2016 Consumer Confidence Report

Water System Name: **Pacific Union College** Report Date: May 24, 2017

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2016 and may include earlier monitoring data.

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

Type of water source(s) in use: 4 Wells

Name & general location of source(s): Well #3,4,5 North Howell Mountain Rd. Past Clark Way
Well #6 Behind Water Tanks at Airport

Drinking Water Source Assessment information: Available at Facilities Management, Dale Wither's Office.
This was completed in October of 2001 for our Water System. We update this as land use changes around the wells.
The Vulnerability Summary showed us most vulnerable for the following activities for each well as follows:
Well #3- Grazing, Sewer Collections Systems, Historic Gas Stations
Well #4- Farm Machinery Repair, Grazing, NPDES/WDR Permitted Discharges, Photo Process Printing, Sewer Collection Systems, Historic Gas Stations
Well #5- Grazing Sewer Collection Systems
Well #6- Airports- Maintenance/Fueling Areas, Vineyards
We will be glad to go over any questions that you might have on this or let you review the full report

Time and place of regularly scheduled board meetings for public participation: We do not have any board meetings but we are always available for public comment.

For more information, contact: Dale Withers dwithers@puc.edu Phone: (707) 965-7154

This information can also be viewed on the Pacific Union College Website at the following URL:
http://www.puc.edu/campus-services/facilities-management/ccr

We are also able to email you this information in the future should you misplace this copy or need an extra.
If you do not use email, you can drop by our office to pick up an extra copy.
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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

Primary Drinking Water Standards (PDWS): MCLs and 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 that a water system must follow.

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.

Variances and Exemptions: State Board 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 (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

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

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 or 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.

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 by-products 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.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria	0(In a mo.)	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	0(In the year)	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER							
Lead and Copper (complete if lead or copper detected in the last sample set)	**Sample Date**	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	07/2014	10	<0.005	NONE	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	07/2014	10	<0.05	NONE	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	06/2011	10	<0.005	NONE	15	0.2	
Copper (ppm)	06/2011	10	0.066	NONE	1.3	0.3	
Lead (ppb)	06/2008	10	<0.005	NONE	15	0.2	
Copper (ppm)	06/2008	10	<0.05	NONE	1.3	0.3	
Lead (ppb)	06/2005	10	0.0054	NONE	15	0.2	
Copper (ppm)	06/2005	10	0.14	NONE	1.3	0.3	

Note: PUC has never exceeded the Lead and Copper Action Levels since testing started in 1995, results above through 2005

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)		**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	03/2015	10.4	9.1-12	NONE	NONE	Salt present in the water and is generally naturally occurring
Hardness (ppm)	03/2015	22	17-27	NONE	NONE	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring
Alkalinity (Total ppm CaCO3)	03/2015	41	32-48	NONE	NONE	Generally found in ground and surface water
Calcium (ppm)	03/2015	2.6	1.7-4.1	NONE	NONE	Generally fou nd in ground and surface water
Magnesium (ppm)	03/2015	3.8	3-5	NONE	NONE	Generally found in ground and surface water

***Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.*

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Asbestos	05/2014	< 2.0 ppb	<2.0	7	7	Internal corrosion of asbestos cement water mains; erosion of natural deposits
Arsenic	03/2015	< 2.0 ppb	<2.0	10 ppb	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production waste.
Average Chlorine Residuals (ppm)	Daily	0.5	0.3-0.7	N/A	N/A	Sodium Hypochlorite injected into water from chlorination
Barium (Wells 3,4,5,6) (ppm)	03/2015	160	140-190	1000	2	Erosion of natural deposits

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chromium	03/2015	< 1.0 ppb	<1.0	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppb)	03/2015	0.21 ppb	0.2-0.23 ppb	2 ppb	150 ppb	Discharge from steel/metal, plastic and fertilizer factories
Gross Alpha Activity	11/2007	0.6805 pCi/L	0.43-1.02	15 pCi/L	N/A	Decay of natural man-made deposits
Nitrate	01/2016	1.887 ppm	1.4-2.2	10	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate	03/2015	< 4.0 ppb	<4.0	6	6	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
Radium 228 (pCi/L)	09/2008	<0 pCi/L	0 pCi/L	0 pCi/L	0 pCi/L	Discharge from steel/metal, plastic and fertilizer factories
Total Trihalomethanes (TTHMs) (ppb)	10/2015	0.5	0.5	80 ppb	N/A	By-product of drinking water chlorination
Haloacetic Acids (ppb)	10/2015	ND	ND	60 ppb	N/A	By-product of drinking water chlorination
Uranium (pCi/L)	11/2007	0.19 pCi/L	<0-0.74 pCi/L	20 pCi/L	0.43 pCi/L	Discharge from steel/metal, plastic and fertilizer factories
TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chloride	03/2015	6.4 ppm	4.6-8.4	500 ppm	N/A	Runoff/leaching from natural deposits; seawater influence
Color Units	03/2015	3.5	<3-5	15 units	N/A	Naturally-occurring organic materials
Iron	03/2015	<100 ppb	100	300 ppb	N/A	Leaching from natural products; industrial wastes
Manganese	03/2015	<20 ppb	<20	50 ppb	N/A	Leaching from natural deposits
Specific Conductance	03/2015	137.5 micromhos	120-150	1600 micromhos	N/A	Substance that form ions when in water; sea water influence
Sulfate	03/2015	4.68 ppm	1.7-10	500 ppm	N/A	Runoff/leaching from natural deposits, industrial waste
Total Dissolved Solids (TDS)	03/2015	152.5 ppm	140-160	1000 ppm	N/A	Runoff/leaching from natural deposits
Turbidity	03/2015	0.76 units	0.2-1.8	5 units	N/A	Soil Runoff
Zinc	03/2015	<50 ppb	<50	5000 ppb	N/A	Runoff/leaching from natural deposits, industrial wastes

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Additional General Information on Drinking Water

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).

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).

Lead-Specific Language for Community Water Systems: 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. Pacific Union College 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 http://www.epa.gov/safewater/lead.

For Water Systems Providing Ground Water as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES

Microbiological Contaminants (complete if fecal-indicator detected)	**Total No. of Detections**	**Sample Dates**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
E. coli	0(2015)	Monthly 3,4 Quarterly 5,6	0	(0)	Human and animal fecal waste
Enterococci	0(2015)	Monthly 3,4 Quarterly 5,6	TT	n/a	Human and animal fecal waste
Coliphage	0(2015)	Monthly 3,4 Quarterly 5,6	TT	n/a	Human and animal fecal waste

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