MARCH 2016

Frequently Asked Questions

WOODLAND-DAVIS Clean Water Agency

INTRODUCTION TO SURFACE WATER

1 Where does my drinking water come from?

Historically the Cities of Woodland and Davis have always relied on groundwater for 100 percent of their water supplies. In June 2016, the Cities will begin adding treated surface water from the Sacramento River to their water systems.

2 Why are we augmenting groundwater with surface water?

Woodland and Davis are two of only a very few cities of their size in California that still rely entirely on groundwater for water supplies. In the past, high quality groundwater was plentiful enough to meet community needs, and also state and federal water quality regulations. The quality of some local groundwater aquifers and wells has deteriorated and the Cities are not able to meet existing stricter state drinking water quality and wastewater discharge regulations without improving their water supplies. Thus, high-quality treated surface water is being introduced to augment the groundwater supplies, to both improve overall water quality and to meet current and future anticipated water quality regulations.

3 Will the Cities still use groundwater once the surface water project is completed?

The Cities will slowly introduce surface water into the system to allow it to adapt to the new water source. Groundwater will be used as necessary during higher demand periods and will be, in most cases, blended with surface water before being delivered to customers. Additionally, the City of Woodland is constructing Aquifer Storage & Recovery Wells, which will allow for the storage – or banking – of surplus treated surface water in new groundwater wells for times when water demands are greatest, such as peak times and summer months.

4 When will the surface water project be completed?

June 2016. Surface water will first be introduced into the Cities' water systems at that time.

5 How will the surface water be treated?

The surface water will be treated in a new state-of-the-art Regional Water Treatment Facility designed to provide 30 million gallons of high-quality drinking water per day under a variety of Sacramento River water conditions, including varying river levels and turbidity spikes. The new treatment facility includes proven treatment technologies used at nearby plants such as West Sacramento's, including flash mixing, sand ballasted clarification, ozonation, granular media filtration and chlorine addition for disinfection. It is designed to meet or exceed current and potential future drinking water regulations.

6 Are the Cities doing anything to treat water pipes to prevent corrosion?

The WDCWA contracted with the internationally recognized engineering firm of Trussell Technologies, Inc. (http://www.trusselltech.com/) to study and provide recommendations on how to successfully introduce the new treated surface water into the existing distribution systems. Trussell's report included recommendations on actions to prevent corrosion. As a result, the Regional Water Treatment Facility includes capabilities for pH adjustment and the addition of a corrosion inhibitor to the finished water. Each City has also taken proactive measures to reduce the potential for discolored water and other corrosion by completing large scale flushing of distribution lines. Both Cities will conduct weekly water testing before and after the introduction of surface water to ensure that the desired water quality is maintained. The Trussell Technologies report is available online at:

http://wdcwa.com/images/uploadsdoc/SourceWaterIntegrationStudy_DavisWoodland.pdf

7 What about chromium and lead?

Lead and chromium are not typically found in surface water supply sources. Lead typically comes from lead service lines to homes and home plumbing fixtures. Chromium is naturally occurring in groundwater. Nevertheless, the WDCWA has conducted years of raw water sampling and testing at the new intake site on the Sacramento River. The results of these studies are available on the WDCWA website under the heading of Sacramento River Water Quality Reports (http://wdcwa.com/documents). Test results for the Sacramento River water have consistently shown lead and chromium levels to be either non-detectable or far below the State's allowable maximum contaminant level.

Last year, the WDCWA contracted with the internationally recognized engineering firm of Trussell Technologies, Inc. (http://www.trusselltech.com/) to study and provide recommendations on how to successfully introduce the new treated surface water into the existing distribution systems. Trussell Technologies Inc. completed this study in October 2015. The study and recommendations have been reviewed by the WDCWA, Cities and UC Davis, as well as by engineers at the State's Division of Drinking Water (DDW). The DDW is the division of the State Water Recourses Control Board responsible for permitting the water systems associated with the DWWSP.

Study recommendations include flushing pipelines, injecting orthophosphate to prevent corrosion, and adjusting pH at the plant to also prevent corrosion. Corrosion of lead pipes and fixtures containing lead can cause lead contamination of water. Fortunately, there are no known lead pipes in either City's water distribution system, and this fact, when combined with the above outlined actions will virtually prevent lead contamination issues. The study is available on-line at:

http://wdcwa.com/images/uploadsdoc/SourceWaterIntegrationStudy_DavisWoodland.pdf

7 What about chromium and lead? (continued)

In addition to the comprehensive study, WDCWA asked Trussell Technologies to conduct an investigation regarding the recent events in Flint Michigan, comparisons with Davis/Woodland, and the proactive measures that are being taken by the Cities of Davis and Woodland to protect public health. This study is available on-line at this link:

http://wdcwa.com/images/uploadsdoc/TrussellMemo_FlintComp_Feb2016.pdf

Although State Bill 385 allows communities until 2020 to comply with the new Maximum Contaminant Load (MCL) for hexavalent chromium, both Cities will come into compliance once the surface water is introduced in June 2016. Additionally, the cities are well within the Federal MCL for total chromium. The Cities have taken the following operational steps for their groundwater wells to ensure hexavalent chromium levels in their respective water systems are safe and within allowable limits:

Because its deep wells meet the hexavalent chromium standard, the City of Davis plans to blend water from four deep aquifer wells with surface water in the transmission main prior to entering the distribution system. A fifth deep aquifer well will be used as necessary, but will still feed directly into the existing distribution system. Four intermediate depth wells that exceed the state's hexavalent chromium levels will be kept operational for emergency standby use only. The remaining wells will be converted to irrigation only or eventually decommissioned.

The City of Woodland is planning to balance the use of stored treated surface water in Aquifer Storage Recovery (ASR) wells and up to three blending wells. The intent of the blending wells is to supplement treated water supply by blending native groundwater with the surface water, thereby reducing hardness and hexavalent chromium to a safe level prior to reaching the distribution system and residents or businesses.

8 How does our water system differ from Flint, Michigan's?

WDCWA asked Trussell Technologies to conduct an investigation regarding the recent events in Flint Michigan, comparisons with Davis and Woodland, and the proactive measures that are being taken by the Cities of Davis and Woodland to protect public health. Flint's system is leaching lead and experienced occurrences of "red water." According to the Trussell Technologies report, 25 percent of Flint's water service lines are made from lead. Woodland and Davis do not have any known lead service pipes. Additionally, the quality of Sacramento River water is much better than the source water for Flint. Lastly, both Woodland and Davis have proactively implemented actions to prevent corrosion following the introduction of surface water. The Trussell Technologies report is available online at:

wdcwa.com/images/uploadsdoc/TrussellMemo_FlintComp_Feb2016.pdf

9 Will I notice a difference in how my water looks, tastes and feels?

Yes. Surface water is naturally softer than local groundwater. It will result in less wear and tear on water using appliances, and require less soap/detergent for washing purposes. The water may appear temporarily cloudy when it first comes from the tap, which is a result of air bubbles in the system. And, the water will taste different because it has fewer minerals and will have been treated to the highest standards.

10 Will my water be discolored when surface water is first introduced?

The WDCWA and Cities have worked together to plan the introduction of surface water into each city's water system in order to minimize incidents of discolored water. WDCWA contracted with the internationally recognized engineering firm of Trussell Technologies, Inc. to study and provide recommendations on how to successfully introduce the new treated surface water into the existing distribution systems. The study is available on-line at:

http://wdcwa.com/images/uploadsdoc/SourceWaterIntegrationStudy_DavisWoodland.pdf

Study recommendations include flushing pipelines to suspend and remove sediment, injecting orthophosphate and adjusting pH at the water treatment plant to prevent corrosion. Dislodged sediment and corrosion are major contributing factors to having discolored water. In the event there are changes to water taste, color, or odor, residents should report this immediately as discussed below.

11 What testing is done to test for contaminates?

Drinking water quality standards in California are established by the Federal government under the Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB). To ensure the safety of drinking water, the WDCWA and Cities are required by the California Division of Drinking Water (DDW) to take samples regularly and test them for a multitude of compounds to ensure they meet drinking water quality standards. Samples are taken both at the connection points between the WDCWA pipelines and the Cities distribution systems and also within the Cities at locations agreed to by DDW. WDCWA is requiring that the Regional Water Treatment Facility produce higher quality water that will exceed current drinking water standards.

12 How will I know if my water is not safe to drink?

Each year, the Cities each send out a water quality report that details the results of ongoing water quality testing. If for any reason your drinking water does not meet state or federal water quality standards at any time during the year, you will promptly receive a notice from your City detailing any precautions you should take before using the water.

13 How do I report problems?

If for any reason you believe your water quality is in question, please contact your City immediately as follows:

City of Davis water users

Call Public Works at (530) 757-5686. The City requests water users call to report water quality problems so they can be quickly addressed. Please do not email to report water quality concerns.

City of Woodland water users

Please call 530-661-5962 (7 a.m. – 4 p.m., Monday-Friday). After hours, the call will roll over to Yolo County Communications, which is available 24 hours per day, 7 days per week. Water users may also email Public Works at **pubworks@cityofwoodland.org**, or submit a report through the "myWoodland" mobile app.

14 Do I need a water filter once surface water is introduced?

Most people will not need to use a water filter. A water filter can provide additional protections for people with severely compromised immune systems.

15 Do I need a water softener once surface water is introduced?

Surface water is naturally much softer than groundwater, so a water softener in most cases will likely not be necessary once the new surface water supplies are introduced. Water hardness is expected to be reduced by approximately 80 percent. Additionally, removing water softeners will improve the quality of treated wastewater discharges to the environment. Water softeners add salts to wastewater discharge and ultimately impact the cities' ability to meet state and federal wastewater quality discharge requirements. If you choose to continue to use a water softener, please contact your service provider to ensure it is programmed properly for reduced water hardness.

16 How will the change affect my detergent and soap?

Because the water will be naturally softer, you will likely be able to reduce the amount of shampoo, soap and detergents used in your household.

17 Why do I see city crews opening fire hydrants?

Fire hydrants provide outlets to flush the system of naturally occurring sediments that build up in water distribution lines. Periodic flushing rids the system of sediment, ensures water quality, keeps the system running smoothly and extends the life of pipelines.

18 I have a severely compromised immune system. Is tap water safe for me?

Consult with your doctor about additional protections that may be required for those with severely compromised immune systems, such as in-home filtration units.

19 Can I still use tap water for my fish aquarium?

Tap water should be specially treated for use in aquariums. Check with your local pet supply store for recommendations.

20 Is there fluoride in my drinking water?

At this time drinking water from the WDCWA's new water treatment facility will not include added fluoride.

21 Are there chloramines in my drinking water?

No. Currently, finished water from the new treatment plant is designed to add chlorine, not chloramines, based on the needs of each City. Chlorine will be added to meet the minimum chlorine residual required by the Division of Drinking Water (DDW) to ensure that the distribution system is clear of harmful bacteria. Finished water chemicals (sodium hypochlorite, sodium hydroxide, orthophosphate corrosion inhibitor and phosphoric acid) can be added at the Regional Water Treatment Facility to the pipelines delivering treated surface water to Woodland and Davis. Each City has the ability to select individual values for finished water pH, chlorine residual, orthophosphate corrosion inhibitor, and phosphorous residual to be served to its distribution system.

22 What is Zinc Orthophosphate?

Zinc Orthophosphate (ZO) is used as a corrosion inhibitor against the release of iron, copper, and lead into our drinking water distribution system. ZO has successfully been used as a dissolved metals inhibitor in municipal water systems for more than 50 years. The US Environmental Protection Agency (USEPA) identified ZO as one of the best available technologies to minimize leaching of metals into drinking water. The Cities have begun injecting very low levels of ZO to ensure a smooth transition to surface water. The new Regional Water Treatment Facility will continue to inject ZO to prevent corrosion in the future.

ZO works by creating/coating a film or scale barrier on the inside of the distribution pipe and trapping the underlying metals below. The control of this microscopic scale in an existing water system is one of the primary factors in maintaining water quality that is low or free from excessive dissolved metals.

ZO's use is well known, reliable, and safe. It has been recommended for use in drinking water by American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard #60 Drinking Water Treatment Chemicals, and has been widely approved for use in potable water systems by the State Division of Drinking Water (DDW). Proper use of ZO easily adapts to existing and changing water conditions without changing water chemistry or taste.

Stay Connected

Visit WDCWA's website at **www.wdcwa.com** for the latest news, project updates and meeting announcements. Contact us at 530-757-5673.

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