

The University of California, Davis tests the campus drinking water supply for many constituents as required by State and Federal Regulations. This report summarizes the results of our monitoring for the period of January 1 - December 31, 2016. This information is provided to inform the campus community about the monitoring and quality of the domestic water supply.

Where Does Our Water Come From?

The UC Davis Utilities Division operates, maintains and monitors the campus domestic water system. Six on-campus wells are used as the University's water supply. These wells draw water from aquifers 800 to 1,400 feet below the ground. The water is not treated, except for disinfection using chlorine (sodium hypochlorite). Chlorine levels are typically maintained between 0.50 and 1.0 ppm (parts per million). There was no treated surface water added to the campus drinking water system for the 2016 reporting period.

Substances That Might Be in Drinking Water (State-wide)

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

In order to ensure that tap water is safe to drink, The US Environmental Protection Agency (USEPA) and the California State Water Resources Control Board, Division of Drinking Water prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected contain at least small amounts of some substances. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

- *Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*
- *Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.*
- *Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.*
- *Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.*
- *Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.*

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

What Does Our Water Contain?

Tables 1 through 7 list the drinking water contaminants that were detected during the most recent sampling. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Division of Drinking Water requires water suppliers to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

In addition to the constituents listed in the tables below, our water was analyzed for numerous other substances that were below regulatory levels or not detectable. Additional information is available at the UC Davis Utilities website below and upon request: http://utilities.ucdavis.edu/water_quality/index.html

For more information, contact

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Michael Fan	Director - Utilities	(530) 752-7553	http://mmfan@ucdavis.edu

TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.) 1	0	If more than 5% of the routine samples collected a month are total coliform positive	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Regulations require sampling and levels to be measured at the consumers tap every 3 years. Last sampling 2014 Next sampling 2017

Constituent (and reporting units)	No. of samples collected	90 th percentile level detected	No. Sites exceeding Action Levels	Action Levels	PHG (MCLG)	Typical Source of Contaminant
Lead (ppb)	36	ND	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	36	0.091	0	1.3	0.3	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	9/4/2014	78.2	70 – 93	None	None (None)	Salt present in the water and is generally naturally occurring
pH (units)	9/4/2014	8.3	7.9 – 8.4	None	None (None)	Naturally occurring
Hardness (ppm)	9/4/2014	103	77 – 120	None	None (None)	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	MCL	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Aluminum (ppm)	9/4/2014	0.006	ND - 0.03	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	9/4/2014	3.7	1.9 – 6.2	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	9/4/2014	.014	ND - .048	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (ppb)	9/4/2014	5.6	ND – 13	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Hexavalent Chromium (ppb)	12/30/13	5.0	ND – 12*	50	0.02	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	9/4/2014	0.13	0.087 – 0.12	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

*Additional information regarding Hexavalent Chromium is provided on page 4. **TABLE 4 (Continued) - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD**

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	MCL	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Lead (ppb)	9/4/2014	ND	ND	Action Limit=15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Nitrate as NO ₃ (ppm)	9/4/2014	2.18	0.60 – 3.8	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Gross Alpha	12/30/2015	ND	ND	20	0.43	Erosion of natural deposits
Radium 226 & 228 Combined pCi/L	12/30/2015	ND	ND	5	(0)	Erosion of natural deposits
Uranium pCi/L	12/30/2015	ND	ND	20	0.43	Erosion of natural deposits
Selenium (ppb)	9/4/2014	1.3	ND – 2.6	50	(30)	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)

TABLE 5 - DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	MCL	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
TTHMs (Total Trihalomethanes) (ppb)	8/18/2016	4.5	.55-7.9	80	N/A	By-product of drinking water disinfection
Total Haloacetic Acids (ppb)	8/18/2016	ND	ND	60	N/A	By-product of drinking water disinfection
Chlorine (ppm)	Weekly	0.71	0.35 – 1.01	[MRDL = 4.0 (as Cl ₂)]	[MRDLG] = 4 (as Cl ₂)	Drinking water disinfectant added for treatment

TABLE 6 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	MCL	PHG ^(a) (MCLG) _(a)	Typical Source of Contaminant
Aluminum (ppb)	9/4/2014	0.006	ND - 0.03	200	N/A	Erosion of natural deposits; residue from some surface water treatment processes
Color (Units)	9/4/2014	ND	ND	15	N/A	Naturally-occurring organic materials
Foaming Agents (MBAS) (ppb)	9/4/2014	ND	ND	500	N/A	Municipal and industrial waste discharges
Iron (ppb)	9/4/2014	12	ND – 46	300	N/A	Leaching from natural deposits; industrial wastes
Manganese (ppb)	9/4/2014	10	ND – 39	50	N/A	Leaching from natural deposits
Odor--Threshold (Units)	9/4/2014	ND	ND	3	N/A	Naturally-occurring organic materials

TABLE 6 (Continued) - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	MCL	PHG ^(a) (MCLG) _(a)	Typical Source of Contaminant
Turbidity (Units)	Quarterly	0.21	0.00 - .51	5	N/A	Soil runoff
Total Dissolved Solids (TDS) (ppm)	9/4/2014	326	320 - 340	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (micromhos)	9/4/2014	482	300 – 540	1600	N/A	Substances that form ions when in water; seawater influence
Chloride (ppm)	9/4/2014	20	15 – 24	500	N/A	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	9/4/2014	34	28 – 38	500	N/A	Runoff/leaching from natural deposits; industrial wastes

Note: There are no PHGs or MCLGs for constituents with secondary drinking water standards because these are not health-based levels, but set on the basis of aesthetics.

Unregulated Contaminant Monitoring Rule 3

As part of the Safe Drinking Water Act Amendments of 1996, the U.S. Environmental Protection Agency (EPA) is required to create a list every five years of up to 30 unregulated contaminants to be monitored in public water supplies. This list is derived from the Candidate Contaminant List (CCL) and represents compounds for which the EPA may consider as candidates for regulation. In 2012, USEPA revised the Unregulated Contaminant Monitoring Rule to establish a new set of unregulated contaminants. All of the wells and two locations within the distribution system were sampled for numerous organic and inorganic compounds. The table below lists the unregulated constituents that were detected in the source water or in the distribution system. (Note: Total and Hexavalent Chromium are regulated under the Safe Drinking Water Act and the results are listed above.

TABLE 7 - DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Avg. Level Detected	Range of Detections	Notification Level	Health Effects Language
Chlorate (ppb)	9/16/2014	156	120 – 190	800	N/A
Molybdenum (ppb)	9/16/2014	1.96	1.8 – 2.1	N/A	N/A
Strontium (ppb)	9/16/2014	314	270 – 340	N/A	N/A
Vanadium (ppb)	9/16/2014	20	15 - 24	N/A	N/A

* The State adopted a Primary Drinking Water Standard for Hexavalent Chromium 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 is over the new MCL then the water supplier may opt to continue monitoring the source water quarterly during calendar year 2015. At the end of the year, if the running average of the four samples is over the MCL, then the system is out of compliance. One of the campus wells had levels of 12 ppb which is above the new MCL. This well was taken out of production, placed into stand-by status and will only be used in an emergency. Several treatment options are being evaluated to determine if the well can be brought in compliance and placed back into service.

Drinking Water Source Assessment Information

A drinking water source assessment was completed in June 2003. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

The sources are considered most vulnerable to the following activities and not associated with any detected contaminants: Animal activities, Sewer/septic collection & treatment systems, Pesticide/fertilizer/petroleum/chemical storage & transfer areas, Research laboratories. There have been no contaminants detected in the water supply attributable to these activities, however the source is still considered vulnerable to activities located near the drinking water sources.

For more information, contact the University of California, Davis – Utilities Division. Contact information is provided on page one. Additional information can be found on the State Water Resources Control Board, Division of Drinking website at:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWSAP.shtml

You may also contact the State Water Resources Control Board, Division of Drinking district office at:

http://www.waterboards.ca.gov/drinking_water/programs/documents/ddwem/DDWdistrictofficesmap.pdf

Important Information about Your Drinking Water

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. State Water System ID No: 5710009.

Additional General Information on Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (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 (1-800-426-4791).

While your drinking water meets the federal and state standard for **arsenic**, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The California Department of Health Services 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.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. UC Davis Utilities Division is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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 water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at the website below.

<http://www.epa.gov/safewater/lead>.

TERMS USED IN THIS REPORT:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect 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 U.S. Environmental Protection Agency (USEPA).

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 the California Environmental Protection Agency.

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.

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.

USEPA: The U.S. Environmental Protection Agency.

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (ppm)

ppb: parts per billion or micrograms per liter (ppb)

pCi/L: picocuries per liter (a measure of radiation)

List of Translations for Water Quality Report

Pursuant to Section 64481(l), Chapter 15, Title 22, a utility's CCR is required to include the following sentence translated into Spanish and any language that is spoken by a non-English speaking group that exceeds 1,000 residents or 10% of the residents in a community.

"This report contains important information about your drinking water. Translate it, or speak with someone who understands it."

Spanish

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

Arabic

"هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب).
ترجم التقرير, أو تكلم مع شخص يستطيع أن يفهم التقرير."

Chinese (Traditional)

此份有關你的食水報告,內有重要資料和訊息,請找
他人為你翻譯及解釋清楚。

Chinese (Simplified)

此份有关你的食水报告,内有重要资料和讯息,请找
他人为你翻译及解释清楚。

Farsi

این اطلاعیه شامل اطلاعات مهمی را جمع به آب آشامیدنی است. اگر نمیتوانید این اطلاعات را بزربان انگلیسی
بخوانید لطفاً از کسی که میتواند دیاری بگیرد تا مطالب را برای شما به فارسی ترجمه کند.

French

Cé rapport contient des information importantes concernant votre eau potable. Veuillez traduire, ou parlez avec
quelqu' un qui peut le comprendre.

German

Dieser Bericht enthält wichtige Information über Ihr Trinkwasser. Bitte übersetzen Sie ihn oder sprechen Sie mit
jemandem, der ihn versteht.

Greek

Η κατοθεν αναφορα παρουσιαζει
σπουδαιες πληροφορειες για το
ποσιμο νερο σας. Πρακακλω να
το μεταφρασετε η να το
σξολιασετε με καποιον που το
καταλαβαινη απολητως.

Hebrew

Hindi

Hmong

Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug
neeg uas totaub txog nws.

Irish

Tá eolas tábhachtach san tuairisc faoi uisce inólta. Aistrigh é, nó labhair le duine cé a thuigeann é.

Italian

Questo rapporto contiene informazioni importanti che riguardano la vostra acqua potabile. Traducetelo, o parlate con una persona qualificata in grado di spiegarvelo.

Japanese

この報告書には上水道に関する重要な情報が記されております。翻訳を御依頼なされるか、内容をご理解なさっておられる方にお尋ね下さい。

Khmer

របាយការណ៍នេះមានព័ត៌មានសំខាន់ៗ

Korean

중요한 정보를 담고 있는 이 보고서를 꼭 읽어주세요.

Laotian

ບູລິມະສິດນີ້ມີຂໍ້ມູນສຳຄັນ

របាយការណ៍នេះ ។

ឲ្យបានយល់, យល់

ຫລືໃຫ້ປຶກສາກັບຄົນໃດຄົນໜຶ່ງທີ່ເຂົ້າໃຈເລື້ອງ.

Polish

Ta broszura zawiera wazne informacje dotyczace jakosci wody do picia. Przetlumacz zawartosc tej broszury lub skontaktuj sie z osoba ktora pomoze ci w zrozumieniu zawartych informacji.

Punjabi

ਇਹ ਸੂਚਨਾ ਮਹੱਤਵਪੂਰਣ ਹੈ।
ਕ੍ਰਿਪਾ ਕਰਕੇ ਕਿਸੀ ਤੋ ਇਸ ਦਾ ਅਨੁਵਾਦ ਕਰਾਉ।

Russian

Этот отчет содержит важную информацию о вашей питьевой воды. Переведите его или поговорите с тем, кто это понимает.

Swahili

Shauri hii niya kufahamisha uzuri wa maji ya kunyua. Shauri nilazima egeuzwe kwa yoyote hajui Kiingereza.

Tagalog

Mahalaga ang impormasyong ito. Mangyaring ipalalin ito.

Turkish

Bu rapor içme suyunuzla ilgili önemli bilgi içermektedir. Bunu tercüme edin veya anlayan biri ile görüşün.

Vietnamese

Chi tiết này thật quan trọng.
Xin nhờ người dịch cho quý vị.