County of Yolo

PLANNING, PUBLIC WORKS AND ENVIRONMENTAL SERVICES

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Memorandum

TO: North Davis Meadows Drinking Water Customers

DATE: February 17, 2015

SUBJECT: Chromium 6 Levels in Drinking Water

This notice is to advise you of the level of Chromium 6 in your drinking water.

Prior to July 1, 2014 Chromium 6(also called hexavalent chromium) had been regulated under the Primary Drinking Water Standard (PDWS) for Total Chromium. California's regulation for Total Chromium was adopted in 1997 and set the Maximum Contaminant Level (MCL) for this constituent at 50 parts per billions (ppb). The sum of Chromium 6 and Chromium 3 equals the amount of Total Chromium in drinking water. The source water in the North Davis Meadows water system was sampled for Total Chromium in 2012 and the level reported was 21 ppb.

The State adopted a PDWS for Chromium 6 that went into effect on July 1, 2014. The MCL was set at 10 ppb and all water systems were required to sample their source waters for this constituent by January 1, 2015. If the concentration of Chromium 6 was over the new MCL, the water system must then take quarterly samples during 2015. If the running annual average of the samples were below 10 ppb, then the system would not be in violation of the MCL. If the average is over, then the system is in violation.

The source water in the North Davis Meadows water system was sampled on November 18, 2014, and the analytical result was reported at 21 ppb. Chromium 6 is a fairly stable constituent and levels rarely fluctuate over time. It is very likely that the annual running average for this constituent will be over the MCL. The County Service Area will continue to monitor its source water and will post updates after receiving analytical results.

According to health experts, some people who drink water containing Chromium 6 in excess of the MCL over many years may have an increased risk of getting cancer. Although the element occurs in its natural state, Chromium 6 may also be introduced into the environment through discharges from electroplating factories, wood preservatives, and other types of manufacturing facilities.

If you have any questions or concerns about your drinking water, please contact Regina Espinoza, County Service Area Manager at 530-666-8725 or the Yolo County Environmental Health Department at 530-666-8646.

EMERGENCY INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

DRINKING WATER WARNING

The North Davis Meadows public water system continues to have levels of nitrate that may be UNSAFE.

As a precaution

DO NOT GIVE THE WATER TO INFANTS UNDER 6 MONTHS OLD OR PREGNANT WOMEN OR USE IT TO MAKE INFANT FORMULA

This notice is provided to you due to the unreliability of this system to provide water that meets safe drinking water standards for nitrate.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin.* Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms do occur, seek medical attention immediately.
- **PREGNANT WOMEN SHOULD NOT CONSUME THE WATER.** *High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.*
- Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.
- **DO NOT BOIL THE WATER.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.
- If you have other health issues which cause you concern about consumption of this water, you should consult your physician.

What happened? What is being done?

Nitrate in drinking water can come from natural, industrial, or agricultural sources (including septic systems, storm water run-off, and fertilizers). Levels of nitrate in drinking water can vary throughout the year

North Davis Meadows water supply comes from two ground water wells designated as NDM well #1 and NDM well #2. These wells have nitrate levels that have violated or currently violate the maximum allow level for nitrates in drinking water. The operation of the supply system is such that the majority of the water comes from the well with the lowest level of nitrates however; under high water usage by the community both wells must be used.

The City of Davis, the contractor for the County, will continue to sample the water on a regular basis on behalf of the North Davis Meadows CSA to ensure that there are current nitrate

For Water Quality questions or concerns listed in this notice please contact, Yolo County Environmental Health Department at 530-666-8646

For other information, please contact Regina Espinoza at 530-666-8725 or Regina. Espinoza@yolocounty.org.

This notice will be provided to you on a regular basis until the issue is resolved.

North Davis Meadows- Water Project Update (March 2015)

Dear Neighbors,

The Water Subcommittee would like to let you know where we stand with a solution to the nitrate problem in our two wells.

As you know, we originally came to a consensus that drilling new wells would best solve the problem. However, with the uncertainty about water quality new wells would provide, and with new stricter regulations about certain chemical constituents, we began looking at a possible "dual system". Such a dual system would utilize our existing wells and infrastructure for non domestic water (our large yards!) and use City of Davis water for drinking supplies. We are still exploring these options, but the costs are a major consideration. We could spend a lot of money drilling two wells which could not meet current requirements, or could fail soon in the future. Alternatively, we could spend a lot of money to hook up with the City of Davis for domestic supply. One option that seems to be prohibitively expensive is hooking up to Davis for all of our water supply.

History

In October of 2012, our County Service Area Advisory Committee recommended moving forward with the Proposition 218 process necessary to drill two new deep wells. This recommendation was made based on engineering reports and feedback from residents of North Davis Meadows. From the time of that recommendation until March of 2013, Regina Espinoza worked on the paperwork necessary for the Proposition 218 Election.

In March of 2013, Regina was approached by a representative from the California Department of Public Health. It was proposed that we examine consolidating with the City of Davis for our drinking water. This option had been previously explored by the neighborhood and rejected due to high construction costs and the high cost for water. The new proposal put our neighborhood on a different footing, as the city stood to benefit by being able to obtain a low cost loan, if we consolidated with them. The potential saving to the city was millions of dollars. Given that the quality

and quality of water from wells can't be guaranteed, the new city option was worth pursuing.

Supervisor Saylor and Regina Espinoza spent considerable time negotiating with the city to work out an agreement that would provide our neighborhood with a safe and dependable water supply for a cost that would be very similar to the cost of two new wells. The consolidation project included replumbing the neighborhood for "in-home" water and using our existing plumbing and wells for irrigation.

The information regarding the possible consolidation with the city was shared at a CSA meeting in August of 2013. Key items that had been negotiated were 1) not paying a connection fee ($29,500 per home), 2)being able to get the low interest rate the city received for construction costs(1.8%) and 3)paying a wholesale water rate. An additional cost for connecting our homes to the street, had not been determined.

The City's legal disputes and litigation idled discussions with the County for a period of time. In January of 2014, we received a value cost comparison report comparing total cost of the consolidation project verses two new wells. This analysis showed a cost savings over time of more than $400,000 for the city connection project.

In the spring of 2014, it became apparent that the city was shifting their focus from the loan that involved consolidating with us, to a loan that that would allow them a 30 year repayment schedule, instead of the 20 year repayment schedule associated with the loan that favored us. This substantially increased saving to Davis ratepayers.

In April of 2014, Supervisor Saylor sent a letter to all North Davis Meadow residents notifying them of the city's possible shift in loan sourcing. At that time, he recommended continued negotiations with the city, as there was a possibility that the City would not receive the loan with the 30 year funding and be willing to negotiate with NDM again.

In June of 2014, the Board of Supervisors Representative/City Council Representatives agreed to direct staff to move forward with sharing the cost for an estimate for the cost to connect each individual NDM home to the proposed city system (at the street). A timeline for obtaining this bid was proposed.

In October of 2014, the City of Davis received notification that due to a regulatory change that had been approved by the state legislature, they

would be able to obtain a Clean Water State Revolving Fund loan. This 30 year loan did not involve consolidation with our neighborhood. On October 29, 2014 a CSA meeting was held to discuss the implications of the City receiving funding for their water project without NDM being involved. Supervisor Saylor shared that in going forward, the city will be limited in what it is able to offer NDM because of its responsibility to rate payers who funded the existing infrastructure.

What is new since our CSA meeting in October of 2014?

1. In December of 2014, Regina met with City staff. The City agreed to share the cost (50/50) for a "Request for Proposal" (RFP) to determine the cost of the home to street connection for all 95 homes.
2. On February 6th, Supervisor Saylor had a teleconference with City Council members/staff. Following this meeting, a meeting was held on February 9th with the Supervisor Saylor, Regina Espinoza, Elisa Sabatini, NDM Water Subcommittee (Kathy Greenhalgh and Bonnie Wolstoncroft), Council Member Rochelle Swanson and City Manager Dirk Brazil. (See Significant Points below)
3. Updated information regarding water contaminant levels in Davis' deep wells was obtained.

Significant Points from City Consolidation Project Information from Water Subcommittee Meeting -2/9/15

- The City is willing to proceed with the RFP to obtain a **cost for the home to street connection**, as previously agreed . The City felt sampling only 20 homes would not obtain the necessary information for proceeding with the consolidation project, if NDM opts to pursue that route. The City will pay half of the cost of the estimate, (potential total cost $50,000.) The RFP will go out and then NDM can evaluate continuing given bids received.The process of obtaining a bid will\ take three months to complete, with home to street connection cost information available in perhaps June.

-The City is willing to look into having NDM being able to participate in its funding (by a possible addendum), however this is unlikely.
-The City will have its own engineer review the Engineer's opinion of Estimated Cost, previously provided by West Yost. .At that time, the construction cost for the NDM consolidation was 4.1 million dollars, if fire

flow is not provided and 5.4 million dollars if it is provided. These costs do not include the home to street connection.

- **Use of existing pipes for drinking water distribution.** The use of "boring" to provide a lower cost alternative for construction was discussed (current estimates use trenching to bring in new plumbing). "Boring" can only be used for irrigation plumbing. Rochelle Swanson said that the City typically assumes responsibility for maintenance of the pipes in the streets, once a connection is established. She did not think that Davis would be willing to use our existing infrastructure for drinking water. Rochelle stated that the cost of "boring" might not be any cheaper than open trenching/repaving. Thus, the subcommittee thinks it best to shelve obtaining a new estimate of the cost of this option.

- Due to responsibility to Davis rate payers, the city cannot commit to a to waiver of the $29,500 **connection fee** and the 20% **out of city surcharge for water**. We hope to continue discussions on these issues.

- However, these items, as well as construction costs could become more favorable to NDM, if the Davis Innovation Park, which is being proposed for the land around the Binning Tract, was to proceed. Bonnie Wolstoncroft stated that our neighborhood's water solution shouldn't be based on a "maybe" future project that will have numerous obstacles to overcome.

Update on Well Drilling

The "Opinion of Costs" to drill two new deep wells was "market corrected" in October of 2014. Including financing costs, the updated estimate was reported to be 3.8 million dollars. This is substantially higher than the June 2013 previous estimated 3.1 million dollar cost (2.8 million plus $300,000 in financing costs). The reason for the increase is partly due to the demand for wells that has emerged as a result of our prolonged drought.

We will not be able to obtain low interest funding (2% or less) from one of the State of CA water funds, if we choose to fund wells. We submitted a grant a few years ago and were denied, due to the income level in our neighborhood. Also, the state does not favorably fund projects that rely on well water, as it is not seen as a long term solution.

UC Davis will no longer rely on water from its deep wells and will consolidate with the City. "Improved water quality" is stated as one of the reasons that UCD has exercised its option to connect. Well data, that we have from 2011, showed that three of the six UCD wells were over the MCL for Hexavalent Chromium. The hexavalent chromium maximum contaminate level (MCL) was set in July of 2014, at 10ppb. Updated hexavalent data, shown on the UCD website, shows a range from not detectable to 12ppb, for the year 2013. Hexavalent chromium can be naturally occurring in areas that have serpentine rock.

In 2011, one out of six of the city's deep wells showed hexavalent chromium to be above the new MCL. This well continues to be above MCL at 17ppb (previous readings were (12, 12, 15).

The city's deep well closest to NDM (#31) tested at 8.7 ppb in November of 2014. This is up somewhat from previous readings (5ppb,,6ppb).

The levels of hexavalent chromium and arsenic are stable in the city's deep wells.

Some of the city's wells have no detectable levels of manganese while others have high concentrations. Testing for manganese in triple completion monitoring wells can be inconclusive due to high turbidity. The City consultant stated that the "City samples for total and dissolved metals when drilling a test hole. This information provides reasonably conclusive results for the constituent of concern as the dissolved value will reflect the naturally occurring background concentration of the constituent. When analyzing for total metals, there could be interference with introduced materials, such as drilling mud. In general, high turbidity usually is associated with high levels of metals."

Manganese levels are slowly increasing in two of the city's deep wells.

One of the city's deep wells (#28 which is the oldest) has lost capacity over time and attempts to improve its capacity have failed. The other deep wells have lost some capacity over time but once they have been cleaned and repaired the capacity has returned to nearly normal.

Current regulations require new wells to be 100 feet from an existing leach field. As such, the NDM 2 well will have to be located north of its current location and the NDM 1 well southeast of its location. A large storage tank, in addition to the existing one, will have to be located at the NDM 1 site.

Three gas wells in our area were drilled deeper about 15 years ago. A large amount of water was used. It is unclear if fracking, was used. Fracking uses a concoction of chemicals, along with water, to break through formations in the ground.

Summary

The subcommittee believes best long term solution for providing drinking water that meets state standards is to consolidate with the city for domestic supply.The quality and quantity of water from wells simply can't be guaranteed, although drilling of monitoring wells should be able minimize some of the initial risk. It is helpful that we now have a MCL for hexavalent chromium. However, we don't know what the contaminant de jour will be in the future. In recent years, we have seen the acceptable level of arsenic cut in half and a dramatically lower new MCL set for hexavalent chromium..

The cost of connecting to the City of Davis for our water may be prohibitive, if we are not able to obtain favorable funding (under 2%) and if we are required to pay a connection fee.

We hope to discuss where we are at our next scheduled Advisory Committee meeting on March 24. In the meantime, we want to keep you all apprised of what has become a moving target, but something we certainly need to figure out the best solution.

Respectfully,

Kathy Greenhalgh
Bonnie Wolstoncroft