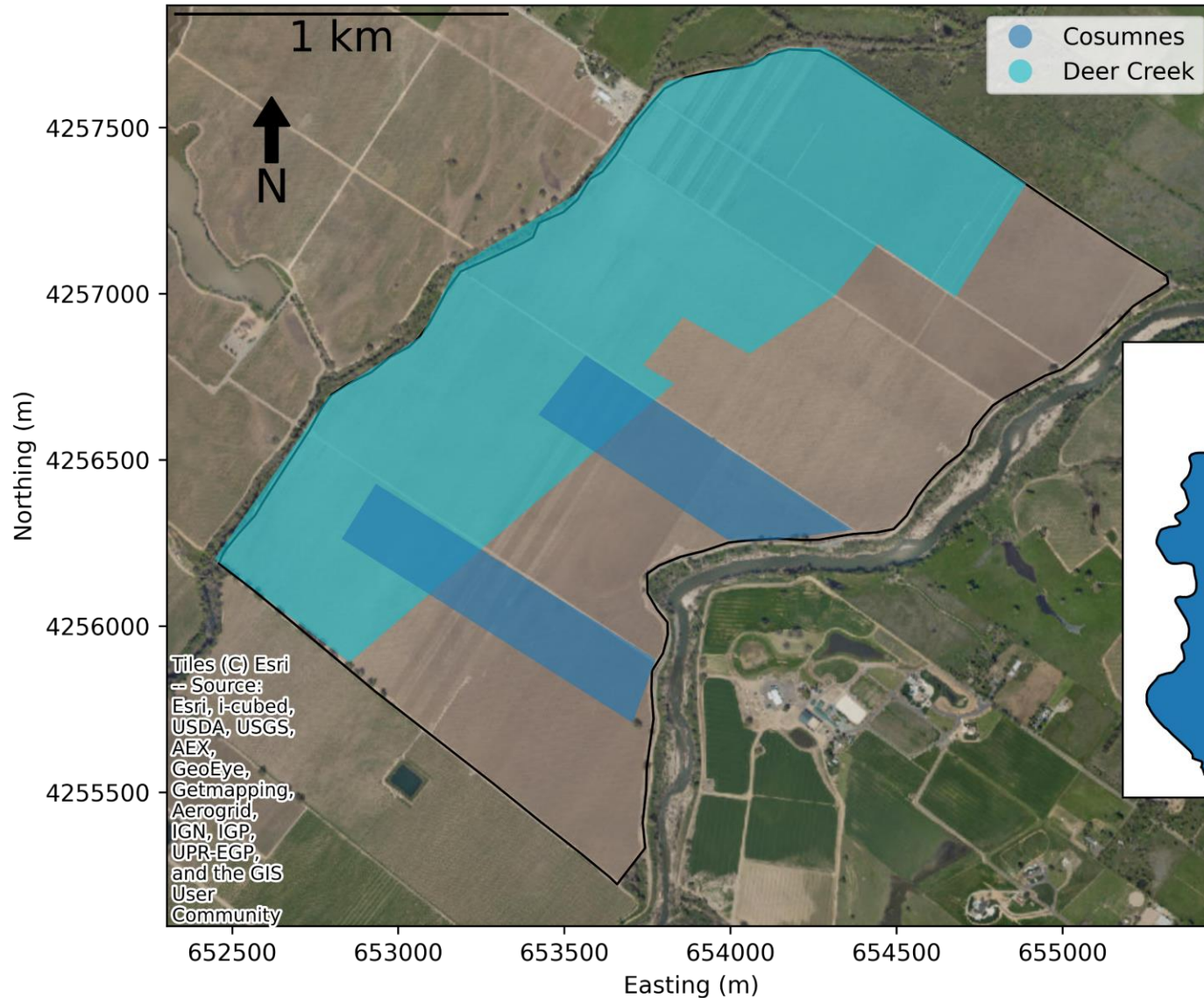


Managed flooding from the Cosumnes River in WY21

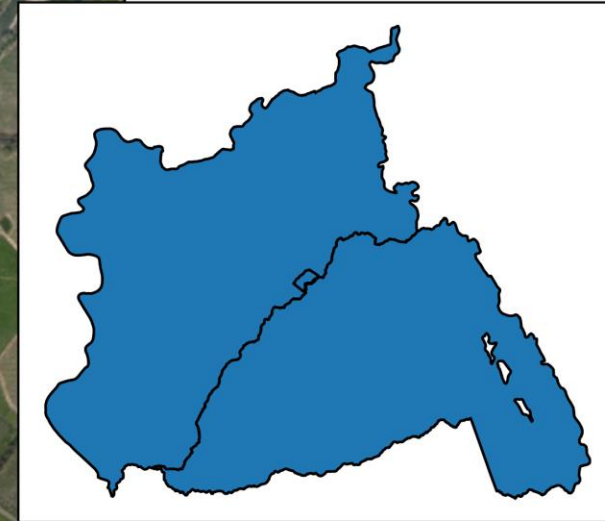


* Upper ~45 cm of soil did not stay saturated long enough to measure seepage rates in WY21

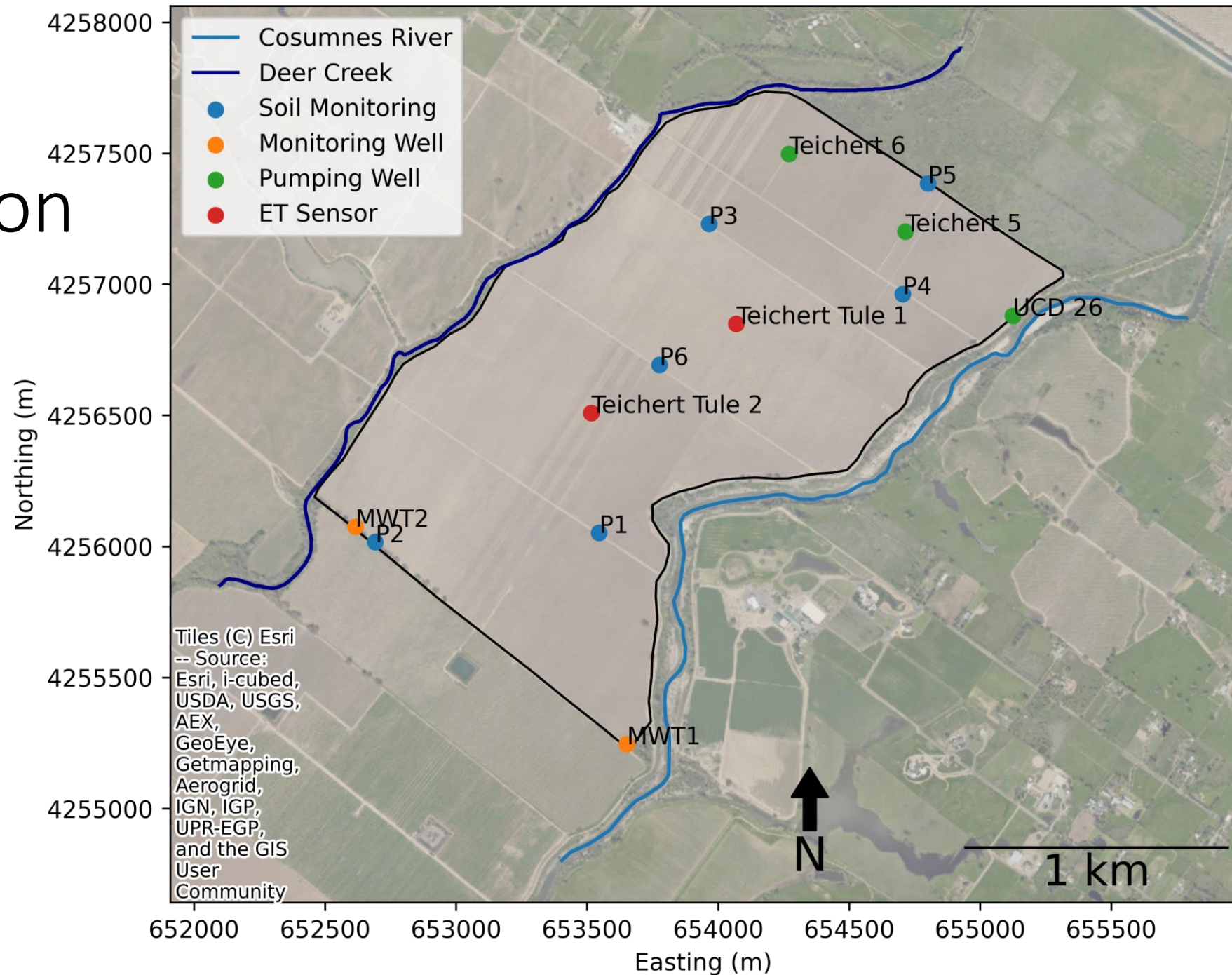
More details on the actual 2021 flooding



Approximate flooding
extent

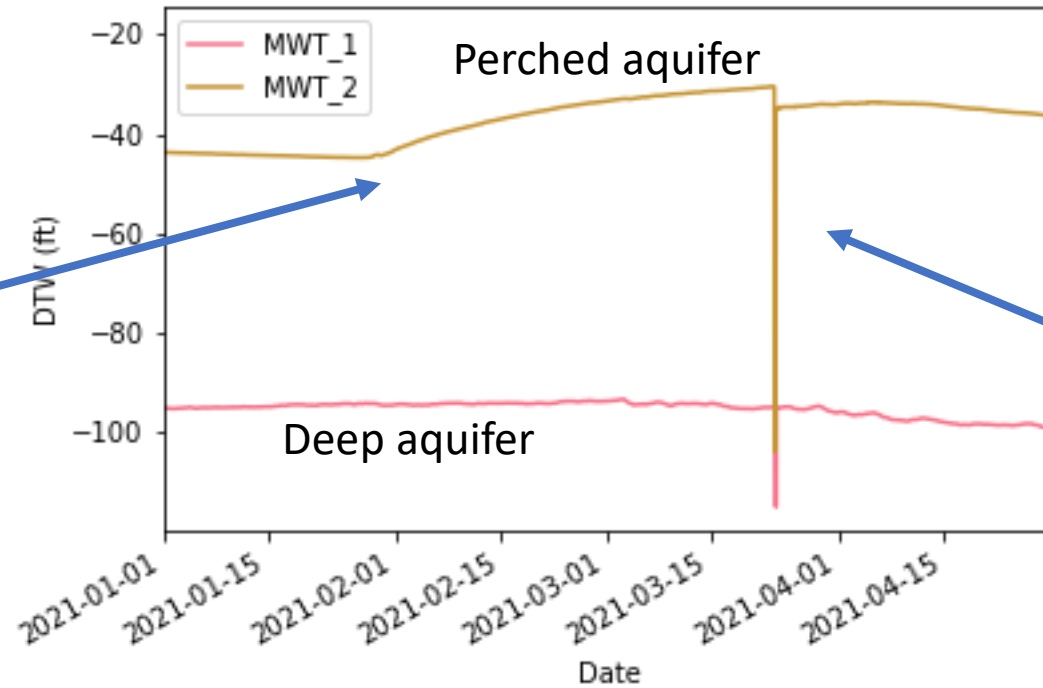


Site instrumentation

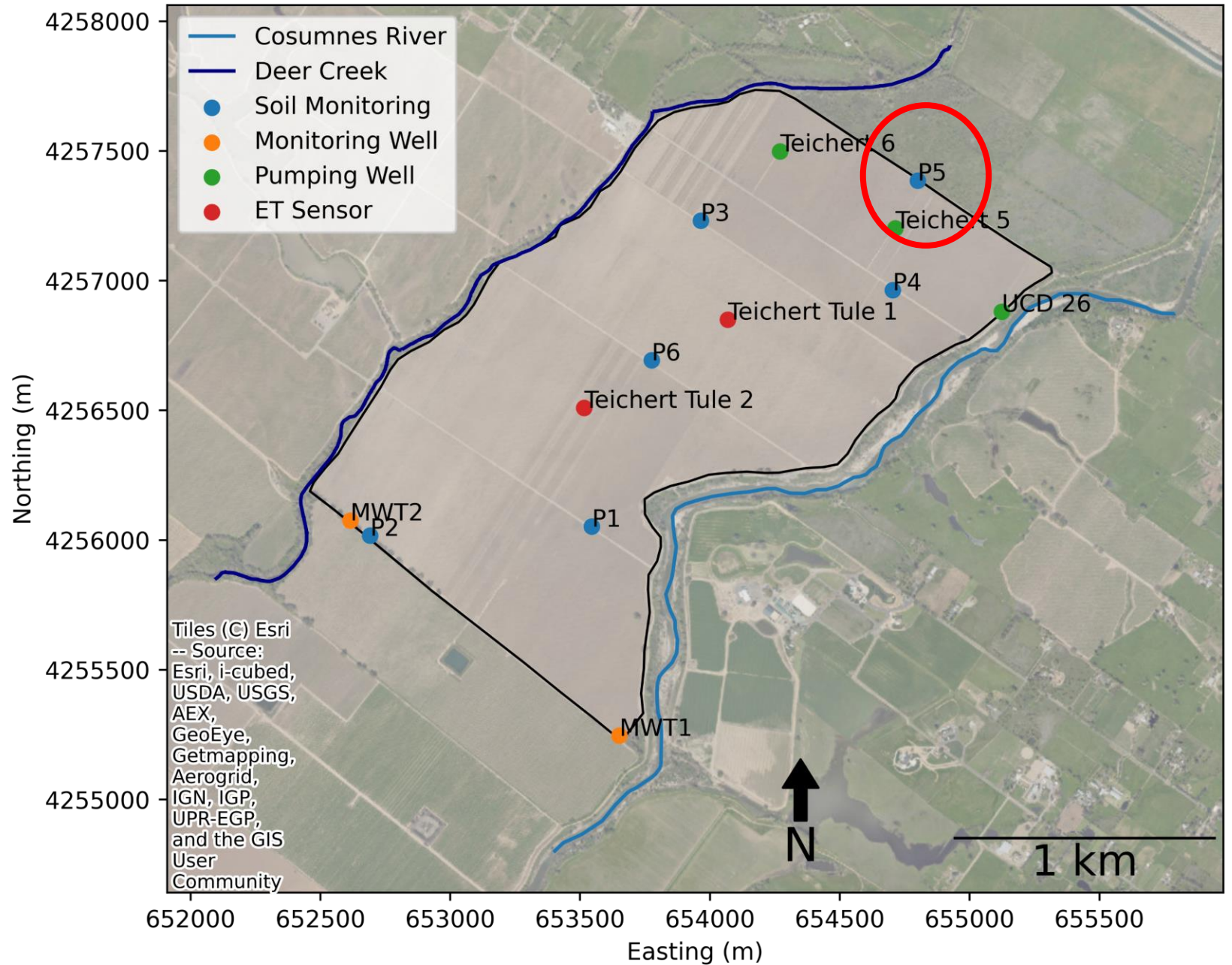


Deer Creek Flooding - 2021

Recharge
into
perched
aquifer



Water
quality
sampling
event



Geophysical study results

- Geophysical study overview

Site map of recent & continuous data collection locations

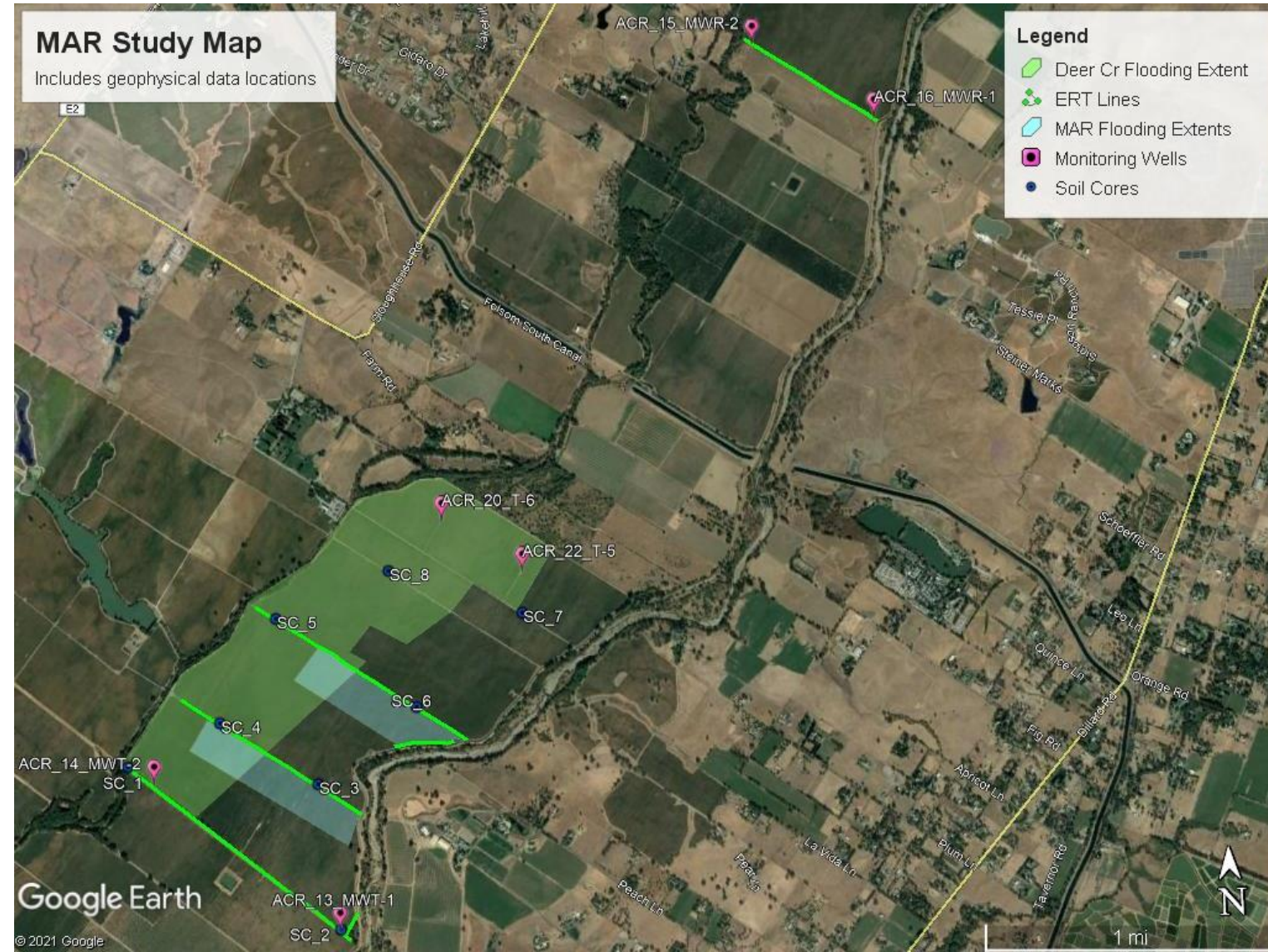
• Collected:

- Borehole geophysics (gamma, induction, & NMR)
 - Tells us how sediments change in lithology and water content continuously down depth in a well
- Electrical Resistivity Tomography (ERT) Imaging
 - Provides a 2-D depth scan along a line on the surface that tells us how changes in lithology vary with depth and along a survey path

• Data collected complement our existing knowledge of:

- Surface hydrology
- Groundwater hydrology
- Lithology (aquifer material)

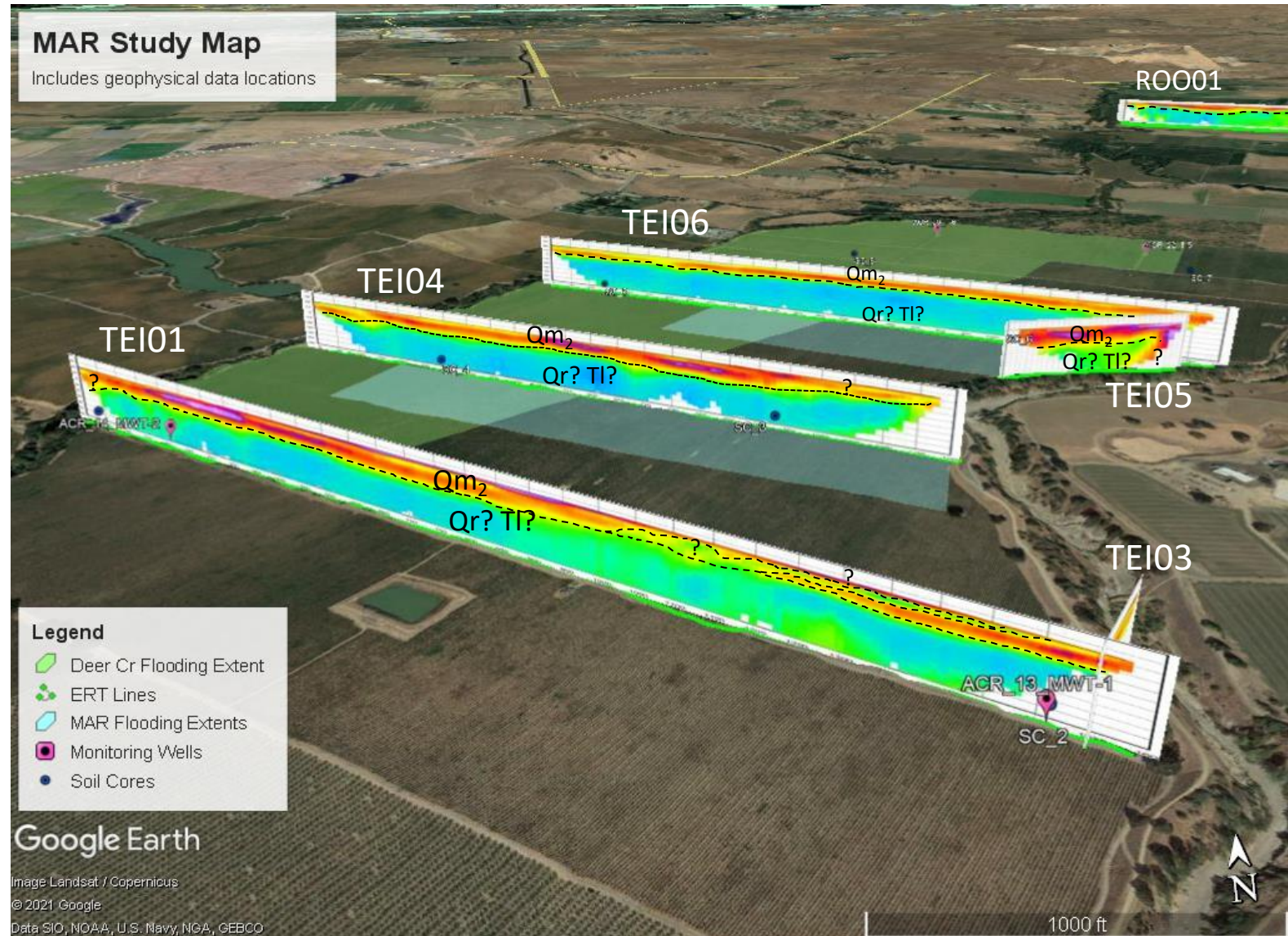
• Helps to understand MAR impacts



Geophysical study results

- Surface geophysics (ERT imaging)

- Paleochannels of higher concentrations of sand/gravel present throughout Qm_2
- Natural & artificial flooding, irrigation, and **large paleochannel intersection with modern Cosumnes R. bed** all contribute to recharge throughout different times of the year
- Qm_2 hosts perched aquifer that recharges regional aquifer (Qr/TI)
- MWT-2 effectively records perched aquifer (dynamic response to flooding)



Open Access Geologic Data was Digitized for Use in a Detailed Geologic Model

ORIGINAL
File with DWR
100 850, 13769

THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

No 110325
State Well No. _____
Other Well No. 277-8

(1) OWNER:
Name Great Western Savings and Loan
Address 1300 Alcatraz St. Sacramento, CA 95814

(11) WELL LOG:
Total depth 222 ft. Depth of completed well 222 ft.

(2) LOCATION OF WELL:
City Sacramento Owner's number 4411#2
Township, Range, and Section Sheldon Hills Sub
Distance from cities, roads, railroads, etc. South end of Sunrise Blvd.

(3) TYPE OF WORK (check):
New Well Deepening Reconditioning Destroying
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic Industrial Municipal Irrigation Test Well Other

(5) EQUIPMENT:
Rotary Cable Other

(6) CASING INSTALLED:
SINGLE DOUBLE If gravel packed

| From ft. | To ft. | Di. in. | Gage or Well | Diameter of Bore | From ft. | To ft. |
|----------|--------|---------|--------------|------------------|----------|--------|
| 0 | 50 | 6 5/8 | 3/16 | | | |

Size of shot or well rings: 4x6x6 5/8" Size of gravel:
Describe joint: Welded collars

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen: None

| From ft. | To ft. | Perf. per row | Rows per ft. | Size in. x in. |
|----------|--------|---------------|--------------|----------------|
| | | | | |

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes No To what depth: 50 ft.
Were any struts used against pollution? Yes No If yes, note depth of struts:
From 50 ft. to 222 ft.

(9) WATER LEVELS:
Depth at which water was first found: 128 ft.
Standing level before perforating, if known: _____ ft.
Standing level after perforating and developing: _____ ft.

(10) WELL TESTS:
Was water test made? Yes No If yes, by whom? _____
Temperature of water: _____ gals./min. with _____ ft. drawdown after _____ hrs.
Was a chemical analysis made? Yes No
Was electric log made of well? Yes No If yes, attach copy _____

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME Kyle's Well Drilling
Address 9500 Central Ave Orangevale, CA 95662
[SIGNED] Chanton Wells (Well Driller)

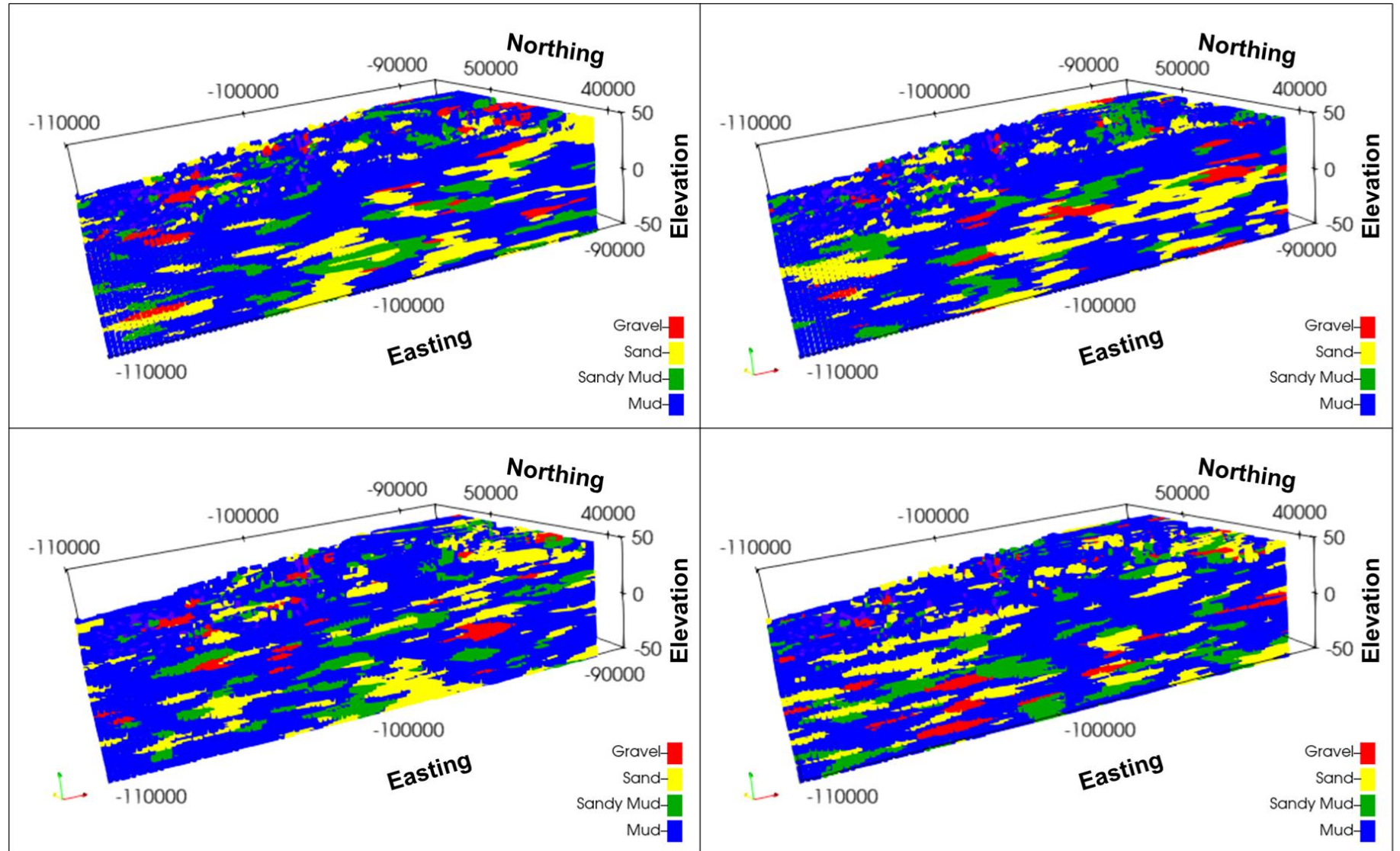
License No. 196723 Dated 2-2 19 74

SKETCH LOCATION OF WELL ON REVERSE SIDE

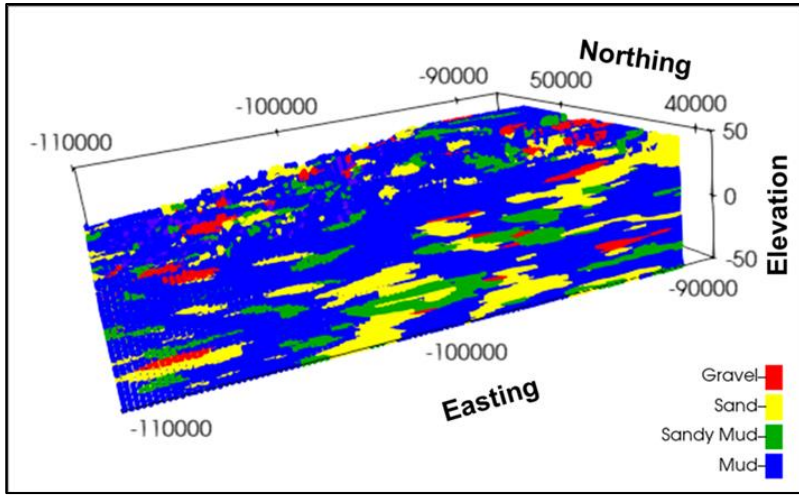
Unit 2 Lot 71 Sheldon Hills
Subdivision South end of
Sunrise Ave across Grantline
Rd

| | | | |
|----------------|-----|-----|------------------------|
| WCR1974-000039 | 0 | 3 | brown clay |
| WCR1974-000039 | 3 | 11 | sand and gravel |
| WCR1974-000039 | 11 | 22 | brown clay |
| WCR1974-000039 | 22 | 26 | gravel and clay |
| WCR1974-000039 | 26 | 52 | brown clay |
| WCR1974-000039 | 52 | 67 | gravel |
| WCR1974-000039 | 67 | 80 | tan clay and gravel |
| WCR1974-000039 | 80 | 85 | brown clay |
| WCR1974-000039 | 85 | 100 | tan clay and gravel |
| WCR1974-000039 | 100 | 124 | tan clay |
| WCR1974-000039 | 124 | 128 | tan clay and gravel |
| WCR1974-000039 | 128 | 146 | gravel |
| WCR1974-000039 | 146 | 148 | sand and clay |
| WCR1974-000039 | 148 | 152 | red clay and gravel |
| WCR1974-000039 | 152 | 162 | tan clay |
| WCR1974-000039 | 162 | 175 | brown clay |
| WCR1974-000039 | 175 | 179 | pink clay |
| WCR1974-000039 | 179 | 200 | brown jointed clay |
| WCR1974-000039 | 200 | 209 | pink clay |
| WCR1974-000039 | 209 | 216 | red brown clay |
| WCR1974-000039 | 216 | 217 | sand |
| WCR1974-000039 | 217 | 222 | red brown jointed clay |

100 Versions of the Geologic Model were Created

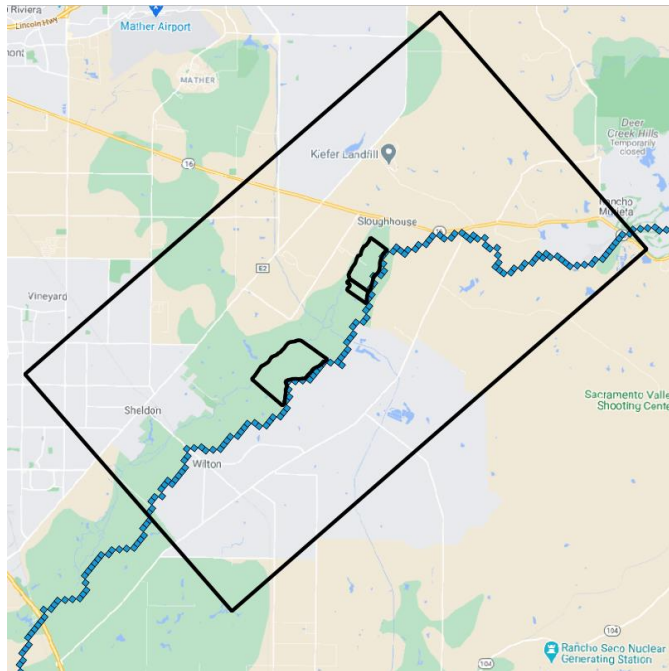


All versions have the same geologic data, but the program adds randomness, which changes the location of connected gravel and sand pathways, which efficiently move water from the surface to the water table



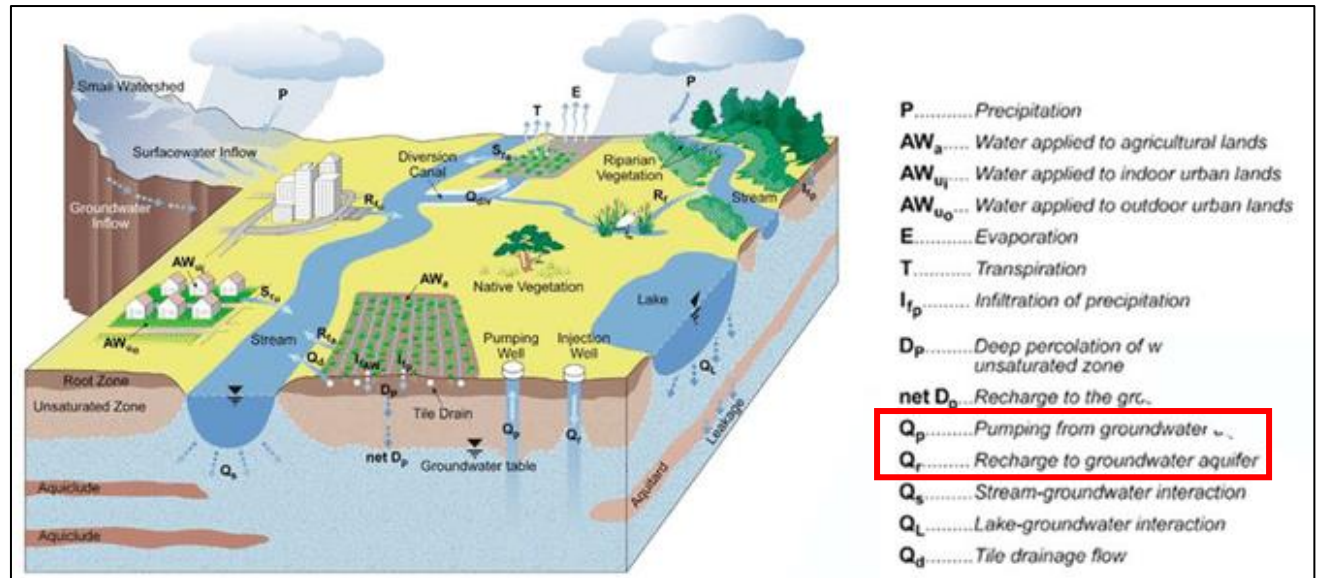
Geology from Geologic Model

River Seepage

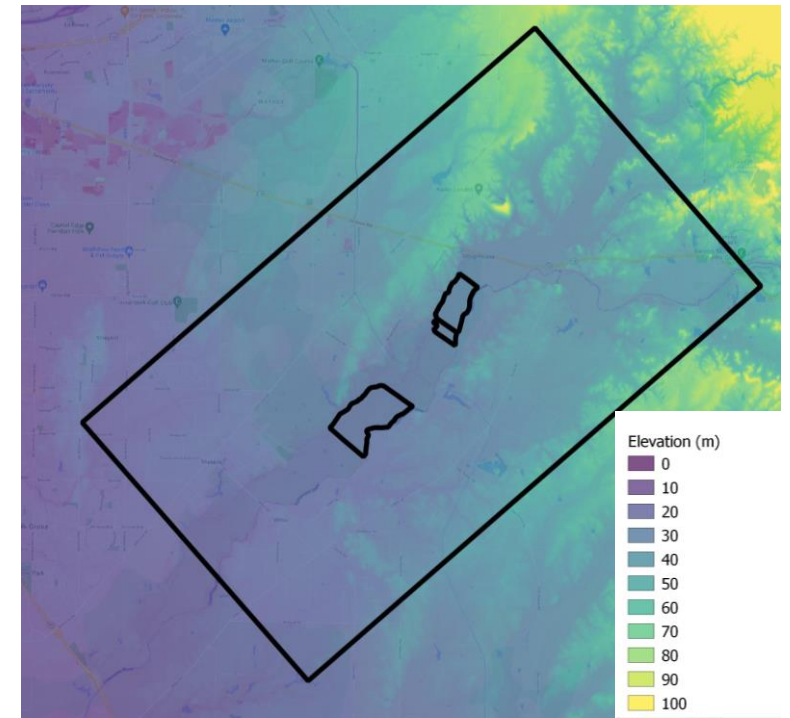


Currently:
Incorporating
all data into a
groundwater
flow model

Pumping and Recharge



Elevation and Boundary Conditions



External Sources of Funding Also Supported This Project

Lawrence Livermore National Lab Funding Sources

- University of California “Laboratory Fees” grant (\$300k total)
- Bureau of Reclamation WaterSMART grant (\$200k)
 - Work plan:
 - Task A: Communication and Coordination
 - Task B: On-Farm Recharge Monitoring
 - Task C: River Recharge Monitoring and Modeling
 - Task D: Data Infrastructure and Maintenance
 - Task E: Data Integration and Reporting
- Environmental Protection Agency – proposal due 11/9 (\$2M total)
 - Additional monitoring, isotope tracing, geochemistry modeling

California State University, Sacramento

- City of Sacramento Water Forum
- Sacramento County Water Agency
- The Nature Conservancy

University of California, Santa Cruz

University of California, Davis

- University of California “Laboratory Fees” grant (\$450k total)

COSUMNES FLOW/SWRCB PROCEEDINGS

The background is a gradient of blue, transitioning from a lighter shade at the top to a darker shade at the bottom. On the right side, there are several white, parallel diagonal lines that sweep upwards from the bottom towards the top right corner.

HISTORIC FLOW PROCEEDINGS (WR 79-13)

- ▶ OHWD acts as a water manager, but historically has not held an independent right
 - ▶ Many landowners within OHWD claim riparian or appropriative rights
- ▶ 1979: USBR files a Petition for Change to its permits (2631; 12258; 10473; 10474) on Cosumnes
 - ▶ Permits provided for direct diversion & diversion to storage (Camp Creek & Sly Park)
 - ▶ No increase in the amount or season of diversion
 - ▶ Diversions serving El Dorado ID service area

WR 79-13

- ▶ In response to Change Petition, OHWD files a protest on behalf of landowners within its boundaries.
 - ▶ Argues that the proposed changes (expanding the place of use) would result in less water available for downstream users and for recharge.
- ▶ Prior to the hearing, OHWD and USBR enter into a settlement agreement
 - ▶ Measuring and monitoring devices to be installed, and parties will report to each other*
 - ▶ Sly Park diversions approximately when runoff ends at Highway 99
- ▶ SWRCB memorializes settlement agreement in WR 79-13
- ▶ Reconsidered & confirmed in 79-23