OAKDALE IRRIGATION DISTRICT **October 2017**

General Manager's Monthly Report

This month's question: Have water transfers and sales of OID's surplus water out-of-area impacted groundwater recharge to our local aquifer? The answer to this question can be found in the publically available data OID tracks, produces and reports to the State of California's Department of Water Resources (DWR). OID's actions are in compliance with the Ag Water Suppliers Efficient Water Management Practices Act of 1990. These reports, called Ag Water Management Plans (AWMP), are prepared by an independent consultant hired by OID to insure the methodology, consistency and accuracy of the reports meet the standards set by the State's DWR.

Constituents of OID will be happy to know that as of the 2016 the amount of groundwater recharging our local aquifer has increased 50% since 2001. YES 50%!! Per the history of data, in 2001 there was 46,246 acre feet recharged into the aquifer. In 2016 it increased to 69,524 acre feet. How can this be if OID is selling water out of the area?

There are two answers. One is OID studied the impacts water transfers would have on the aquifer back in 2007 when it prepared its Water Resources Planning document (WRP) and its Environmental Impact Report (EIR). The documents supported the benefits to groundwater. The second reason we know this is from 17 years of data collection to prove and assure the findings of the WRP were correct. They have proven to be spot-on. So let's look at the data and benefits.

Since water transfers/sales began in 1998 OID has derived a revenue of $69 million. During that same period, OID has invested $67.8 million back into its water delivery system in capital replacement/improvement and modernization projects. That much investment in conservation has produced the following benefits at no cost to landowners;

Seepage from OID Canals and Drains: In 2001 water seepage from canals and drains to the aquifer was 27,368 acre feet. In 2016 that number had increased to an average 42,050 acre feet. A 53% increase in recharge. HOW? OID invested $20.1 million in automated gates and built two regulating reservoirs. The automated gates keep water ponded in canals longer and at higher elevations and the two reservoirs added 45 acres of recharge basin to the system.

Deep Percolation of Applied Water "On-Farm:" In 2001 the deep-perc loss to the aquifer from on-farm applied water was 18,063 acre feet. In 2016 that number had increased to 27,063 acre feet. A 52% increase in recharge. HOW? In 2001 OID had 6,923 acres of permanent crops. In 2016 that number now stands at 30,639 acres. The conversion of thousands of acres of pastureland to high-dollar crops has contributed to the ability to put more water into the aquifer. The OID service area is dominated by hardpan soils that are resistant to the vertical infiltration of water. Land conversions have ripped and sub-soiled those lands before planting of these high dollar crops. Once these soils are opened up their infiltration value to the aquifer improves dramatically and provides a drainage benefits to surrounding lands

Deep Percolation of Precipitation: In 2001 "irrigation season" percolation of precipitation was determined to be 815 acre feet. In 2016 AWMP that number had increased to an average 13,584 acre feet. A 15 fold increase!! HOW? This is how land conversions have benefited our area.

Efficiency Improvements in OID Keeps More Water Local:

One of the biggest benefits of conservation projects funded by the sale of surplus water is that it has allowed OID to keep more water local. In 2001, the amount of water leaving the OID from farmers' fields (tailwater), OID canal and lateral spills into OID drains totaled 74,616 acre feet. Today, those losses have been reduced to 48,605 acre feet. That's 26,011 acre foot savings (35%)!! Today, because of modernization and system improvements, funded solely by the sale of surplus water, that water sits in New Melones Reservoir available to meet the needs of OID constituents where and when needed and not running out OID drains at no benefit to OID. This water represents greater water reliability and drought resilience to our constituents and served us well during the 2012-2016 drought. Not to forget the 10,000 acres OID has annexed, keeping 30,000 acre feet of its conserved water going to a local benefit, our agricultural economy.

While the data shows OID's efforts have been all positive there is a problem. The local aquifer should be responding and it's not. This problem was not anticipated nor forecasted by OID but it is currently impacting OID and our constituent's abilities to realize the aquifer benefits we have invested in.

To the east of Oakdale has evolved the development of 35,000 acres (est.) of tree-crops. Collectively these lands are all pumping groundwater at the rate of 100,000 acre feet (est.) a year. As OID and the City of Oakdale sit downstream of these lands their pumping is intercepting that 100,000 acre feet of groundwater that was migrating westward to replenish our local aquifer. That water will now not get here for that purpose. Until this extraction of groundwater east of OID is addressed by the Groundwater Sustainability Agency, OID and the City of Oakdale will continue to see a lowering of water tables in our area, but it is clearly not because of nor attributable to out-of-district water sales by OID.

Water Report as of September 1, 2017

Total Storage Capacity of New Melones =	2,420,000 af
Storage in New Melones on Oct 1, 2016 =	527,400 af
New Melones Inflow since Oct 1, 2016 =	2,856,685 af
Current New Melones Storage =	2,044,800 af
OID 2016/17 Water Allocation =	300,000 af
OID Water Used Oct 1, 2016 to Sept 1, 2017 =	169,375 af
Water Sales this year Out-of-Area =	0 af
Water made available for local use =	No Limit
Local Water Sales (est.) to date =	2,500 af
OID water (est.) to be lost to Federal Government on September 30 =	94,346 af

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