

# Dams and groundwater storage go hand in hand

By Buddy  
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Californians are becoming more attuned to the crucial need to develop additional water storage. California's historic drought, now possibly stretching into a fifth straight year, has made clear that we need to capture and store much more of the high runoff flows from the mountains in big water years for use in dry years.

Unfortunately, a significant number of environmental advocates are supporting only half the water-storage solution. They either misunderstand or just hate the idea of new dams and reservoirs, maybe both. Evidence of this was found [in a recent Fresno Bee column](#). It encouraged additional groundwater storage development but slammed, most inaccurately, Temperance Flat and other new California surface storage projects under consideration.

The new public joint powers agency, the San Joaquin Valley Water Infrastructure Authority, is stepping up to back both groundwater and surface water projects. However, use of both types of projects is not a new idea.

The Central Valley Project's Friant Division was designed in the 1920s and built in the 1940s with the new surface water to be used in conjunction with groundwater to create a more reliable water supply and stop land subsidence.

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This has worked well for more than 60 years. It has slowed and at times virtually halted groundwater overuse, stabilizing the East Side aquifer through recharge and by turning off pumps through irrigation deliveries made from the Friant-Kern and Madera canals. Only when consecutive years have been very dry (or like the past two years when the Bureau of Reclamation gave Friant users zero allocations of surface water) has the water table dropped dramatically.

As built and operated, the Friant system is the primary reason agriculture – including the high-value citrus belt – along the Valley's east side has been able to thrive.

The project's centerpieces – Millerton Lake and Friant Dam – are much too small to be able to handle San Joaquin River normal yearly natural runoff (1.8 million acre-feet) without flood releases down the river.

Since 1977, San Joaquin flood releases from Friant Dam have added up to more than 15 million acre-feet (approximately 100 years of water supply to Fresno), most of which has flowed to the ocean. In eight of Friant Dam's most recent 16 flood release years, more than a million acre-feet was released each year. Millerton Lake holds only 520,500 acre-feet.

The simple reality is that Sierra flood-event runoff flows head toward the Valley in massive volumes over short periods of times (days versus months). These high flows can be our source for recharging and storing groundwater but they occur much faster and in far greater quantities than can be handled.

The flows would have to be conveyed to the recharge sites, all of which are many miles away and lots of time is needed for the water to percolate into the soil. It's a very slow process.

The Friant-Kern Canal can only convey 4,100 cubic feet per second south of the Kings River and Millerton flood inflows are many times higher. In 1997, the inflow to Millerton was 120,000 cfs. The reservoir can't possibly capture all of it. Nor can the canals move that amount of flow.

Yes, we need more groundwater storage, particularly now that the Valley must meet the state's new groundwater

sustainability standards. But we must realize that to capture these floodwaters and percolate them into below-ground storage will take a far bigger above-ground cup. That “cup” is Temperance Flat Reservoir.

One thing is certain. We have to be prepared to capture this precious commodity when it is available and not allow it to be discharged to the ocean.

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