Annual Water Quality Report 2017

West Kern

Water District

Water Testing Performed January 1 – December 31, 2017 and may include earlier monitoring data.

Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien. (This report contains important information about your drinking water. Translate it, or speak with someone who understands it.)

The State Water Resources Control Board Division of Drinking Water (DDW) requires community water systems to publish and make available an annual Consumer Confidence Report to provide background on the quality of your water and to show compliance with federal and state drinking water standards.

West Kern Water District continuously works to ensure a reliable and high quality water supply at a reasonable cost. We are committed to maintaining and upgrading facilities to ensure delivery of safe drinking water for our customers in the incorporated cities of Taft & Maricopa, together with the Westside communities of South Taft, Taft Heights, Ford City, Valley & Dustin Acres, Tupman, Fellows, Derby Acres, and McKittrick.

This 2017 Annual Water Quality Report describes in detail the quality of your water during 2017. As in previous years, your water met all U.S. Environmental Protection Agency (USEPA) and State drinking water health standards. You will find further explanation of the requirements and test results in the accompanying pages.

Water is one of our most valuable resources. West Kern's water supply comes from a contract with the Kern County Water Agency for State Water Project water. The water is transported through the California aqueduct, where it is recharged into the ground through our spreading ponds. Your water is extracted from the Tulare Lake aquifer from our 13 groundwater wells located in the northeast corner of the District in the underflow of the Kern River Sub-basin and from an area north and adjacent to the State of California's Tule Elk Reserve. The water is then transported through a 36" transmission pipeline to our Station A facility located at the corner of Highway 119 and Golf Course Road where it is treated with chlorine before being disseminated to 318 miles of pipeline, 26 above ground water storage reservoirs and 15 booster pump stations. The District has one of the most complex systems in California. Our employees are dedicated in providing you with high quality water service and make water quality and water reliability our top priorities.

West Kern Water District's Board of Directors meet on the fourth Tuesday of each month at 6:00 p.m. in the District Board Room located at 800 Kern Street, Taft. Meeting agendas are posted at the District office as well as on the District's website and the public is encouraged to attend.

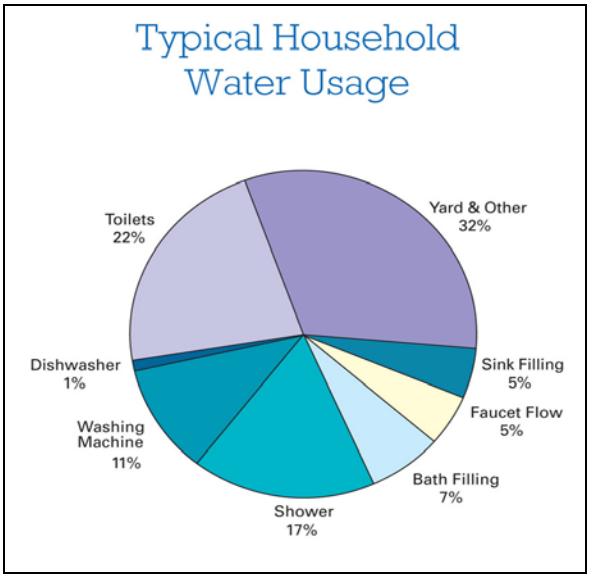
If you have any suggestions, questions, or concerns, or require further information regarding this report please contact Wendy Adams-Rosenberger at 661-763-3151 or through the District's webpage at www.wkwd.org.

Water Use & Efficiency

Although emergency drought restrictions have been lifted, the following prohibitions against wasteful practices are still in effect.

- Cars may only be washed with hoses that have an automatic shutoff nozzle.
- Water cannot be used to clean sidewalks or driveways unless there is a health & safety issue.
- Outdoor landscapes may not be watered in any way that causes runoff.
- Outdoor landscapes may not be watered at all for 2 days after any measurable rainfall.

West Kern Water District encourages customers to maintain a water efficient lifestyle.



Drinking Water Source Water Assessment

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs & wells. As water travels over the surface of the land or through the ground, it can dissolve naturally-occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

Microbial contaminants

Such as viruses & bacteria, can be naturally occurring or come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants

Such as salts & metals, can be naturally occurring or result from urban storm water run-off, industrial or domestic wastewater discharge, oil and gas production, mining, or farming.

Pesticides and herbicides

May come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants

Including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants

Can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA and the State Water Resources Control Board (State Board) prescribe regulations which limit the amount of certain contaminates in the water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health."

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.
More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline 800-426-4791

Are you at risk?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-comprised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, and those with HIV/AIDS or other immune system disorders; some elderly people; and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Additional information on bottled water is available on the California Department of Public Health website (https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx).

An assessment of West Kern's drinking water sources was completed in May 2001. The sources are considered the most vulnerable during artificial recharge activities in spreading basins, but these activities have not been associated with any detected contaminants. For more information contact Wendy Adams-Rosenberger at 661-763-3151.

You may request a summary of the assessment be sent to you by contacting the SWRCB, DDW at (818) 551-2004.

2017 Water Quality

West Kern Water tests your water for more contaminants than are shown in the table as required by state and federal regulations. This table lists only those contaminants that were detected.

Primary Drinking Water Standards protect public health by limiting the levels of certain constituents in drinking water.

Detection of Contaminants with Primary Drinking Water Standards

Radiological	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	WKWD Average	Typical Source of Substance
Gross alpha	2015-2017	pCi/L	15	(0)	No	0 to 14.3	6.16	Erosion of natural deposits
Uranium	2015-2017	pCi/L	20	0.43	No	0 to 13	5.67	Erosion of natural deposits
Inorganic Chemicals	**Year Tested**	**Unit**	**MCL (SMCL)**	**PHG (MCLG)**	**Exceeded Standard?**	**Range**	**WKWD Average**	**Typical Source of Substance**
Arsenic[1]	2017	ug/L	10.00	4	No	ND-8.4	3.18	Erosion of natural deposits
Antimony[2]	2016	mg/L	6	1	No	ND-7	0	Discharge from petroleum refineries, fire retardents, ceramics solder
Barium	2015-2016	mg/L	1	2	No	ND-.058	0.02	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Total Chromium	2016	mg/L	0.05	(100)	No	ND-0.001	0	Erosion of natural deposits
Fluoride	2015-2016	mg/L	2	1	No	ND-0.27	0.08	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2017	mg/L	10	45	No	ND-3.87	1.55	Runoff and leaching fertilizer use
Disinfection Byproducts	**Year Tested**	**Unit**	**MCL (SMCL)**	**PHG (MCLG)**	**Exceeded Standard?**	**Range**	**WKWD Average**	**Typical Source of Substance**
Total haloacetic acids	2017	ug/L	60	N/A	No	4.1-4.3	4.2	By-product of drinking water chlorination
Total trihalomethanes	2017	ug/L	80	N/A	No	22-25	23.5	By-product of drinking water chlorination
Disinfectant Residual	2017	mg/L	4	4	No	0.15-0.23	0.19	By-product of drinking water chlorination
Microbiological	**Year Tested**	**Unit**	**MCL (SMCL)**	**PHG (MCLG)**	**Exceeded Standard?**	**Highest Monthly**		**Typical Source of Substance**
Total coliform (systems with >40 samples/month) (Total Coliform Rule)	2017	positive samples	5%	(0)	No	0.00%		Naturally present in the environment
Fecal Coliform and E. Coli	2017	positive samples	0	(0)	No	0		Human and animal fecal waste

Sampling Results showing Lead & Copper Detection

Contaminate (CCR Units)	Year Tested	AL	PHG (MCLG)	90th Percentile	Exceeded Standard	Range	No of Schools Requesting Lead Samples	Typical Source of Substance
Copper (mg/L)	2015	1.3	0.3	0.05	No	30 sites sampled; 0 sites over action level	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (mg/L)	2015	0.015	0.2	0.00132	No	30 sites sampled; 0 sites over action level	10	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

[1]While your drinking water meets the federal and state standards for arsenic, it does contain low levels of arsenic. The arsenic standards balance the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects, such as skin damage and circulatory problems.

[2]While your drinking water meets the federal and state standard for antimony, it does contain low levels. During the sample period one well out of 13 exceeded the MCL. West Kern's blending operations utilize multiple wells which results in antimony average being 0. To address the issue 4 consecutive quarters of testing began in Jun 2017. Some people who drink water containing antimony in excess of the MCL over many years may experience increases in blood cholesterol and decreases in blood sugar.

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Test Results

Secondary Drinking Water Standards are set for substances that don't impact health but could affect the water's taste, odor, or appearance.

Other compounds are un-regulated but may be of interest to you.

Table Legend

N/A – not applicable
ND – not detected
MCL - maximum contaminant level
PHG – public health goal
NTU - nephelometric turbidity unit
mg/L - milligrams per liter = ppm – parts per million
ug/L - micrograms per liter = ppb – parts per billion
µS/cm - measure of specific conductance

Detection of Contaminants with Secondary Drinking Water Standards – Aesthetic Standards

Inorganic Chemicals	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	WKWD Average	Typical Source of Substance
Chloride	2015-2016	mg/L	500	N/A	No	29 - 99	50.93	Erosion of natural deposits; seawater influence
Color	2015-2016	NTU	15	N/A	No	ND	ND	Naturally occurring organic materials
Iron	2015-2016	ug/l	300	N/A	No	ND - 130	40	Leaching from natural deposits; industrial wastes
Odor	2015-2016	units	3	N/A	No	ND-210	0	Naturally occurring organic materials
Specific Conductance	2015-2016	µS/cm	1600	N/A	No	326 - 860	488	Substance that forms ions when in water; seawater influence
Sulfate	2015-2016	mg/L	500	N/A	No	30 - 260	102.38	Runoff/leaching from natural deposits; industrial waste
Total dissolved solids	2015-2016	mg/L	1000	N/A	No	238 - 560	335	Runoff/leaching from natural deposits
Turbidity	2015-2016	NTU	5	N/A	No	.1 – 1.1	0.3	Soil runoff
Zinc	2015-2016	mg/L	5	N/A	No	ND - .008	0	Runoff/leaching from natural deposits; industrial wastes

Other Detected Constituents that May be of Interest to Consumers

Constituent	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	WKWD Average	Typical Source of Substance
Hardness	2015-2016	mg/L	None	None	N/A	38 - 200	90	"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.
Sodium	2015-2016	mg/L	None	None	N/A	45 - 110	72	Refers to the salt present in the water and is generally naturally occurring.
Alkalinity	2015-2016	mg/L	None	None	N/A	17 - 107	67.77	
Boron	2015-2016	mg/L	None	None	N/A	ND - .25	0.17	
Calcium	2015-2016	mg/L	None	None	N/A	14 - 80	38.29	
Magnesium	2015-2016	mg/L	None	None	N/A	ND - .35	0.23	
pH	2015-2016	pH	None	None	N/A	7.9 - 8.9	8.2	
Potassium	2015-2016	mg/L	None	None	N/A	ND - .68	0.30	

Turbidity is a measure of the cloudiness of the water. It has no health effects but we monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Lead & Copper

Every 3 years, West Kern Water District is required to sample for lead and copper at specific customer taps as part of the Lead & Copper Rule. Lead and copper are also tested on source water supplies. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. No traces of lead were detected in West Kern's water sources. Lead in drinking water comes primarily from materials and components associated with service lines and home plumbing. The District is responsible for delivering high quality water but cannot control the variety of materials used in customer plumbing systems. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested by a private lab. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from USEPA Safe Drinking Water Hotline or at www.epa.gov/lead.

Definitions used in this report:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCL's protect public health and are set as close to the PHGs or MCLGs as are economically and technologically feasible. Secondary MCLs relate to the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the United States Environmental Protection Agency (EPA) and allow a margin of safety.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other required action by the water provider.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health, along with their monitoring, reporting, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): Requirements that ensure the appearance, taste, and smell of drinking water are acceptable.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by EPA without regard to cost or available detection and treatment technologies.

Notification Level (NL): A health-based advisory level for an unregulated contaminant in drinking water. It is used by the Department of Drinking Water (DDW) to provide guidance to drinking water systems.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Water Hardness

"Hardness" is a measure of the amount of minerals, generally calcium & magnesium, water contains. Hard water is generally not a health concern, but it can lead to mineral buildup in pipes, water heaters, and swamp coolers. Water is considered soft if it is less than 75 ppm and very hard at 300 ppm. West Kern's water shows an average of 90 ppm.

1,2,3-trichloropropane (TCP)

TCP was used in pesticides about 40 years ago and is considered by CA as a human carcinogen. Effective December 14, 2017 the CA State Water Resources Control Board established the MCL of 5 ppt. Prior to regulations being finalized, West Kern completed testing on all source wells with results showing non-detect levels. Beginning in 2018 all water systems, including West Kern, are required to complete 4 quarters of initial monitoring.

Unregulated Contaminant Monitoring Rule

The USEPA requires utilities to sample for emerging contaminates as part of the Unregulated Contaminant Monitoring Rule (UCMR). Every 5 years the USEPA prepares a list of unregulated contaminates for drinking water suppliers to analyze. UCMR results are then used to assist in the development of future drinking water regulation. The third round of UCMR sampling (UCMR3) was completed by all water retailers between 2013-2015. Currently, the USEPA is preparing for UCMR 4. For more information please contact the District or visit the USEPA website: www.epa.gov/dwucmr/learn-about-unregulated-contaminate-monitoring-rule.

Disinfection By-Products

West Kern Water uses chlorine to disinfect its groundwater sources. Disinfection By-Products (DBPs), which include Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5), are generated by the interaction between naturally occurring organic matter and disinfectants such as chlorine. TTHMs and HAA5 are measured at multiple locations throughout the distribution system. Each location is averaged once per quarter and reported as a running average by location.

Sustainable Groundwater Management Act (SGMA)

What Is SGMA?

The Sustainable Groundwater Management Act (SGMA) is a combination of three bills passed by State Legislature and signed by California Governor Jerry Brown in 2014: Assembly Bill 1739, and Senate Bills 1168 and 1319. This legislation provides local agencies with the framework to manage groundwater basins in a sustainable manner, recognizing that groundwater is most effectively managed at the local level. Local agencies are tasked with forming groundwater sustainability agencies (GSA) that will develop and implement groundwater sustainability plans (GSP) to achieve and manage groundwater sustainability by 2040.

(SGMA) will affect everyone... We want to hear from you!

As a water user in the West Kern Water District and Kern Groundwater Authority boundary, your input is crucial for the development of the Groundwater Sustainability Plan (GSP). The attached Stakeholder Survey was developed to provide you with an avenue to voice your concerns and provide your valuable input.

Please complete the Stakeholder Survey one of two ways:

1. Complete the attached survey and mail to Kern Groundwater Authority, 1800 30th Street, Suite 280, Bakersfield, CA 93301; fax to (661) 479-7172; or email to tbarton@ppeng.com.
2. Complete and submit the Stakeholder Survey online by visiting www.kerngwa.com.