Water Subcommittee Report on the Proposed City of Davis Connection for Domestic Water-8/28/13

The Davis option is dependent upon:

1. The city obtaining state funding for their water project at low interest rates. Connecting our system to their supply would enable their project to be eligible for this funding.
2. Approval of the Davis option by the North Davis Meadows neighborhood in a Prop 218 election.

Why the water subcommittee believes that the Davis option is the best solution to our nitrate problem:

The quality and quantity of the water for the two new deep wells project can't be guaranteed. The Davis option is similar in cost to the well project.

If we have a problem with the quality of the water, after putting in new wells, can't we treat the water?

Yes, we could add treatment. However, the cost of the treatment equipment and the operating costs are high. Additional water needs to be pumped for treatment. The most economical way to treat would be to replumb the neighborhood and only treat our domestic water. The cost of the replumbing could be over a million dollars. On top of that, treatment equipment could cost up to around a million dollars per site. We could have to bond another 2 to 3 million dollar project on top to the original well project. For example, if the cost of the well project is $2,280 annually for 30 years (paid when we pay our property taxes), we could have another $1,700 annual bill that for the treatment. Annual maintenance and operation charges would be much higher than what we are paying now, as we would have more equipment to maintain and higher electrical costs due to the additional water that we would need to pump. The cost of brine disposal is another expense to consider.

What about the treatment that was tested at the Golf Course a couple of years ago?

The treatment that was tested used ion exchange to remove nitrates and then added a process that reduced the amount of brine the process generates. This would reduce O & M costs, but we would still have a large upfront expense.

Can't we get a grant to fund either the well option or the city option?

We applied for a grant to fund our well option in 2011. We were denied funding. We were told that the income in the neighborhood was a factor in denying our request. Recently, the state has been criticized for funding so few grants. The Sac Bee reported that the state likes to provide low interest loans to fund projects, as that allows them to recharge the pool of money available for new loans. We have also been told that the state prefers to fund projects that involve connecting a small community with water problems to a larger municipality. They see this as the best long term solution to a water problem.

The city option would allow us to fund our portion of the project with a low interest loan (below 2%). The well project would be funded using the regular bonding rates (these vary depending on the market,

but are at historically low levels). Given that the options are set up to be similar in price, there will be significant saving in interest for us, if we support the city option.

The process of applying for a state grant is a significant cost for our CSA, due to the administrative costs we pay the county and the engineering costs involved.

Isn't the water in the deep aquifer supposed to be of very good quality?
The deep aquifer water does not have nitrates. However, there have been problems with manganese. The city had to retrofit Well 32, which is a deep well, with manganese treatment. The cost was $2.6 million. In February of this year, a deep well on the west side of town (well # 30), had reading a reading of 2,400ppb. When it was retested the level was 1,700ppb. The Maximum Contaminant Level is 50ppb. The well was removed from service. In August of 2011 that same well had a reading of 10ppb. It exceeded the MCL in 2006 (98ppb) and in 2008 (68ppb).

The city currently has five deep wells. In addition to the above discussed wells, a third deep well (#33) is being closely monitored for manganese, due to levels up to 45ppb. The deep well closest to us (#31) does not have a problem with manganese. That well is from 760 to 1782 feet in depth. Our well project proposes to use aquifers between 600 and 900 feet deep.

We had been told that it was felt the manganese issue was more of a problem for areas east of "F" Street. The well that was removed from service is south of us. Manganese can be in the intermediate aquifer, an area that will be involved with the proposed well project. Our engineer, Larry Ernst, said that testing for manganese can be inconclusive for monitoring well water, due to the turbidity of the water.

The Davis Enterprise quotes Graham Fogg, a UC Davis hydrogeology professor, as saying that just because one well shows signs of higher contamination, it doesn't mean the others will.

Having a manganese problem with new wells appears to be a significant risk, and one that we will not be able to be definitively ruled out by testing the monitoring wells. Manganese levels do not appear to be consistent over time.

Arsenic- There is arsenic in the deep aquifer. The levels became of concern when the state reduced the MCL from 20ppb to 10ppb several years ago. It is felt that arsenic is more of an issue when you drill a well below 1000 feet (our wells have been planned for 900 feet). The deep wells have not exceeded the MCL. Some of the deep wells have arsenic level of 4ppb. A couple of wells have level s 7ppb to 8ppb. Arsenic levels appear to be consistent over time

Hexavalent Chromium- The draft MCL for hexavalent chromium was set at 10 ppb in July of 2013. One of the city wells and three of the UC Davis wells have exceeded this MCL in the past.

Our water is tested for numerous contaminants. The MCL can be changed by the state at any time. Requirements to test for additional contaminants are added over the years.

Isn't UC Davis relying on water from the deep aquifer?
UC Davis may have to treat their water. They could choose to connect to the City at a later date.

Can we add fiberoptic lines for internet service, when the trenching is done for water, if we use the city option?

We have asked about this possibility and think it is an excellent idea.

Note: At our 8/28/13 meeting Herb Niederberberger, the general manager for Davis Utilities, said that it is not possible to put either fiberoptic or cable lines in the trenches that will be used for water. If a water pipe were to break they would have to redig the trench to fix the problem. A cable or fiberoptic line would be in the way. They allow such lines to cross water ditches, but not to be placed in them. A committee of neighbors was formed to investigate how we can get lines brought out here.

Other:

Metering will be required for our water system by 2025. A few years ago the cost of this was estimated at $250,000. The city option includes metering and will save us this future expense.