North Davis Water Project Options Frequently Asked Questions

Note: the question below concerning a Point of Use/Point of Entry option has been updated following questions during the February 1, 2018 CSA Advisory Committee meeting.

Below are questions asked during the September 13 Community Meeting that were not answered in the Water Project Options materials and those which have been asked since. Please note, while the County endeavors to provide answers to as many questions as possible, some answer require significant resources and time the CSA can not afford.

Q: Why not dig deeper wells?

A: This option was rejected due to concern about hexavalent chromium and manganese. Also, the community was unlikely to receive a low-interest loan for funding the project.

Q: What is the City of Davis' immediate plan to assess all fire hydrants and water pressure in NDM?

A: On October 3, the City tested the system. Fire is compiling the information now. The test showed many instances of low system pressure, which is not positive. Other related information:

- Fire flow pump activated when called for.
- Water is going to flush the mains and the City may retest after that. They did see some sand come out of the hydrants.
- All hydrants were operated in April as part of preventative maintenance activity.
- All water main valves were exercised the week of 9/25.

Q: Would bonding being a low-cost option similar to the State Revolving Fund (SRF) loan?

A: In 2015, the Water Project Subcommittee was directed to an online loan calculator by Government Financial Strategies to evaluate the cost of bonding a well project over 20 years vs. a low-interest loan. That calculation estimated an additional $1,100 cost per household per year to bond a $3.8 million well project. Government Financial Strategies was again engaged in the last 6 month with the questions of bonding vs. an SRF loan. They again confirmed the SRF loan is by far the cheapest way to finance the Water Connection Project. The County's Department of Financial Services was asked to calculate the difference. Ultimately, it was decided not to pursue this information as it required significant time and resource.

Q: What about Point of Entry and Point of Use (individual home filtering systems)?

A: Yolo County Environmental Health has confirmed with the State Water Board that POU/POE is NOT going to be accepted as the permanent solution. Also, per H&SC, Section 116552, POU/POE is only good for three years, if approved. The intent of the 3-yr term is to allow the facility to secure funding for centralized treatment plant or consolidation. POU/POE is meant as a temporary solution. We have confirmed this with the State Water Board.

Link here for more information:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/poepou/2017publicworkshopspou.pdf (see slide 12, #8, #11 and #12; slide 13, #2b)

Update: Additional information. as of February 23, 2018. from the State Water Board regarding point of use:

- Final regulations (start on pg 5): https://www.waterboards.ca.gov/board_info/agendas/2018/feb/020618_9.pdf

- To go this route, 100% of households must agree this is the only solution (see Item 6 on pg 2 of 30 in above link).
- The community must present to the regulator all the options and prove this is the only solution.
- If approved, POU still would only be permitted for a 3 year period, so the CSA would need to raise fees to pay someone to re-evaluate and prepare for reconsideration every 3 years.
- Ongoing monitoring requirements - Homeowners would need to provide regular access to the regulating entity (Yolo County Environmental Health, in consultation with the State Division of Drinking Water) as they are considered the "operator" of the device. Therefore, the CSA would need to raise fees for O&M and coordinating access for to every home to test, at least annually, as well as post-filter replacement.

Q: How will the charges in Scenario 2 impact our current property tax bill?

A: For Scenario 2, the $3,600 is an estimate of the cost of the water from Davis. The exact amount would depend on usage. Neighbors would be billed directly from the City for their water use. In addition, there would be a charge for repaying the loan for the water project (design, infrastructure and connection fee). This is estimated to be $3,000 for Scenario 2. This amount would be part of the property tax bill.

Currently, we pay about $1,200 for water, as part our CSA fee. The total CSA fee, of around $1,700, also includes communal landscaping, ditches, county administrative services and street lights. Proposition 218 proceedings will be conducted to figure out how much those services will continue to cost, without the water for individual homes. While a portion of the fee will continue for communal landscaping, there should be a significant reduction in the CSA fee in Scenario 2.

Q: Could another alternative be considered in which a water line from Davis be connected to our existing water supply (as in Scenario 2) which would supply drinking water to home, as well as to fire hydrants, with a new irrigation line installed in the neighborhood using existing wells to supply irrigation water?

A: This option is similar to Scenario 3, but with the plumbing done differently. Per consultation West Yost, "I don't see Scenario 4 as a viable option. I cannot give you a definitive answer on the costs, because I have no basis for sizing the entirely new pipe system that would be needed for the irrigation only system. Scenario 4 would have all of the construction costs of Scenario 2, PLUS ALL of the on-site dual system separation costs and cross connection concerns, PLUS an entire new pipe system for irrigation that could not use the same looping route from Primrose Place. Once we use the existing piping for the new potable system, the loop route through the residential property at 39609 Primrose couldn't be used for the irrigation system. It would also would need all new service laterals to the front of each property. Beyond the fact that we'd need to model both systems for Scenario 4 and that scenario would take the greatest amount of design engineering, it would also construct the greatest amount of pipe, so my gut sense is that it would have a higher construction cost than any of the other scenarios. Based on the criteria I've seen, none of the irrigation system costs would be eligible for SRF funding."

Q: Why are two different connection fees shown for Scenario #1?

A: The 1" meter size connection ($17,271 one-time fee per household) is the typical connection for a single-family residence to City of Davis water for all in-home water uses, including fire sprinklers, as well as fire hydrants. The ¾" meter size connection ($10,362 one-time fee per household) could possibly be negotiated with the City of Davis for a scenario in which the indoor water use excluded the fire sprinklers (Scenario 1 and possibly Scenario 3). For some homes, the in-home sprinklers would have to be disconnected from the indoor uses and re-connected to the wells. It must be noted that the Fire Chief feels the well water is not a reliable source for any fire flow (in-home or fire

hydrants).

Note: The City will need to do a study, at our cost, to determine if the connection fee can be reduced, and ultimately this will have to be approved by the City Council.

Q: Is the City connection fee for Scenarios 2 negotiable?

A: It is unlikely.

Q: Why can't we use in-home Reverse Osmosis for treatment?

A: Community wells that serve more than 50 residences must meet certain standards. North Davis Meadow has 95 residences. As such, treatment must be done at the well head.

Q: Was treatment considered?

A: Yes, treatment costs were looked into. Both NDM wells are out of compliance. Treatment would have to be installed at each well site. The equipment would cost $750,000 to $1,000,000 per site (old estimates). There are very significant operations and maintenance costs associated with treatment (brine disposal, electricity, service contract, county administration). Each additional contaminant may have to be treated differently, depending the system, which adds to the cost. The cost of treatment was found to be prohibitive given the amount of water that is used in the neighborhood, due to the large size of the lots. Meeting the fire flow requirement was also problematic.

Q: Were new wells considered?

A: Yes. Drilling of two new wells to 900 feet in depth was considered. However, the quantity and quality of groundwater is not guaranteed. State requirements can change over time. If the water were not to meet standards in the future, the neighborhood would be right back to the current situation. Deep wells would solve the nitrate problem, however manganese and hexavalent chromium could be problematic. In addition, wells can lose capacity over time. This has happened to the oldest of the deep wells in Davis. Attempts to improve its capacity have failed.

Currently, Davis uses surface water (river), which is supplemented with water from deep wells, as needed, to meet demand. The City has six deep wells. One is over the Maximum Contaminant Level (MCL) for hexavalent chromium (Well 28). It is likely that this well will be abandoned, according to an engineer from the City. Another deep well has a treatment system for manganese (Well 32) and a third well also has manganese issues (Well 30). The newest well (34) has had high manganese levels and will have its water blended with surface water.

Well 30 in West Davis was operated for 12 years and met all drinking water standards. It has been off-line since 2013 due to high manganese concentrations. This illustrates how a problem can arise at any time.

Given that 4 of 6 deep wells in Davis have had issues with contaminants, it would be very risky for North Davis Meadows to try to drill deep wells to address its water problems.

Q: What about Broadband?

A: A good deal of time and effort has been spent examining how Broadband can be incorporated into the water project by Supervisor Saylor's deputy, Tara Thronson, the county Broadband committee, and the NDM Broadband Committee. Any conduit for Broadband would have to be spaced 12 inches horizontally from the water pipe. Due

to the need to upsize the trench for this spacing, the extra cost for placing conduit would be around $590,000. This cost is not eligible for the low interest state loan (SRF funding). Based on this information, the cost to install a Broadband conduit will not be incorporated into the water project. However, Broadband continues to be pursued as a parallel project.

Q: Why can't we get a grant?

A: Grants are available for economically disadvantaged communities. While NDM will not qualify for a grant, they do qualify for a low-interest State Revolving Fund (SRF) loan to provide safe drinking water to the community.

Q: What are the non-compliance fines related to providing safe drinking water to the community?

A: Section 116650 (d) and 116650 (e) of the California Health & Safety Code state that in addition to the issuance of a citation, the State Board may assess a penalty in an amount not to exceed $1,000 per day for each day that a violation occurred, and for each day that a violation continues to occur. A separate penalty may be assessed for each violation and shall be in addition to any liability or penalty imposed under any other law.

North Davis Meadows has been issued a citation for nitrate, aluminum and iron (and previously for hexavalent chromium prior to the court ordering rescinding the MCL). The maximum $1,000/day could be for each violation, so $3,000/day based on current contaminants exceeding the limits. It is at the Water Board's discretion to determine whether to back date when calculating the penalty amount. They haven't imposed the fine thus far because the neighborhood has demonstrated progress toward a permanent solution.

Other Requests for Information

- During the Community Meeting there was a request for North Davis Meadows water usage data in the past 5 years. Since then, it has been determined that this data is not useful as it includes common use areas, likely irrigation and pool leaks, and suspected metering inaccuracies.

- A request was also made for future City of Davis water rate increases. Water rates are evaluated every 5 years, and approved through Proposition 217 proceedings which North Davis Meadows residents would be a part of should they connect to the City of Davis water system. As such, only the cap for water rate increases for the next two years could be provided (14% and 9%) as the City is at the end of the most recent 5 year rate period.