

# 1977 - NOT SO BAD AFTER ALL!

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The Board of Directors holds regular public meetings on the 2nd Tuesday of every month at 9:00 am at the District office in Tulare

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Water officials would shudder when the year 1977 came up as something that could happen again. Coming on the heels of a dry 1976, California was faced with record low snowfall throughout the Sierras, Central Valley reservoir inflows receded down to a trickle, and it took heavy reliance on groundwater pumping to get through the summer. By mid-February 2014, this year was seen as potentially another 1977. The unfolding winter was persistently dry and was preceded by a very dry 2013. As it turns out, however, 2014 was nearly twice as wet in both the Sacramento and San Joaquin watersheds as was 1977! Much of the difference came as late winter rain rather than snow, but those rains winding up in reservoirs and flowing into the Delta did little to ease up the restrictions holding back Delta export pumping. This year will certainly go into the record books as a very dry year, but not as bad as 1977.

Yet, here we are going into the summer and, oddly enough, find ourselves wishing for the good ol' days of 1977. Why? Look at the comparison table below, contrasting the 1977 and 2014 federal and state Project water allocations to various regions in the San Joaquin Valley:

	1977	2014
West-side CVP	25%	0%
SJR Exchangers	75%	65% <sup>(1)</sup>
Friant CVP	25%	0%
SWP Ag.	40%	5% <sup>(2)</sup>

(1) Supply coming from Delta exports and San Joaquin River(2) SWP allocation for all state contractors, Ag. and M&I

While the 25% allocation to Friant in 1977 may not seem like much, it's a lot better than zero and keeps permanent crops alive through the hot summer months, particularly in areas with little or no access to groundwater.



San Luis Reservoir sits at 35% of capacity as supplies pumped from the Delta have shrunk

From Modesto down to Bakersfield, we have more urban dwellers than in 1977 – about 1.5 million more. However, most of these folks rely on municipal groundwater systems, not water from reservoirs or project canals. Agricultural land in production today is only about 0.7% greater than in 1977, and much of this has occurred in areas dependent solely on groundwater. In other words, demand for the surface water is little different than it was in 1977.

What *is* hugely different now is the inability of the state and federal Project operators to release water from the reservoirs during the spring and summer and pump it south into the southern Valley. There is water in the system, but it's being reserved for environmental needs which *might* occur off into the future. How ironic it is that the immense water storage and delivery systems of the CVP and SWP, largely built to enable the state to ride out the drought years with nominal cutbacks in supplies, are virtually hamstrung by environmental regulations and constraints to the point where the Projects' dry-year relief can no longer be depended upon.

Looking at this another way, that is to superimpose 1977 snowfall and runoff – worse than what we have to work with this year - on top of the current-day regulatory regime, and the result is the state literally running out of surface water in critical ways. Not nearly enough for even the most senior of users in the Sacramento and San Joaquin Valleys, nothing for all others dependent on Project supplies here in the Valley and, of grave concern to all, a Delta that starts to salt up and put Delta agriculture in jeopardy and threaten a shut-down of the federal and state export pumps.

All this points to the urgent need for more reservoir storage and striking a better balance between the environment and the needs of people. Let's hope that as things worsen and more and more of the state gets swept in to major water shortage problems, the pendulum, now at the far left towards somewhat speculative environmental wants, begins to swing back the other way.

## **TID for Hire**

What's a water district to do without water? It's not news that we will have no water once again this year, what with the ongoing drought and Friant angst in having to give up much, if not all, of its San Joaquin River supply this year to Los Banos area farmers. Here we are with the Water Department and seven Ditch Tenders ready to fire up the system, checkup the canals, take orders and measure flows at ditch turnouts, but all this will have to wait until next year.



City of Tulare Ponding Basin No. 3

Our Ditch Tenders also serve as skilled maintenance workers, equipment operators, etc. and are quite able to take on a variety of in-house repair and construction projects this summer, much like they do off-season when we usually don't run water. However, having gone this long - since the winter of 2013 - without any water, it was time to seek outside work to help sustain our expense budget and make up for the lack of water sale income. With our grant-funded capital projects and a long list of repair and maintenance work items, we've got plenty to do in-house. We don't plan to put any of this off to a great degree, but we have sought to fill the time with work that would otherwise consist of a number of crew members normally devoted to tending to the water flows.

To that end, TID has made arrangements with Orange Cove ID, Tulare County, Wutchumna WC, and the City of Tulare to undertake needed operations and maintenance work of theirs. Add to that several piping and on-farm projects for landowners in need. This work will bring in revenue to offset ongoing payroll expenses and help keep us in the black this year. One of the larger programs is with the City, and we are taking on maintenance and rehabilitation work on many of their storm water basins around town. We are working with City staff to identify ways to set these basins up for improved groundwater recharge capabilities during the rainy season. This helps not only the City, but the District as well. We both depend greatly on the groundwater aquifer beneath us, as is all too evident in years such as this one.

All of these outside jobs are temporary, and our O&M Superintendent is keeping a close eye on work being put off until a later date here in the District. We understand our prime duties are to provide water service to our farmers. This temporary work has been vetted with the Board of Directors, and they are in full support *provided* we do not jeopardize our ability to carry out our prime mission to keep up our own canal system in order to provide water at a reasonable price to our own growers.

## Groundwater—Is It Sustainable?

Sustainability – that's the popular buzz word today when talking about natural resources, water in particular. No one can argue that we need water, now and in the future. When it comes to groundwater, the Valley is being faced with some tough choices down the road. Growing cities, largely dependent on wells, are using more of the resource. So too are some farm lands using water for multiple crops and newly-farmed lands coming into production in some areas. The loss of surface water to environmental regulations has taken its toll as well. Combine all of this with the ongoing drought, and water levels throughout the Valley are dropping at accelerated rates, i.e., we are locked into a groundwater overdraft trend which will be difficult to get out of.

To many of us, what needs to be sustained in this region is our agricultural heritage and population centers it supports. This view spurred the development of most of our current surface water sources, from the local reservoirs Lake Kaweah and Millerton Lake to the west-side Delta export projects bringing water from the water-rich Sacramento Valley watersheds. The people's needs required more water and the valued groundwater resource underneath was being overtaxed, just like today.

So here we are again, but this time the focus is preserving the groundwater resource by demand management approaches, to and including less pumping. The groundwater overdraft forum held in Tulare last November squarely addressed the problem, and the general mood of local attendees was that this was coming. The state's water rights board – the SWRCB – has made it plain that it wants locals to get their groundwater basins in balance, and legislation is being drafted now in Sacramento to empower local agencies to do just that.

One bright spot emerging from all of these activities is the common viewpoint that we will need time to get back into balance, as much as 20 years. We didn't get into this fix overnight and won't feasibly solve it that quickly either. Unfortunately, not being emphasized to any degree by our state's leaders yet is the development of more imported water supplies for the Valley, including the return of what has been taken away via environmental regulations. Without that, severe impacts to the sustainability of Valley agriculture will surely result and the wellbeing of its towns and cities hang in the balance. Look for future issues of TID Tidings for more on this critically important subject as it unfolds in the next few months.



Local Private Groundwater Well



#### **WHO REMEMBERS?**

The man in hip waders was the District's Superintendent, Clifford Slaughter, way back in 1903. This photo meant prosperity, for it signified a wealth of water in the Tulare region, and in other parts of the Valley as well. Showcasing Tulare's hidden treasure, it became a postcard and found its way via U.S. Mail to many elsewhere in the country yearning for rich soil, a life-giving climate and water to go with it.

Artesian wells, sometimes referred to as flowing wells, are now a thing of the past. By the late 1880's, there were more such wells in California than anywhere else in the U.S., and a majority of those were found right here in the San Joaquin Valley. Over eons of time, water recharging the underlying aquifers created pressure from below, and water would gush to the surface when a pathway, like was done with a hole drilled through the shallow clays, was created. In such abundance was the supply that folks thought it to be never-ending, and small wells were allowed to flow without being capped off into open lands until the water flow was again channelized into irrigation ditches and landscape needs.

By the early 1900's, these flowing wells petered out in rapid fashion, and the well-drilling technology of the day couldn't bring water to the surface from much below 20 feet down or so. What happened? Like today, over pumping the supply caused the disappearance. Groundwater science was in its infancy, and the work of early engineers in Europe, who were unearthing how water existed and moved in the underlying soils much like water in a sponge, hadn't reached fledgling Tulare County. Like the water supply in streams and rivers that *could* be seen, groundwater was thought by many to flow in underground rivers. A rumor fanned across the region that, with the great 1906 earthquake in San Francisco, these underground rivers were somehow realigned and all the water was swept right out from under the Valley and flowed northward and into the Bay!

Tulare Irrigation District 6826 Avenue 240 Tulare, California 93274

#### LOOK INSIDE...

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Founded in 1889, Tulare ID was one of the first irrigation districts in California. Its purpose is to serve the water supply needs of the greater Tulare area, a rich and agriculturally diverse region within the Southern San Joaquin Valley. The water provided comes locally from the Kaweah River and is also imported from the Federal Central Valley Project.

