Boeing Palmdale Water Quality Report for the 2017 Reporting Year

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

This Consumer Confidence Report is a snapshot of last year's water quality analysis results for you, the customer. Included are details about where your water comes from, what it contains, and how it compares to State standards. We are committed to providing you with information because informed customers are our best allies. Though the tap water at Site 1 continues to maintain compliance with all water quality requirements, it is still recommended that personnel use bottled water provided on-site for consumption.

Your drinking water at AFP 42, Site 1 originates from three wells that withdraw groundwater from the Lancaster Subunit at varying depths. These wells are referred to as Well 1, Well 3, and the Well 4. The site does not have a connection with any publically-owned water district. Your water undergoes disinfection via chlorination to protect you against microbial contaminants.

The California State Water Resources Control Board, Division of Drinking Water, Hollywood District has conducted assessments of Well 1, Well 3 and Well 4. The purpose of the assessments was to determine the vulnerability of your source to possible contaminating activities. An assessment of the drinking water source for Well 1 was completed in December 2001, Well 3 in November 2002, and Well 4 in March 2013. These sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: airports – maintenance/ fueling areas, historic gas stations, known contaminant plumes, and military installations. You may request a copy of the assessments by contacting Mr. Dmitriy Ginzburg, North Hollywood District Engineer, at (818) 551-2049 or by visiting State Water Resources Control Board, Division of Drinking Water, 500 North Central Avenue, Suite 500, Glendale, CA 91203.

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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 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, 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 U.S. Environmental Protection Agency (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.

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791) or online at https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those undergoing chemotherapy, those who have undergone organ transplants, those 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) or online at https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline.

Tables 1, 2, 3, and 4 will provide you with data on the levels of contaminants found during testing conducted on the tap water on site. Only those substances measured above the detection level of reporting (DLR) are listed. Because the DLR has been reached and the substance is listed, does not mean that a contaminant has been found at a harmful concentration.

Two contaminants came back with results higher than the MCL in 2017. These exceedances did not result in violations because the water sources were not and currently are not being used to supply water to the site.

- The exceedance for the color standard at Well 1 was the result of an error in sampling at a location that had experienced very little use, which lead to a buildup of metals in the water (Table 1). When this well is put back into use, monthly testing of the color parameter will help ensure that this issue has been resolved.
- The continued issue of increasing concentrations of trichloroethylene (TCE) in Well 4 is related to a known underground contamination that is currently being

remediated by the USAF (Table 2). Over the next few years, granular activated carbon filtration systems capable of removing TCE and other compounds will be installed on site wells. Monitoring of this issue will continue with the support of USAF and the State Board.

Questions about water quality at this facility can also be answered by contacting Martin Maxwell at 661-265-2181 or martin.k.maxwell@boeing.com.

Definitions & Abbreviations:

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.

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.

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.

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

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

ND: Not Detectable

ppb: Parts per billion; Equivalent to micrograms per liter

ppm: Parts per million; Equivalent to milligrams per liter

pCi/L: Picocuries per liter; A measure of radioactivity

μS/cm: MicroSiemens per centimeter

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use USEPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water". Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers – a 5 minutes shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaking toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Table 1 – Selected water quality testing results.

Classification	Contaminant	CCR Unit	MCL	PHG (MCLG)	Well 01 (Date of Sampling)	Well 03 (Date of Sampling)	Well 04 (Date of Sampling)	Typical Source
Radioactive	Gross Alpha particle activity	pCi/L	15	0	0.91 (8/26/15)	0.67 (1/14/16)	0.95 (8/26/15)	Erosion of natural deposits
Radioactive	Ra-228	pCi/L	5	0.019		0.457 (1/14/16)		Erosion of natural deposits
Radioactive	Radium, Total	pCi/L	5	N/A	0.31 (8/7/13)		0.67 (8/7/13)	Erosion of natural deposits
Radioactive	Uranium	pCi/L	20	0.43	0.6 (8/26/15)	0.5 (1/14/16)	0.57 (8/26/15)	Erosion of natural deposits
Inorganic	Aluminum	ppm	1	0.6	0.388 (8/2/17)			Erosion of natural deposits; Erosion of natural deposits; residue from some surface water treatment processes
Inorganic	Arsenic	ppb	10	0.004	1.09 (8/2/17)	2.82 (8/2/17)	2.12 (8/2/17)	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Inorganic	Chromium	ppb	50	(100)	7.96 (8/2/17)	9.41 (8/2/17)	6.47 (8/2/17)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Inorganic	Chromium, hexavalent	ppb	-	0.02	4.55 (8/23/17)	9.92 (8/23/17)	5.66 (8/23/17)	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.

Inorganic	Fluoride	ppm	2	1	0.117 (8/2/17)	0.207 (8/2/17)	0.138 (8/2/17)	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Inorganic	Lead	ppb	-	0.2	7.47 (8/2/17)			Discharges from industrial manufacturers; erosion of natural deposits
Inorganic	Nitrate (as N)	ppm	10	10		0.201 (8/2/17)		Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Secondary MCL	Chloride	ppm	500	N/A	2.65 (8/2/17)	2.41 (8/2/17)	2.61 (8/2/17)	Runoff/leaching from natural deposits; seawater influence
Secondary MCL	Color	Units	15	N/A	66 (8/2/17)	1 (8/2/17)	15 (8/2/17)	Naturally-occurring organic materials
Secondary MCL	Iron	ppb	300	N/A	1.43 (8/2/17)		0.188 (8/2/17)	Leaching from natural deposits; industrial wastes
Secondary MCL	Manganese	ppb	50	N/A	40.8 (8/2/17)		1.12 (8/2/17)	Leaching from natural deposits
Secondary MCL	Silver	ppb	100	N/A		19.8 (8/2/17)		Industrial discharges
Secondary MCL	Specific Conductance	uS/cm	1600	N/A	224 (8/2/17)	215 (8/2/17)	208 (8/2/17)	Substances that form ions when in water; seawater influence
Secondary MCL	Sulfate	ppm	500	N/A	12.1 (8/2/17)	11.9 (8/2/17)	11 (8/2/17)	Runoff/leaching from natural deposits; industrial wastes
Secondary MCL	Total Dissolved Solids	ppm	1000	N/A	133 (8/2/17)	133 (8/2/17)	111 (8/2/17)	Runoff/leaching from natural deposits

Secondary MCL	Turbidity	NTU	5	N/A	3.83 (8/2/17)		1.16 (8/2/17)	Soil runoff
		Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.						
Secondary MCL	Zinc	ppm	5	N/A	0.121 (8/2/17)	0.323 (8/2/17)	0.0722 (8/2/17)	Runoff/leaching from natural deposits; industrial wastes
State Required	Hardness	ppm	N/A	N/A	66 (8/2/17)	38 (8/2/17)	45 (8/2/17)	Runoff/leaching from natural deposits
State Required	Sodium	ppm	N/A	N/A	22.2 (8/2/17)	32.3 (8/2/17)	27.4 (8/2/17)	Runoff/leaching from natural deposits

Table 2 – Trichloroethylene (TCE) sampling results above detection limit in 2017

Location	Contaminant	CCR Unit	MCL	PHG	Date of Sampling						Typical Sources
					1/18	6/14	8/2	8/23	11/15	12/6	
Well 4	Trichloroethylene	ppb	5.0	1.7	2.62	4.1	4.14	5.4	6.53	6.37	Discharge from metal degreasing sites and other factories

Table 3 – Lead and Copper

Contaminant	CCR Unit	PHG (MCLG)	AL	90th Percentile Value	Number of Sites Sampled	Number of Sites Exceeding AL	Typical Sources
Copper	ppb	300	1300	34.15	5	0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	ppb	0.2	15	0.75	5	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Table 4 – Disinfection byproducts and chlorine residual ranges in 2017

Contaminant	CCR Unit	MCL	PHG	Bldg. 150	Bldg. 157	Typical Sources
Total Trihalomethanes	ppb	80	n/a	1.94	2.58	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	n/a	ND	1.9	