2014 Consumer Confidence Report

Sierra Army Depot (Depot) – Public Water System No.1810700

February 2015

We test the drinking water quality for many constituents as required by state & federal regulations. This report shows the results of our monitoring through December 31, 2014

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: **Groundwater**

Name & location of source(s):

Drinking Water Source Assessment information: **The Public Health Command, Fort Lewis Washington, conducted a water assessment survey on our sources in April 2013. Our sources are considered most vulnerable to the following activities not associated with any contaminates: Military Installations, historic & active automobile gas stations, chemical/petroleum processing/storage. Our sources are considered most vulnerable to the following activities associated with the detection of nitrate: animal operations, monitoring well/test holes.**

Time & place of regularly scheduled board meetings for public participation: **N/A**

For more information, contact: **Nora A Chamberlain** Phone: **(530) 827-5242**

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 & technologically feasible. Secondary MCLs are set to protect the odor, taste, & 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.

ND: not detectable at testing limit

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 & MRDLs for contaminants that affect health along with their monitoring & reporting requirements, & water treatment requirements.

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

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

ppm: parts per million or milligrams per liter (mg/L)

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

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

The sources of drinking water (both tap water & bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, & wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals &, in some cases, radioactive material, & 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 that may come from sewage treatment plants, septic systems, agricultural livestock operations, & wildlife.
- *Radioactive contaminants* that can be naturally-occurring or be the result of oil & gas production & mining activities.
- *Inorganic contaminants*, such as salts & metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil & gas production, mining, or farming.
- *Pesticides & herbicides* that may come from a variety of sources such as agriculture, urban storm water runoff, & residential uses.
- *Organic chemical contaminants*, including synthetic & volatile organic chemicals that are by-products of industrial processes & petroleum production, & can also come from gas stations, urban storm water runoff, agricultural application, & septic systems.

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

The tables below 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 Division 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.

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) 0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the yr) 0	0	A routine sample & a repeat sample detect total coliform & either sample also detects fecal coliform or *E. coli*	0	Human & animal fecal waste

SAMPLING RESULTS SHOWING THE DETECTION OF LEAD & COPPER

Lead & Copper (units) Date	No. of samples collected	90th %tile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb) 2013	10	4	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppb) 2013	10	430	0	1,300	300	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Chemical or Constituent (units)	Sample Date	Average Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG) [MDRLG]	Typical Source of Contaminant
DETECTION OF CONTAMINANTS WITH A *PRIMARY* DRINKING WATER STANDARD						
Arsenic (ppb)	2012	2.5	2.0 – 3.0	10	0.004	Erosion of natural deposits, runoff from orchards
Fluoride (ppm)	2012	0.6	0.6 - 0.6	2.0	1	Erosion of natural deposits, discharge of fertilizer & aluminum factories
Nitrate as NO_3 (ppm)	2014	21	ND – 32	45	45	Runoff & leaching from fertilizer use; leaching from septic tanks & sewage; erosion of natural deposits
Toluene (ppb)	2014	16.5	ND - 33	150	150	Discharge from petroleum & chemical factories; underground gas tank leaks
Gross Alpha (pCi/L)	2012	13.4	ND – 26.8*	15	(0)	Erosion of natural deposits
Uranium (pCi/L)	2014	19	16 – 23*	20	0.43	Erosion of natural deposits

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

DETECTION OF CONTAMINANTS WITH A *SECONDARY* DRINKING WATER STANDARD						
Iron (ppb)	2014	9	ND – 70	300	None	Erosion of natural deposits
Manganese (ppb)	2014	2	ND – 8	50	None	Erosion of natural deposits
Chloride (ppm)	2012	32	25 – 38	500	None	Erosion of natural deposits
Sulfate (ppm)	2012	160	130 – 190	500	None	Erosion of natural deposits
Total Dissolved Solids (TDS) (ppm)	2011	655	480 – 830	1,000	None	Erosion of natural deposits
SAMPLING RESULTS FOR HARDNESS & SODIUM						
Hardness (ppm)	2012	240	190 - 290	None	None	Sum of magnesium & calcium polyvalent cations present in the water, naturally occurring
Sodium (ppm)	2012	68	62 - 74	None	None	Salt present in the water; generally naturally occurring
DETECTION OF DISINFECTANTS & DISINFECTION BYPRODUCTS						
Chlorine (ppm)	2014	0.8	0.4 – 1.2	(4.0)	[4]	Drinking water disinfectant added for treatment
Haloacetic Acids (ppb)	2014	3.2	2.1 – 4.2	60	None	Disinfection by-products
Trihalomethanes (ppb)	2014	11	5.0 – 17.0	80	None	Disinfection by-products

Summary Information for Contaminants Exceeding an MCL

Gross Alpha: Monitoring results have determined that the uranium is the major contributor to the Depot's gross alpha. By treating for uranium, the Depot is, therefore, treating for gross alpha.

Uranium: In 2014 the Depot treated water uranium results, in the range of 16-23 pCi/L, averaged 19 pCi/L. The quarterly running annual average of treated results, which determines compliance with the MCL, in the range of 19–20 pCi/L, did not exceed the uranium MCL of 20 pCi/L.

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 & 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, & 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* & other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women & young children. Lead in drinking water is primarily from materials & components associated with service lines & home plumbing. The Depot 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, & steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Additional Information for SIAD Residents, Employees, Contractors, & Visitors

The Depot came into compliance with State & Federal drinking water standards for **uranium, iron, & manganese** in 2011 when it installed 1) an ion exchange treatment to remove uranium & 2) greensand filters to remove iron & manganese from the drinking water. The tables above show that, with the exception of some individual uranium results, the Depot's water met drinking water standards in 2014.

The Depot is required to test the water for additional contaminates ranging from acetone to zinc. In the event any of the tested contaminates exceeds an MCL the Risk Management Environmental Division & Directorate of Base Support Offices are required by law to notify the proper agencies & provide public notification. Since August 2011, with the exception of some individual uranium & manganese results, the Depot has been in compliance with the USEPA & Division's drinking water standards.

The Depot collects a minimum of three samples a week from the distribution system, which are tested for bacteria. The Depot's automated chlorination system ensures that the water is chlorinated to State, Federal, & Army Standards. All drinking water analyses results are maintained for three years. The Directorate of Base Support is putting forth a five year plan that includes replacing the water lines throughout the Depot. Please feel free to contact me at nora.a.chamberlain.civ@mail.mil. I will be happy to discuss any concerns/questions you may have.