General Manager's - Monthly Report

A subject of interest to all of us is groundwater. If you live in the city limits of Oakdale, 100% of all your water comes from the city's groundwater well system. This water is pumped out of the ground; put into a pipe; and sent to your home. Pretty neat system. If you're an OID agricultural customer, only 2-3% of your water supply comes from groundwater. The other 97-98% of your irrigation water comes from the Sierras as surface water. Back in the 1940s OID put in 20 groundwater wells to solve some canal capacity issues. These wells were drilled to depths of 250 feet and greater. At the time, the water table stood at an average depth of 43.2 feet below the ground surface. Since that time OID has added 6 additional wells and farmers have installed 100s of wells in our area to meet irrigation and drought demands.

From the 1940's to 2011 the local water table has declined to an average depth of 78.6 feet. That's a drop of 35.4 feet in 64 years (7-inches/year). In comparison, locations to our south, Merced to Bakersfield, are pumping from depths of 600 feet and greater.

During the 1976-1977 drought OID's wells declined 20-25 feet. In the 1989-1992 drought we saw the same affect. It took 5-6 years for water levels to recover. During our recent 4-year drought, which began in 2011, OID's wells have dropped but just 12 feet, about half of previous drought events. The reason for this smaller decline is explained below. OID expects some recovery in water levels after this drought abates, but like previous droughts, that will take a few years to see. Currently, water levels in OID's historic well system stands at about 91 feet below the surface. To help manage and track water resources OID and all irrigation districts provide a "water balance" to the State. Of interest from this data is how OID and its farmers impact the local aquifer. Let's look at this.

Withdrawals from the aquifer occur from pumping. Local farmers in OID's service area pump 23,000 acre-feet annually. OID's well system pumps 8,500 acre feet (10-year average w/ 4-years of drought). This makes for a combined annual withdrawal of 31,500 acre feet from the aquifer below OID's service area. Inputs to the aquifer come from OID's leaky canals and drains which add about 42,000 acre feet; deep percolation from applied irrigation water by farmers adds about 27,500 acre feet; and precipitation adds another 13,500 acre feet. That's a total annual input of about 83,000 acre feet to the aquifer. Doing the math; OID and its local farmers put into the aquifer a net 51,500 acre feet more water than they take out. So why is the aquifer declining?

Looking east of Oakdale and Woodward Reservoir you'll see a bloom of new tree acreages being planted surviving only on groundwater. Estimates are that 30,000-40,000 acres of both historic and new agriculture to our east is pulling out 120,000-160,000 acre feet annually from the groundwater. It's not hard to see who is contributing to dropping aquifer levels. OID annexed 10,000 acres of this land to help reduce overdraft but that's not going to solve the problem. There's not enough surplus water in OID to remediate this issue and that has those who invested in this area nervous. The solutions to groundwater overdraft may be to reduce agriculture for those without a backup surface water supply. That's why you hear the call to "keep water local" and "annex more lands." It's coming from some of those large landowners who want to get OID water to backfill their risky investments. Problem is they want the water at below market prices or subsidized by OID rate payers.

Another lingering question is, does OID engage in pumping and selling water for profit? The media genius who crafted this fabrication deduced that; if OID pumps water <u>and</u> OID sells water, then OID pumps to sell water for profit. Sorry, not true. Since the 1940's OID has had to pump groundwater to meet service demands each and every year. Over the 16 years of doing water transfers, which began in 1999, OID has pumped on average 7,474 acre feet a year. Over the 39 years <u>prior</u> to selling any water OID pumped annually 10,200 acre feet. That's a pumping <u>reduction</u> of 27%. Looking at the facts, if OID was pumping <u>and</u> selling water, pumping rates would be going up <u>not</u> down. So why does OID pump less water?

The answer lies in efficiency improvements by both OID and its farming community. We collectively do more with less water and that means less pumping and taxing of our aquifer. A huge plus to our aquifer. OID has used water sale revenues to modernize and improve its delivery system. Farmers have paid for their improvements out of their own pockets. Both groups are benefiting our regional groundwater system. Yes we have more work to do to protect our aquifer, but we are in good shape to address and solve those challenges.

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Water Report as of August 1, 2016

Facility	Max Storage	Current Storage	% Capacity	Inflow (cfs)	Storage Change
	(af)	(af)			Since 7/1 (af)
New Melones - Federal	2,419,523	582,745	24%	762	(47,290)
Donnells	64,325	52,906	82%	176	(8,932)
Beardsley	97,802	87,356	89%	371	(9,067)
Tulloch	66,968	65,536	98%	1,962	(838)

New Melones Inflow since Oct. = 876,000 af OID 2015/16 Water Allocation = 300,000 af OID Water Used since Oct 1 = 123,140 af Projected Use Aug. 1-Sept 30 = 72,959 af Total Projected Use Oct 1-Sept 30 = 196,099 af Water Sold this year (April/May) = 42,500 af Water made available for local use = 5,000 af Local Water Used to date = 227 af

Projected OID water lost to Federal Government on September 30 = 56,628 af



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