



2014

ANNUAL WATER QUALITY REPORT

City of Delano – Prepared June 2015

This brochure is a report to consumers regarding the drinking water quality provided by the City of Delano. Included is an explanation of where our water comes from, the results of water quality testing and information on how to interpret this data. We are proud to share our results with you, so that you may have confidence in the quality of our drinking water.

We test the water quality for many constituents as required by both State and Federal Regulations. This report gives the results of our monitoring for the period of January 1 – December 31, 2014.

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.

Este folleto contiene información muy importante sobre la calidad de su agua para beber. Tradúzcalo ó hable con alguien que lo entienda bien.

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

Water Source and Location

The City of Delano water system is supplied entirely with groundwater from aquifers beneath the city. There are fourteen wells supplying the water system. Source Locations are:

Well #14 – Garzoli & Woollomes	Well #31 – Albany & Diaz
Well #20 – 22 nd & Kalibo	Well #32 – Veneto & Primavera
Well #21 – 21 st & Albany	Well #33 – 20 th & Trenton
Well #22 – 5 th & Randolph	Well #35 – Austin & 1 st Avenue
Well #24 – 20 th & Browning	Well #38 – S99 & County Line
Well #25 – Schuster & S. Randolph	
Well #26 – 2300 Block of Browning	
Well #29 – Veneto & Primavera	
Well #30 – County Line & Randolph	

Drinking Water Assessment Information

A source water assessment was conducted for the City of Delano water supply wells in November 2002. The sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply:

- Fertilizer / Pesticide / Herbicide Applications

The water sources are also considered most vulnerable to the following activities not associated with the detected contaminants:

- Automobile Repair Shops and Gas Stations
- Machine Shops
- Photo Processing / Printing

For more information contact:

Department of Public Works, 725 S. Lexington Street, Delano, CA 93215. Telephone (661) 721-3350.

The City Council meets on the first and third Monday of each month at 5:30 pm in the City Hall Council Chambers located at 1015 11th Avenue.

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.

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.

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

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

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

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

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

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

<: less than

Educational Information:

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 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) guideline 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).

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 Department of Public Health (Department) 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 that provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 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 Department 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.

CITY OF DELANO WATER QUALITY TABLES
(For Explanation of Violations, See End of Tables)

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA- MONTHLY 2014						
Microbiological Contaminants	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria ¹	
Total Coliform Bacteria	0	0	More than 5.0% of monthly samples are positive	0	Naturally present in the environment	
Fecal Coliform or <i>E. coli</i>	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 – SEPTEMBER 2014						
Lead and Copper	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant ¹
Lead (ppb)	42	<1.0	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	42	0.220	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent	Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant ¹
Sodium (mg/L)	7/08/14	82	40-130	none	none	Salt present in the water and is generally naturally occurring
Hardness (mg/L)	7/08/14	52	10-110	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

CITY OF DELANO WATER QUALITY TABLES
(For explanation of violations, see end of tables)

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

Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant ¹
Arsenic (ppb)	Weekly 2014	4.61	ND-8.1	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2014	0.097	<0.010-0.054	1	2	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Copper (ppm)	2014	ND	ND	AL=1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	2014	0.266	0.16-0.47	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ppb)	2014	ND	ND	AL=15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Nitrate (ppm) (as nitrate, NO ₃)	2014	24.45	ND-46	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (ppm) (as nitrogen, N)	2014	0.15	ND-0.15	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Dibromochloropropane [DBCP] (ppm)	Monthly 2014	45.46	ND-82	200	1.7	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Gross Alpha Particle Activity (pCi/L)	2014	2.49	ND-2.76	15	(0)	Erosion of natural deposits
Combined Radium (pCi/L)	2014	.29	0.0792-0.481	5	(0)	Erosion of natural deposits
Chlorine Residual (ppm)	2014	1.85	1.02-3.09	4	4	Drinking water disinfectant added for treatment
TTHMs (ppb) (Total Trihalomethanes)	2014	5.9	ND-17	80	N/A	By-product of drinking water disinfection
Haloacetic Acids (ppb)	2014	3.8	ND-6.8	60	N/A	By-product of drinking water disinfection
Perchlorate (ppb)	2014	ND	ND	6	6	Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse affects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.
Chromium VI (ppb) (Hexavalent chromium)	2014	5.54	ND-9.7	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits

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(For explanation of violations, see end of tables)

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	Secondary MCL	Typical Source of Contaminant ¹
Color (units)	2014	6.7	5-10	15	Naturally occurring organic material
Copper (µg/L)	2014	ND	ND	1.0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Corrosivity (no unit)	10/07/03	0.303	0.09-0.51	non-corrosive	Natural or industrial-influenced balance of hydrogen, carbon and oxygen in the water, affected by temperature and other factors
Odor – Threshold (units)	2014	ND	ND	3	Naturally occurring organic material
Turbidity (NTU)	2014	1.29	ND-1.9	5	Soil runoff
Total Dissolved Solids (mg/L)	2014	323	220-490	1000	Runoff/leaching from natural deposits
Specific Conductance (µS/cm)	2014	482	250-790	1600	Substances that form ions when in water; seawater influence
Chloride (mg/L)	2014	53	14-140	500	Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	2014	65	22-120	500	Runoff/leaching from natural deposits; industrial influence

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	Notification Level	Health Effects Language
Trichloropropane (ppt) (1,2,3-TCP)	Weekly 1/07/14- 12/18/14	7.46	ND-21	5	Some people who use water containing 1,2,3-trichloropropane in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals. This contaminant is currently unregulated and an MCL has not been established.

1: Per the SWRCB CCR Guidelines

EXPLANATION OF EXCEEDANCE			
Constituent	Explanation	Potential Health Effects	Actions Taken to Address
Nitrate (as nitrate, NO ₃)	One sample at Well No. 35 exceeded the 45 ppm MCL. The Water System is not currently in violation of the MCL for Nitrate.	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.	Well No. 35 was shut off upon notification of sample results and is not currently in use. This well is scheduled for the installation of a nitrate removal system by 2016. The Water System is not currently in violation of the MCL for Nitrate.

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).

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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. The City of Delano 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>.