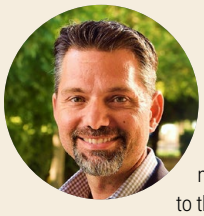
Friant WATER AUTHORITY

eWATERLINE

JULY 2022

MESSAGE FROM THE CEO



Jason Phillips
Chief Executive Officer

In my past few messages, I've discussed the releases being made this year from Millerton Lake to the San Joaquin River Exchange Contractors and their likely effects on Friant Contractors, eastside valley communities, and salmon populations below Friant Dam. In late June, the Bureau of Reclamation began "ramping down" these releases, as late spring storms improved water supply conditions in Northern California and Delta pumping increased more than initially expected. **Reclamation also increased the Friant Division Class 1 allocation** from 15% to 20%. Although this is all good news compared to what we thought might happen, the previous three months of reduced Delta supply cost Friant Contractors more than 200,000 acre-feet of water, which will undoubtedly result in a similar volume of water being pumped from the valley's stressed aquifers. This highlights the reality that the current water infrastructure and environmental regulations are failing the people of California and both major investments and major reforms are needed.

With the State of California again managing a historic budget this year, the time is right for big, one-time spends on real infrastructure, especially in the San Joaquin Valley. We've shown we'll put that money to good use immediately to build future climate resilience. The **Friant-Kern Canal Middle Reach Capacity Correction Project**, a current beneficiary of State investments, continues to make impressive progress in its implementation. As highlighted elsewhere in this newsletter, FWA is also working closely with our contractors and with Reclamation to develop an interactive web-based map that details the geography, features, and significance of the Friant-Kern Canal along

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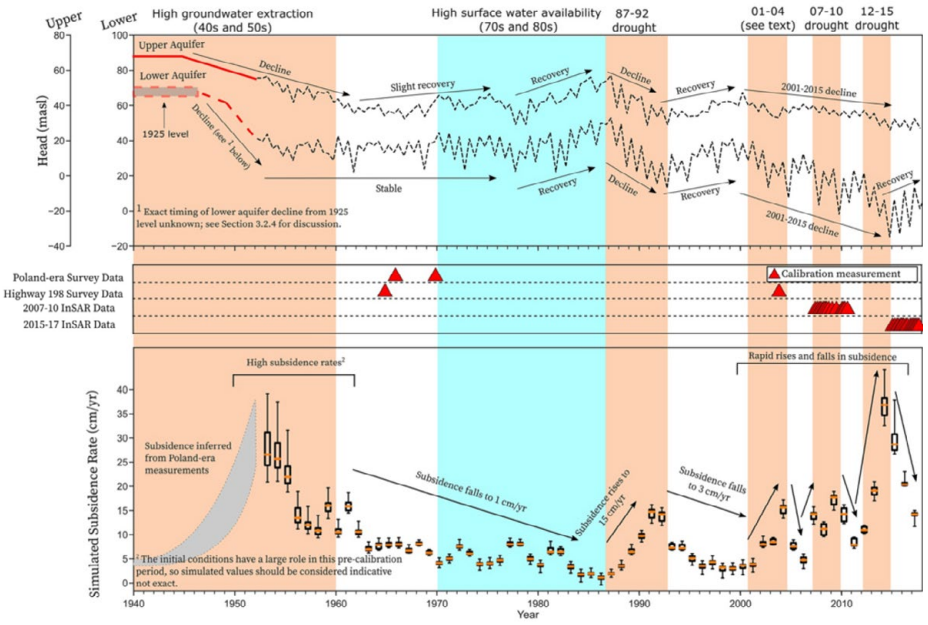
STUDY CONCLUDES THAT WITHOUT INCREASED SURFACE WATER, REGIONAL LAND SUBSIDENCE WILL CONTINUE FOR DECADES EVEN IF WELLS STOP PUMPING

Last month, a group of researchers at Stanford University released findings from a study of subsidence in the San Joaquin Valley, including assessments of what factors could slow or halt subsidence in future years. One major finding was that even if groundwater pumping for farms and cities was halted immediately, regional land subsidence is likely to continue for decades. However, the study also found that subsidence could slow significantly within just a few years with the introduction of surface water to help raise levels in groundwater aquifers. The study simulated 65 years of land elevation subsidence in the Valley near the town of Hanford using a combination of remote sensing data, well log data from local agencies, and expertise and review by local water managers.



A figure from the study showing the relationship between hydrologic events (wet periods and drought periods), groundwater levels, and simulated subsidence between 1940 and 2010. (Source: Lees, et al., 2022.)

The study's lead author, Stanford geophysics PhD student Matthew Lees, was quoted in Stanford's **news release** as saying, "If you don't get these water levels to come back up, then the land is going to sink, potentially tens of centimeters per year, for decades. But if they go up, you can get rewarded very quickly. You almost immediately improve the situation." While not specifically addressed in the study, these findings underscore the need to restore the carrying capacity of local and regional canals, such as the Friant-Kern, to support the surface water deliveries needed to halt subsidence in the near-term and bring the Valley into long-term economic and environmental sustainability.

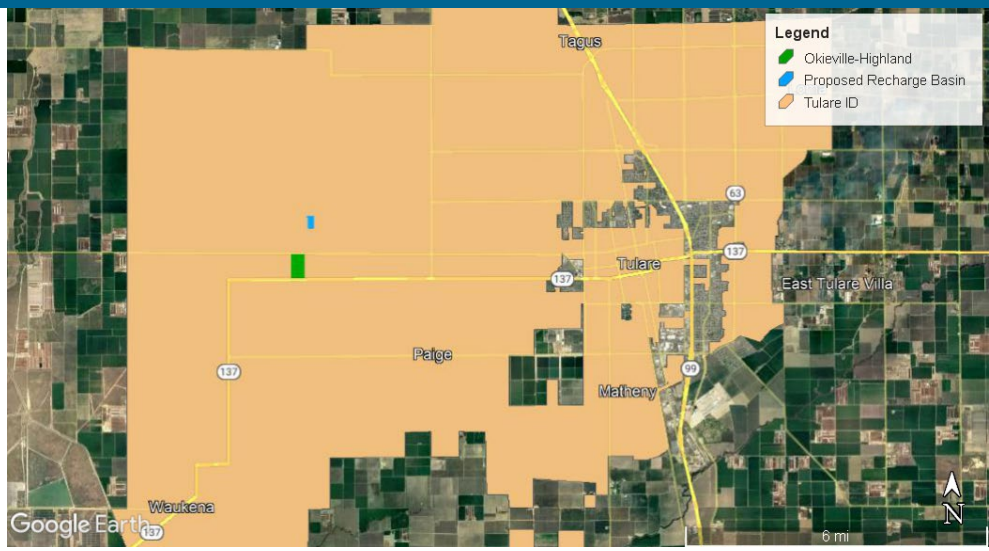
The study was published in the **June 2** issue of the scholarly journal *Water Resources Research*.

the entire facility (which, if you can believe it, is eligible for listing on the National Register of Historic Places).

Other efforts, such as the **Water Blueprint for the San Joaquin Valley**, are developing proposals for multibenefit projects that would help achieve California's groundwater sustainability goals and support the Human Right to Water. Currently, the Blueprint is working with Fresno State's California Water Institute to on a study to identify 20 geographic locations that are technically and financially feasible for strategic groundwater recharge that will support sustainability and improve water quality and quantity for disadvantaged communities dependent on groundwater. For an example of this type of project, see the article in this newsletter about the project that Tulare Irrigation District is pursuing in Okieville in coordination with Self-Help Enterprises.

The above investments will help the valley use its local and regional supplies more effectively, but that still won't prevent future deliveries of Friant water to the Exchange Contractors unless California can also achieve regulatory stability in the Delta. To that end, for several years State and Federal agencies and public water agencies have been working to negotiate and finalize a comprehensive approach to meeting the water quality standards and supporting species recovery in the Delta and its tributary watersheds. This effort is intended to result in a set of Voluntary Agreements (VAs) aimed at achieving a more flexible and beneficial regime of water and habitat management than allowed under the State Water Resources Control Board's Bay-Delta Water Quality Control Plan – a major regulatory requirement for operating State and Federal pumps in the Delta. FWA has participated in VA discussions and negotiations since at least 2017, and signed on to the first VA package with other water agencies in 2018. However, since then there have been bumps in the road on finalizing the VAs. In fact, when the new agreement was announced this past March, FWA didn't sign on to the new VA "memorandum of understanding" (MOU) with the other State, Federal, and local/regional water agencies. After several years of "calls" on Friant supplies by the Exchange Contractors and uncertainty about the future, we just couldn't find a successful path forward back in March.However, on June 17, I signed the VA MOU that will allow FWA to again participate in the VAs and, hopefully, be part of the solution. That said, there's still a long road ahead for success. The lack of reliability in the Delta and the releases for the Exchange Contractors are compatible neither with a viable Friant Division nor a viable San Joaquin River Restoration Program – our existing multi-million dollar effort to restore fish populations below Friant Dam. It's imperative that these issues are resolved; if they're not, the VAs simply won't work for the eastside of the southern San Joaquin Valley.

As we enter July, I want to remind everyone to stay cool, safe, and hydrated. I hope each of you has a bit of time blocked off this month to relax and enjoy time with your family.



OKIEVILLE RECHARGE BASIN PROJECT DEMONSTRATES OPPORTUNITY FOR SHARED WATER SUPPLY BENEFITS BETWEEN FARMS AND COMMUNITIES

As many eastside residents are aware, the Friant Division of the Central Valley Project was originally planned and designed to take advantage of the region's natural opportunities to sustainably use surface water and groundwater together to support both farms and people. As drought and water quality have threatened the water supply for many small, rural eastside communities, water managers are looking for innovative solutions to provide clean and safe drinking water. One Friant Division contractor, **Tulare Irrigation District (TID)**, is leaning into the Friant Division's conjunctive water use legacy by implementing a groundwater recharge project designed and strategically located to improve water supplies for the Tulare County community of Okieville. Okieville (pop. 300) was originally settled by migrants from Oklahoma during the Dust Bowl, and is currently designated by the State of California as a severely disadvantaged community. Okieville's domestic and community wells have frequently gone dry in drought years; and, when water is available to pump, it's contaminated with both nitrates and uranium.

The Okieville Recharge Basin Project involves the construction of a 20-acre recharge facility and supporting infrastructure up-gradient of Okieville. The project is expected to provide, on average, 630 acre-feet per year in normal years and 1,400 acre-feet in wet years of high-quality Sierra watershed surface supplies dedicated to recharging aquifers adjacent to the community, which should improve the quality of local groundwater pumped by the Okieville-Highland Acres Mutual Water Company's well and delivery system. TID also intends to implement a monitoring program, including a system of monitoring wells, to determine the empirical benefits of groundwater recharge on the quantity and quality of groundwater available to Okieville.

"While we believe the project is going to provide water quality and supply benefits to Okieville, we're also implementing a monitoring system to evaluate exactly how well it accomplishes that goal," said Aaron Fukuda, TID General Manager. "If the benefits can be demonstrated, we hope this project can serve as a model for others who are looking to provide clean drinking water benefits through recharge."

The project's proponents have ample reason to be optimistic about the potential benefits to both TID and Okieville. The project's origins go back to 2015, when community-based organization Self-Help Enterprises began monitoring one of TID's ponding basins for its effects on nearby domestic wells that were going dry but also had suffered from longtime nitrate and uranium contamination. Self-Help Enterprises found that nitrate levels were 8.4 parts per million (ppm) about 300 feet from the ponding basin but increased to 86 ppm in wells located 2,500 feet away from the ponding basin, and uranium levels also decreased in wells closer to the basin.

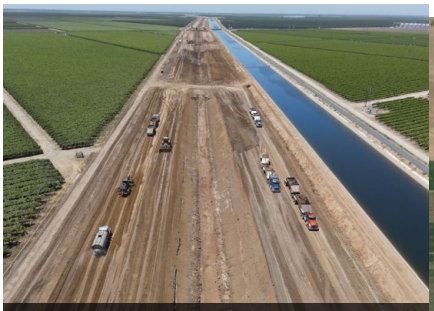
TID completed environmental review under CEQA for the project in March 2022, and is now undertaking permitting, property acquisitions and design. The project is slated to be in construction by late 2022 and should be ready for recharge activities by late 2023. The estimated total project cost is just under $2.5 million, with about $1.9 million in grant funding from the California Department of Water Resources and the remainder of the funding provided by TID.

CONSTRUCTION UPDATE: FRIANT-KERN CANAL MIDDLE REACH CAPACITY CORRECTION PROJECT

Throughout June, construction continued on the new canal embankment for segments 1, 2, 3, 6, and 7, parallel to the existing Friant-Kern Canal (see project map for locations). Some of the key highlights this month:

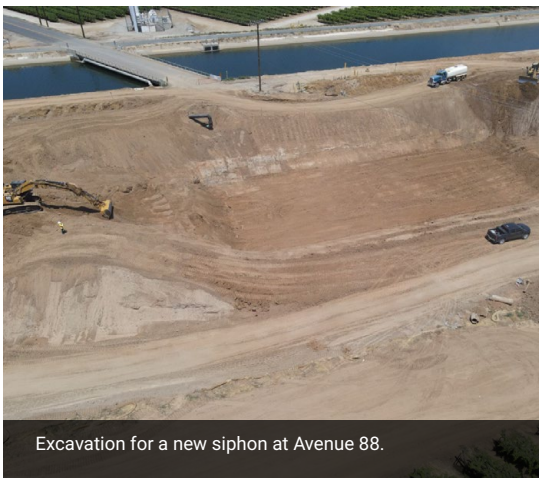
- Completion of setup for the concrete batch plant near the Terra Bella Irrigation District staging area.
- Removal of most of the trees in the work area.
- Construction of a 5-foot by 4-foot drainage extension box south of Avenue 128.
- Preparation of the foundation for the new canal near the Terra Bella Irrigation District recharge basins, just north of Avenue 88 to the south end of the project Phase 1 footprint, about halfway between Earlimart and Ducor.
- Excavation of the new canal and constructed embankments between Avenue 112 and Deer Creek, and between Avenue 92 and the project's south end.
- Installation of the groundwater dewatering system near Deer Creek, including six wells and piping connections installed to the settling tank.
- Initiation of excavation for the new roadway siphon at Avenue 88.

As with any major construction project, team biologists have been monitoring active construction areas and consulting with the U.S. Fish and Wildlife Service to ensure construction activities do not affect wildlife in the area. To date, no evidence has been found to indicate the presence of kit fox or burrowing owls – two sensitive species – within the work area.

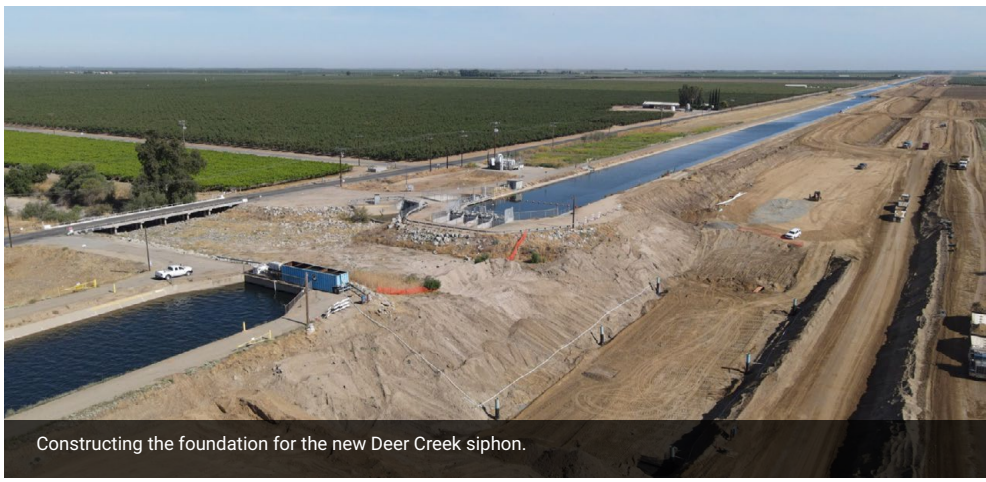


Construction of the new canal in Segment 6.

Construction of a drainage box in Segment 1 of the new canal.



Excavation for a new siphon at Avenue 88.



Constructing the foundation for the new Deer Creek siphon.

STAFF APPRECIATION DAY HIGHLIGHTS

On June 18, FWA held a fiesta-themed staff appreciation event at Visalia's Adventure Park to recognize the previous six months' strong track record of employee and worksite safety. About 60 employees and family members gathered to enjoy water slides, miniature golf, go karts, and arcade games. Strong bonds were built and tested as FWA employees Chris Hickernell, Maggie Suarez, and Juan Carlos lapped their coworkers twice on the go kart track!

IN THE NEWS

"California's largest reservoirs at critically low levels – signaling a dry summer ahead," *The Guardian, June 24*

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"Tunnel vision: What's next for the governor's plan to replumb the Delta?," *CalMatters, Rachel Becker, June 22*

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"San Luis Reservoir dam being raised 10 feet," *Manteca/Ripon Bulletin, June 21*

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"These maps illustrate the seriousness of the western drought," ***Washington Post, June 16***

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"How does more rain in northern California equal less flows in the San Joaquin River?" *SJV Water, June 14*

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"The forgotten underwater town at the bottom of Millerton Lake," *KSEE/KGPE, June 9*

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"Stanford study measures solution for sinking California, finds it may take more to reverse damage," *ABC7, June 7*

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"These are the imoacts of California's worst drought on record," *NPR, June 7*

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"In an era of drought, an obscure water contract is pitting California farmers against each other," *Grist.org, May 26*

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