

From: [Mark Cook](#)
To: [Sharon Scantlebury](#)
Subject: public comment - San Simon sub basin INA
Date: Friday, July 17, 2015 4:57:14 PM
Attachments: [Mark Cook public comment.pdf](#)

Good afternoon Ms. Scantlebury

Please find the attached PDF to be submitted in the public comments for designation of an INA in the San Simon Valley sub-basin.

Best regards,
Mark Cook

July 17, 2015

Arizona Department of Water Resources
ATTN: Sharon Scantlebury
via email sscantlebury@azwater.gov

Mark A. Cook
Whitetail Creek Orchards, LLC
PO Box 65
Bowie, AZ 85605

RE: public comment of proposed San Simon Valley INA

To whom it may concern:

I have presented an oral statement of record at the Bowie public hearing, and wish to offer additional comments of record, particularly concerning the 100 year groundwater flow model recently prepared by ADWR. I am certainly not qualified to contest the results as a hydrologist, but my observations lead me to believe that the future aquifer drawdown is underestimated by the model.

There are four index wells on or in the immediate vicinity of our farm South of San Simon (ADWR hydrographs attached). All four are operating deep agricultural irrigation wells. As I evaluate ADWR's data from these wells and compare the last 2 well sweeps of 2015 and 2007, I find that these water levels have dropped an average of 5.48'/year. To be sure, our area has experienced a drought during this 8 year period. However, when I evaluate these wells going back 28 years to an apparent well sweep in 1987, I find they have dropped an average of 4.15'/year for the last 28 years. According to the USGS estimated pumping in the valley, this time period experienced pumping volumes similar to or lower than the projected pumping in the model. It also includes quite a range of years generally accepted as being prior to our current drought. I understand that the accepted science shows this drawdown will not necessarily continue in a linear fashion as the aquifer continues to be pumped. However, considering that these wells have dropped an average of 116' in 28 years of pumping similar to the model, it leads me to question the conclusion of the model that these 4 wells will drop a maximum of 155' in the next 100 years.

I would additionally suggest that the "current rates of withdrawal" have been underestimated. Annual pumping of 49,760 acre feet per year on 20,500 acres in the valley is 2.43 acre feet/year/cultivated acre. The primary crops in the valley of pecans, pistachios, and alfalfa all require quantities in excess of this estimation. Most other crops or double cropping in the valley require at least this quantity.

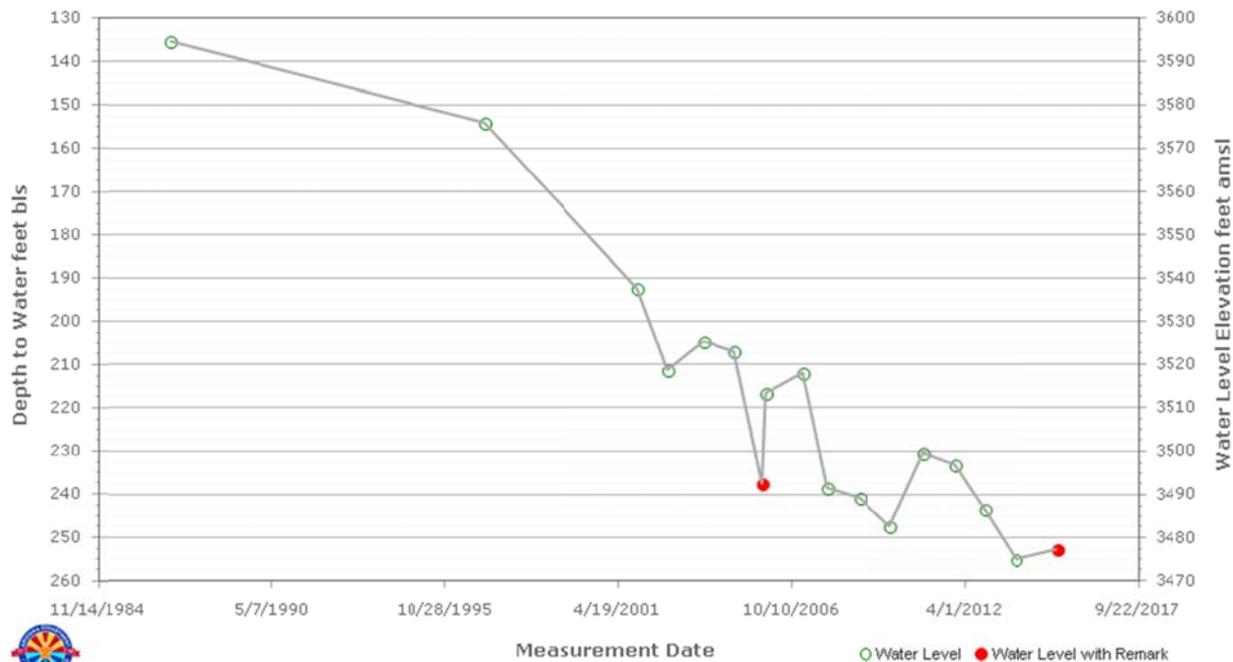
I estimate that there are nearly 8,000 acres of permanent crops planted in the valley that are 6 years old or less, mathematically this could be the source for the estimation. However, these plantings are on a set and known progression of increased water consumption in the very near future. To not consider this verifiable and well documented progression of crops under current cultivation as “current” pumping would be extremely short sighted. There are also a significant number of new acres under active development today that will be cultivated and/or potentially grandfathered under an INA. Though not considered in the model, it does not lessen their future impact to the aquifer. If such acres would be grandfathered in an INA and considered cultivated from the standpoint of substantial capital investment, I submit these acres should be considered in the decision.

I believe it is a noble goal to provide a reasonably safe supply of irrigation water in the future for ourselves, our neighbors, and our children. Any assessment of a “reasonably safe supply” of course must assess if irrigation water will be physically present in the aquifer. More importantly though, it must also assess the likelihood that it will be economically feasible to pump to the surface for beneficial use. Under today’s circumstances, it must be considered that agricultural pumping lift levels vary from 50’ to 150’ deeper than measured static water levels. In addition, seasonal drawdowns in the aquifer itself will be greater than predicted by the model, since all of the irrigation pumping occurs during a 6-7 month growing season, rather than being averaged over the year, as assumed in the model. It is certain that this relationship will increase as the static water level declines, and/or the production of any given well will likely decrease. The result of this is increased energy costs and increased capital costs of pumping equipment, eventually reaching a point that is not economically sustainable.

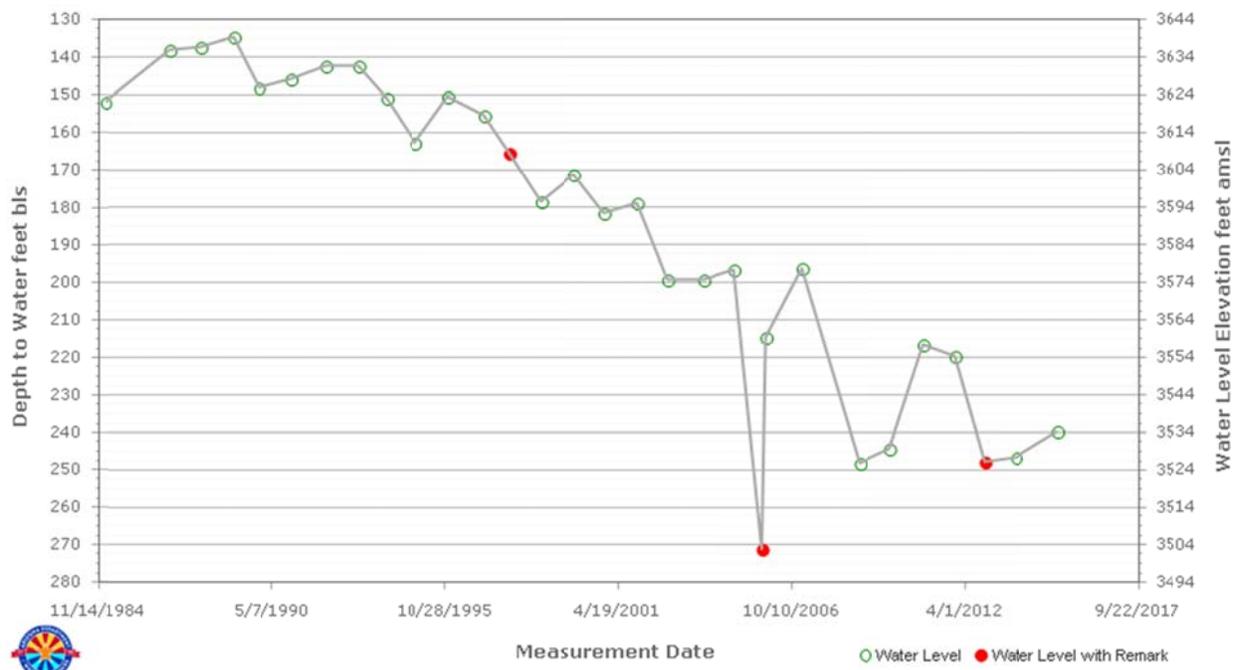
Agriculture is the primary economic engine of our valley and the families who rely on it. The current expansion of permanent crops and other agricultural endeavors is a true success story for the entire community. This success is not without potential peril or limitations. There is eventually a point that the aquifer can’t support additional expansion and the availability of future supply of irrigation water is no longer reasonably safe. I believe we are at that tipping point today. Today’s irrigators and many families will eventually bear the consequences of the decision at hand. It is also very regrettable that an INA is not perfect and some in the community would be impacted negatively. A number of others in opposition, intent to capitalize on this community success story in the short term, simply wish to pick the low hanging fruit and leave the future consequences to those of us who remain. We are potentially faced with a true tragedy of the commons. I respectfully request your support of an INA in the San Simon Valley.

Regards,
Mark A. Cook

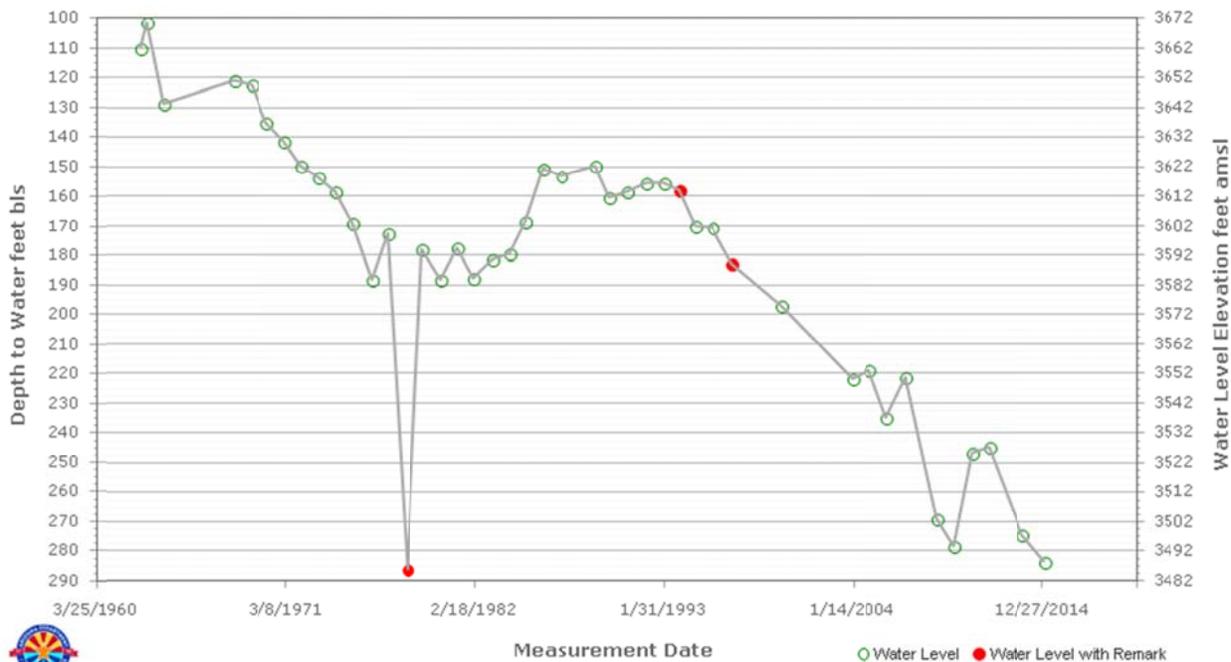
14-32-30CCB



14-31-34ACC



14-31-35BCC



14-31-22ADC

