



Boeing Palmdale Water Quality Report for 2015 Reporting Year

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

Last year, EHS conducted more than 300 tests for over 100 contaminants. We only detected 14 of these contaminants, and found only 1 at a level higher than the State allows. Because of the location at which this contaminant was found, it was not necessary to issue a Do Not Drink Notice. For more information, see the paragraph marked Violation. This brochure is a snapshot of last year's water quality. 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 throughout 2015 and 2016, it is still recommended that personnel use bottled water provided on-site for consumption.

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 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, which 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 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).

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 01, Well 03, and the Well 04. Boeing does not have an active connection with any publically owned water district. Your water undergoes disinfection via chlorination to protect you against microbial contaminants. 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.

The California State Water Resources Control Board, Division of Drinking Water, Hollywood District has in the past conducted assessments of Well 01, Well 03 and Well 04 for the Boeing Company. 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 01 was completed in December 2001, Well 03 in November 2002, and Well 04 in March 2013. The source is 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. Paul Williams, 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.

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).

Tables 1 and 2 below will provide you with data on the levels of contaminants found in 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.



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	Unit of Measure	MCL	PHG	AL	Well 01 (Date of Sampling)	Well 03 (Date of Sampling)	Well 04 (Date of Sampling)	Range	Typical Sources
Biological	Total Coliform	Each	≤1	0		<u>2 (4/1/15)*</u>	ND	ND	ND-2	Naturally present in the environment
Biological	Fecal Coliform	Each	0	0		0 (4/1/15)	ND	ND	ND-0	Human and animal fecal waste
Radioactive	Gross Alpha particle activity	pCi/L	15	0		0.91 (8/26/15)	0.67 (1/14/16)†	0.95 (8/26/15)	0.67-0.95	Erosion of natural deposits
Radioactive	Ra-226	pCi/L	5	0.05		0.31 (8/7/13)†	ND	0.67 (8/7/13)†	ND-0.067	Erosion of natural deposits
Radioactive	Ra-228	pCi/L	5	0.019		ND	0.457 (1/14/16)†	ND	ND-0.457	Erosion of natural deposits
Radioactive	Radium, Total	pCi/L	5	N/A		ND	0.059 (6/25/14)†	0.118 (6/25/14)†	ND-0.118	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)	0.5-0.6	Erosion of natural deposits
Inorganic	Arsenic	ppb	10	0.004		ND	2.65 (6/25/14)†	3.0 (6/25/14)†	ND-2.65	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Inorganic	Chromium	ppb	50	100		ND	11.7 (6/25/14)†	11.8 (6/25/14)†	ND-11.8	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Inorganic	Chromium, Hexavalent	ppb	10	0.02		2.12 (8/26/15)	9.3 (1/14/16)†	5.86 (8/26/15)	2.12-9.3	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Inorganic	Copper	ppm		0.3	1.3	ND	ND	0.00218 (8/26/15)	ND-0.00218	Internal corrosion of plumbing systems; erosion of natural deposits

Classification	Contaminant	Unit of Measure	MCL	PHG	AL	Well 01 (Date of Sampling)	Well 03 (Date of Sampling)	Well 04 (Date of Sampling)	Range	Typical Sources
Inorganic	Fluoride	ppm	2	1		0.116 (6/25/14) [†]	0.215 (6/25/14) [†]	0.19 (6/25/14) [†]	0.116-0.215	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Inorganic	Lead	ppb		0.2	15	ND	ND	1.9 (8/26/15)	ND-1.9	Internal corrosion of water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Inorganic	Nitrate (as N)	ppm	10	10		0.221 (8/26/15)	0.233 (1/14/16) [‡]	ND	ND-0.233	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
SOC	Trichloroethylene (TCE)	ppb	5	1.7		ND	ND	0.697 (2015)	ND-0.761	Discharge from metal degreasing sites
Secondary MCL	Chloride	ppm	500	N/A		2.48 (6/25/14) [†]	2.37 (6/25/14) [†]	2.47 (6/25/14) [†]	2.37-2.48	Discharge from metal degreasing sites and other factories
Secondary MCL	Color	Units	15	N/A		6 (6/25/14) [†]	1 (11/18/14) [†]	7 (6/25/14) [†]	1-7	Naturally-occurring organic materials
Secondary MCL	Foaming Agents (MBAS)	ppb	500	N/A		50 (6/25/14) [†]	50 (6/25/14) [†]	50 (6/25/14) [†]	50	Municipal and industrial waste discharges
Secondary MCL	Iron	ppb	300	N/A		ND	154 (2/17/15)	2030 (2/17/15)	ND-2030	Leaching from natural deposits; industrial wastes
Secondary MCL	Specific Conductance	µS/cm	1600	N/A		225 (6/25/14) [†]	219 (6/25/14) [†]	214 (6/25/14) [†]	214-225	Substances that form ions when in water; seawater influence
Secondary MCL	Sulfate	ppm	500	N/A		14.2 (6/25/14) [†]	14 (6/25/14) [†]	13.3 (6/25/14) [†]	13.3-14.2	Runoff/leaching from natural deposits; industrial wastes
Secondary MCL	Total Dissolved Solids	ppm	1000	N/A		137 (6/25/14) [†]	129 (6/25/14) [†]	130 (6/25/14) [†]	129-137	Runoff/leaching from natural deposits

Classification	Contaminant	Unit of Measure	MCL	PHG	AL	Well 01 (Date of Sampling)	Well 03 (Date of Sampling)	Well 04 (Date of Sampling)	Range	Typical Sources
Secondary MCL	Turbidity	Units	5	N/A		1.37 (6/25/14) [†]	0.31 (11/18/14) [†]	1.23 (6/25/14) [†]	0.31-1.37	Soil runoff
Secondary MCL	Zinc	ppm	5	N/A		ND	0.0523 (6/25/14) [†]	0.283 (6/25/14) [†]	ND-0.283	Runoff/leaching from natural deposits; industrial wastes
State Regulated	Vanadium	ppb		N/A		14.8 (6/25/14) [†]	25.9 (6/25/14) [†]	26.1 (6/25/14) [†]	14.8-26.1	
Required	Hardness	ppm		N/A		77 (6/25/14) [†]	40 (6/25/14) [†]	27.6 (6/25/14) [†]	27.6-77	
Required	Sodium	ppm		N/A		19.3 (6/25/14) [†]	32.1 (6/25/14) [†]	45 (6/25/14) [†]	19.3-45	

Table 2 – Disinfection byproducts and chlorine residual ranges

Contaminant	Unit	MCL (MRDL)	PHG (MRDLG)	B150	B157	Low	High	Avg.
Total Trihalomethanes	ppb	80	N/A	13.7	3.23	3.23	13.7	8.47
Haloacetic Acids	ppb	60	N/A	1.96	3.66	1.96	3.66	2.81
Chlorine (as Cl ₂)	ppm	(4)	(4)	-	-	0.85	2.2	1.7



* **VIOLATION** – Total coliform MCL exceedance in April was the result of a deteriorated seal in the well casing. There was no evidence of contamination by fecal coliform bacteria, so the associated health risk was minimal. Additionally, these are wellhead samples taken prior to disinfection. Coliform tests performed on water collected after disinfection showed no contamination. To remedy this issue, Well 01 was taken offline and refurbished after this event.

† Tests conducted prior to 2015 are listed because that is the last time that those specific tests were conducted. Not all tests are required to be conducted yearly. For example, radioactivity testing is only required every 9 years.

‡ Annual testing was not conducted on Well 03 in 2015 because the well was offline when the testing for other wells was conducted. The testing was conducted as soon as soon as the oversight was recognized.