

eWATERLINE

MARCH 2023

MESSAGE FROM THE CEO



Jason Phillips
Chief Executive Officer

The 2023 water year is aiming to be one of California's wettest ever and will result in significant recharge of both our ground and surface reservoirs. This is welcome news after three consecutive dry years that have depleted both our surface supplies and groundwater aquifers. As I compose this, the Sierra Nevada is already at a near record snowpack. In the Friant system, we will have 100% class 1 contract supplies and much of our class 2 supplies. That's fantastic! Well, sort of. With a few more "atmospheric river" storms headed towards the state, we are now turning our attention to the possibility of severe flooding. Almost every reservoir in the Central Valley is full, and some of the smaller reservoirs are certain to fill and empty several times. The ground is saturated, so when the next round of rainfall occurs on top of this record snowpack, project operators will be forced to make concurrent high flood releases from multiple reservoirs. Millerton Lake will certainly be releasing water into the San Joaquin River for several months as the rain continues and snow melts. We can only hope that the melting process is not so fast that it overwhelms our reservoirs. In 1997, a heavy rain on snow event occurred and resulted in over 60,000 cubic feet per second of water flowing over the top of the dam's spillway. That volume of water flow is over 7 times the amount that can safely pass through the San Joaquin River below the dam, and the result was extensive flooding and damage to property for miles and miles. With all this snow and lack of surface storage capacity, we can now only hope for a cold spring that will allow the snow to melt at a manageable pace. SO AT LEAST THE DROUGHT IS OVER, RIGHT? WRONG! Unfortunately, the state's water supply shortages are locked in. I realize it defies logic, but our water system is largely governed by


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NEW REPORT REINFORCES IMPACT OF REDUCED WATER SUPPLY TO VALLEY ECONOMY

A policy brief released this month by the Public Policy Institute of California focuses on how farming communities in the San Joaquin Valley may fare in the future with increasingly unavailable water supplies. Titled "**The Future of Agriculture in the San Joaquin Valley**," the brief projects that by 2040 the Valley could see a 20 percent reduction (about 2.3 million acre-feet) in its average annual water supply, primarily driven by the impacts of the Sustainable Groundwater Management Act, climate change, and environmental regulations limiting surface water deliveries.

The brief's authors estimate that under the "worst case scenario" of economic loss in the San Joaquin Valley, almost 900,000 acres of farmland would go out of production and with them nearly 50,000 jobs, leading to a regional decline in economic activity by 2.3 percent; these estimates are in line with **a previous study** commissioned by the Water Blueprint for the San Joaquin Valley.

ANNUAL MEETING RETURNS FOR 2023!



FRIANT WATER AUTHORITY
2023 ANNUAL MEETING
APRIL 13, 2023

After a three-year hiatus, FWA will hold its Annual Meeting on the evening of April 13 at the Watermill Grove in Visalia. The event will include a social mixer at 5 PM followed by a dinner at 6 PM. The event is free and open to the public, but we request your RSVP by April 3 as space is limited. For additional event details and to RSVP: <https://friantwater.org/annual-meeting>.

RSVP AT CODE BELOW!



UPCOMING EVENTS

MAR 13

FWA Executive Committee Meeting

Lindsay, CA

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MAR 20

FWA Finance Committee Meeting

Lindsay, CA

[CLICK FOR INFO](#)

MAR 23

FWA Board of Directors Meeting

Visalia, CA

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APR 13

FWA 2023 Annual Meeting

Visalia, CA

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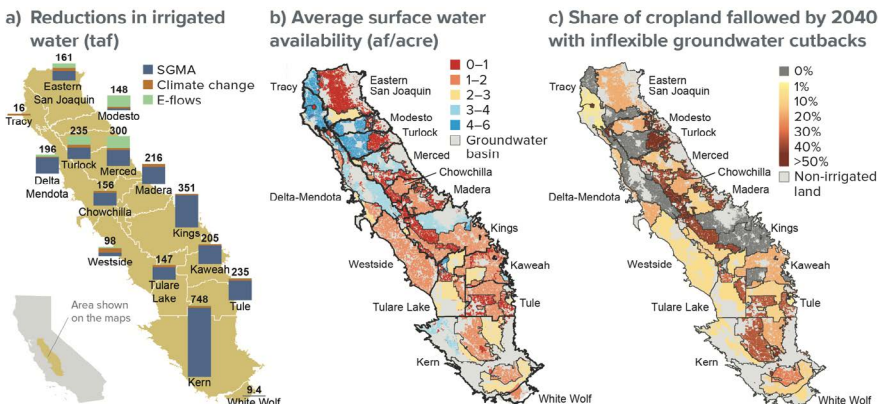


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a series of complex environmental regulations that dictate how much water must bypass our reservoirs and be sent out to the ocean via the Bay-Delta. These regulations have essentially locked in our water shortage situation. What I mean by that is, on average, reservoirs will not be permitted to keep enough water in storage to meet all of our current needs. So this year, we may have sufficient water to go around (and perhaps more), but in the years following, we will find ourselves back into a shortage condition. If the political leaders in the state are unwilling to update these regulations to allow for more flexibility to store and convey this water, people and farms will be forced to leave the state until we have reduced enough water demand to satisfy environmental interest groups. However, there are alternative ways to manage our water system that can make more efficient use of water in wetter years and help meet our state's needs, including for the environment. I would prefer the latter; we just need the political will to accomplish this.

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DRIVERS AND EFFECTS OF REDUCED WATER SUPPLY IN THE SAN JOAQUIN VALLEY BY 2040



Source: Public Policy Institute of California

The brief explores adaptations that could soften the blow to the Valley's agricultural economy, including water trading, expanding groundwater recharge, and accessing new sources of supply, among others. For every adaptation considered, the brief estimates how much each would affect potential reductions in the Valley's acreage, employment, and economic activity. For example, it suggests that expanding sources of supply – such as by capturing and storing water during flood and high-flow periods, or by increasing the reliability of imported Sacramento River supplies – would reduce following by between 225,000 and 395,000 acres (26 percent and 45 percent). The brief concludes with a direct call for coordinated action, saying "There are no farm-by-farm solutions when it comes to improving water trading, enhancing water infrastructure and supplies, or managing large-scale farmland transitions. Achieving successful outcomes will require unprecedented coordination and cooperation among local and regional parties—with strong partnership and support from state and federal agencies."

FWA COO JOHNNY AMARAL FEATURED ON IHEART RADIO'S "THE TREVOR CAREY SHOW"

In February, FWA Chief Operations Officer Johnny Amaral joined "The Trevor Carey Show" on iHeart Radio to discuss California's current water situation with the Friant Division, policy challenges, and ongoing Friant projects.



Listen now on **iHeart Radio** and **Apple**.

Note: Johnny's interview starts at 20:40.

SUBSURFACE AND AQUIFER MAPPING DATA AVAILABLE FOR ENTIRE CENTRAL VALLEY

This month, the California Department of Water Resources (CDWR) released a detailed set of data that reveals the most suitable soils for groundwater recharge throughout the entire Central Valley. CDWR collected the data through a series of airborne electromagnetic (AEM) surveys covering 11,500 miles of land in the valley over the course of six months last year.

AEM surveys are conducted using a helicopter towing electronic equipment that sends signals into the ground. The signals then bounce back and are measured, making the process similar to taking an MRI of the subsurface area. AEM measures the electromagnetic response of the subsurface, which provides clues as to how suitable the area is for recharge. Subsurface material that are more electrically conductive are typically assumed to be fine-grained materials, like silts and clays; if the material measured is electrically resistive, it's assumed to be coarse-grained materials, like sands and gravels, that are generally better suited to recharge.

The combined with other data related to groundwater and soils, the collected data is then used to create continuous images of a particular area's underground geology, including its aquifer systems. The complete dataset and interpretive reports can be accessed through CDWR's AEM Survey website, which also includes links to a GIS-based web viewer that displays electrical resistivity data and data interpretations on a map of the survey areas.

AEM Electrical Resistivity Data

A map of electrical resistivity data for the San Joaquin Valley's subsurface materials generated via the AEM Survey Data Viewer. More resistive materials generally indicate better recharge opportunities.

Resistivity (ohm-m)

- < 3
- 3-5
- 5-8
- 8-12
- 12-18
- 18-28
- 28-42
- 42-66
- 66-100
- >100

AEM surveys are conducted using a hoop-like apparatus suspended from a helicopter. The helicopter carries the equipment approximately 100 feet above the ground and collects data along a predefined flight path.

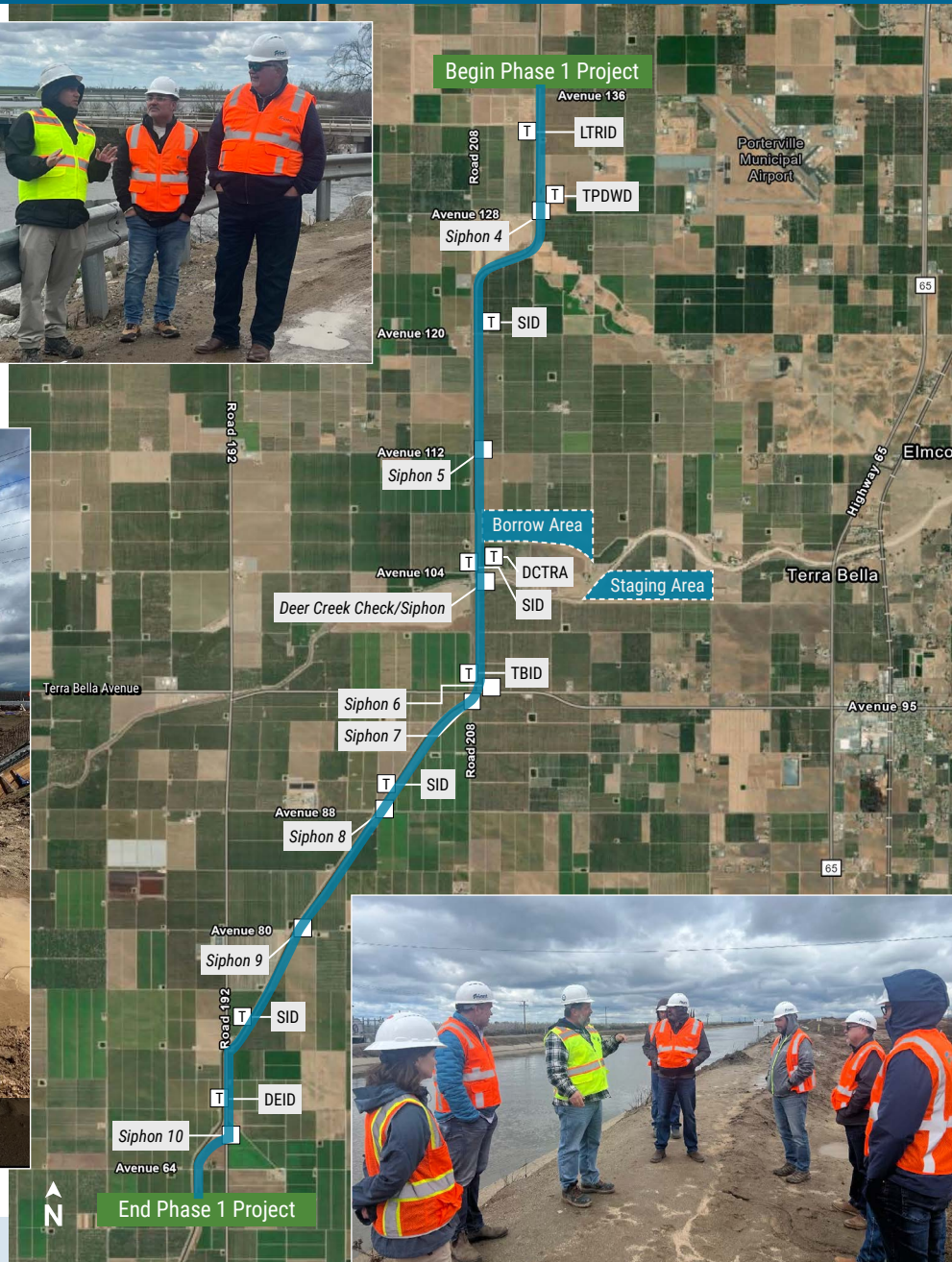
Credit: California Department of Water Resources

FRIANT-KERN CANAL MIDDLE REACH CAPACITY CORRECTION CONSTRUCTION PROGRESS UPDATE

Are you interested in joining a tour of the Capacity Correction Project worksite? Go to www.friantwater.org and let us know.



Road 192 Siphon work.



IN THE NEWS

"California Water Agencies Hoped A Deluge Would Recharge Their Aquifers. But When It Came, Some Couldn't Use It," Western Water, Feb. 16.

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"Perspective: California's Long and Complicated History With Water," CalMatters, Feb. 9.

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"California storms left behind a 'generational snowpack.' What that means," Washington Post, Feb. 7.

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"The Biggest Untold Reason for the Decline of Salmon," California Globe, Feb. 7.

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"Ground zero: Rain brings little relief to California's depleted groundwater," CalMatters, Feb. 7.

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"Winter storms in California will become more intense as climate change accelerates, study finds," Capital Public Radiop, Feb. 3.

[CLICK TO READ MORE](#)

"California Has Tons of Snow. Will That Help Cities and Farms in the Summer?" Wall Street Journal, Jan. 28.

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