

WATER OUR PRECIOUS RESOURCE

Did you know that our bodies are made up of 60% water? We can only live one week without water, but we could go an entire month without food. Water is precious, and we need to learn how to live with the water supply we have. While the earth is covered by more than 70% water (USGS Gov), only 3% is fresh water, and only 1.7% of this fresh water is drinkable. New water does not exist, and the water we drink today is over one billion years old; it simply moves through the water cycle.

Since 2004, through water conservation efforts, our customers have reduced water consumption from an average of 221 gallons per person per day to 199 gallons per person per day. In some countries, where water is scarce, people live on three gallons per day. Most of our water (80%) is used outdoors to irrigate our landscapes and lawns. Only 20% is actually used indoors for personal use, such as drinking, laundry, and bathing. In 1904, maps indicate that a portion of our neighboring city, the City of Chino, was actually covered by standing water. Today we pump groundwater in that same location from over 100 feet below ground surface. We must go deeper and deeper to reach our water supply.

It is imperative that we do our part to conserve this most valuable resource for future generations. In 2010, Governor Schwarzenegger signed into law, Senate Bill 7x-7 which requires a 20% mandatory reduction in water use by the year 2020. Let us make water conservation a way of life. While water seems to be plentiful after a good rain event, there is still the same amount there has been for more than one billion years. However, our population continues to increase, increasing the demand on our limited water supply.

For information on how you can conserve contact Kelly Sandel at (909) 364-2804 or via email at ksandel@chinohills.org.



DEFINITIONS

Blending: The mixing of high-quality water with lower quality water to a calculated ratio to meet or exceed approved standards before delivery to customers.

CDA: Chino Basin Desalter Authority

CDPH: California Department of Public Health

DLR: Detection Limit for Purposes of Reporting

USEPA: United States Environmental Protection Agency

CITY: City of Chino Hills

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's and MCLG's as is economically and technologically feasible. Secondary MCL's 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. MCLG's are set by the USEPA.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that an 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MVWD: Monte Vista Water District

Primary Drinking Water Standard (PDWS): MCL's for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements. PDWS's are set by the California Environmental Protection Agency (CA-EPA).

Public Health Goal (PHG): The level of contaminant in drinking water below which there is no known or expected health risk. PHG's are set by the California Environmental Protection Agency (CA-EPA).

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

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Turbidity: A measure of the cloudiness of the water used which is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants and provide a medium for microbial growth.

Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WFA: Water Facilities Authority

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 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 that 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 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.

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).

WATER PARAMETERS: WHERE DOES OUR WATER COME FROM?

The City's water sources are comprised of surface water, supplied by the Metropolitan Water District (MWD) via the Water Facilities Authority (WFA); and groundwater that is pumped through City-owned wells, Monte Vista Water District (MVWD) wells, and Chino Basin Desalter Authority (CDA) wells.

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.

SOURCES OF WATER

Groundwater: This source of water comes from underground water-bearing soil called an aquifer. This water originates from rain, snow, and irrigation systems. Over several years, water from those sources will percolate through the soil and reach the groundwater table. The ground acts as a large filter, so that only chlorination is normally required to produce safe drinking water at the well site. The City's groundwater supply is comprised of City-owned wells, and water from the MVWD and the CDA.

Surface Water: The City purchases and imports treated surface water via the WFA and MVWD. The source of the surface water is the State Water Project, which provides water from Northern California through the California Aqueduct Program. The USEPA requires that all source water served to consumers be included in the Water Quality/Consumer Confidence Report.

WATER DISTRIBUTION

Water enters the City of Chino Hills' distribution system from the Chino Basin Desalter Authority, Water Facilities Authority, Monte Vista Water District, and from City wells via transmission lines. The water then enters a distribution network where it is pressurized and delivered to local homes and businesses for use.

HOW SAFE DRINKING WATER LEVELS ARE SET

The Federal Safe Drinking Water Act of 1974, and its 1986 amendment, are intended to ensure the quality of our nation's water supplies. In order to ensure that tap water is safe to drink, the USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH's Food and Drug Branch regulations establish limits for contaminants in bottled water that provide the same protection for public health.

City of Chino Hills 2011 Water Quality Report

PARAMETERS	UNITS	STATE MCL (DLR)	PHG (MCLG)	CHINO HILLS Wells		CHINO 1 DESALTER Treated Well Label		MONTE VISTA WATER		MCL VIOLATION	YEARS SAMPLED	TYPICAL SOURCE OF CONTAMINANT
				Range	Average	Range	Average	Range	Average			
PRIMARY STANDARDS - Mandatory Health Related Standards												
INORGANIC CONTAMINANTS												
Aluminum	ppb	100	60	ND	ND	na	ND	ND-84	14.2	NO	2010-2011	Residue from water treatment process; erosion of natural deposits.
Arsenic	ppb	5	0.004	ND-4.6	3	na	ND	ND-4.7	16	NO	2010-2011	Erosion of natural deposits; glass and electronics production wastes.
Barium	ppb	1000	2000	ND-30	23.3	na	ND	ND-40	ND	NO	2010-2011	Oil and metal refineries discharge; natural deposits erosion.
Nitrate	ppm	45	45	0-45	35	na	5	2.7-27	20.2	NO	2011	of natural deposits.
Perchlorate	ppb	5	5	ND	ND	na	ND	ND-5.1	4	NO	2010-2011	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage, erosion of natural deposits.
Fluoride	ppm	2	1.5	0.2	na	0.2	ND	ND-35	0.14	NO	2010-2011	Erosion of natural deposits; water additive; discharge from fertilizer/aluminum.
Chromium	ppb	50	100	3.2-2.7	6.1	na	ND	ND-19	1	NO	2010-2011	Discharge from steel, pulp mills and chrome plating; erosion of natural deposits.
Copper	ppm	1.3	1.3	ND	ND	na	ND	ND-09	ND	NO	2010-2011	Erosion of natural deposits; leaching from wood deposits.
Mercury	ppb	2	12	ND	ND	na	ND	ND-34	01	NO	2010-2011	Erosion of natural deposits; discharge from refineries and factories.
Selenium	ppb	50	30	ND-5	5.9	na	ND	ND	ND	NO	2010-2011	Refineries, mines, and chemical waste discharge; runoff from livestock.
SYNTHETIC ORGANIC CONTAMINANTS												
Dibromochloropropane(DBCP)	ppb	200	17	ND	ND	na	ND	ND-09	0.027	NO	2011	Banned nematocide that may still be present in soils due to leaching from former horticulture uses.
VOLATILE ORGANIC CONTAMINANTS												
Dichloromethane	ppb	5	4	ND	ND	na	ND	nd-14	0.05	NO	2010-2011	Discharge from pharmaceutical and chemical factories; insecticide.
DISINFECTION BYPRODUCTS, DISINFECTION RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS												
Trihalomethanes (THMs) (Total Trihalomethanes)*	ppb	80	na	1.37	12.5	na	ND	ND-61	23.5	NO	2010-2011	Byproduct of drinking water disinfection.
Halooacetic Acids	ppb	80	na	ND-11	6.6	na	ND	ND-9	3.2	NO	2010-2011	Byproduct of drinking water disinfection.
DBP Precursor Control	ppm	11	na	ND	ND	na	ND	11	11	NO	2010-2011	Various natural and man-made sources.
Total Chlorine Residual (System)	ppm	4	4	2.1-1.6	0.46	na	ND	0-1.31	72	NO	2011	Drinking water disinfectant added for treatment.
SECONDARY STANDARDS-Aesthetic Standards												
Aluminum	ppb	200	na	ND	ND	na	ND	ND-84	14	NO	2010-2011	Erosion of natural deposits; residue from some surface water.
Fluoride Agents (MBS)	ppb	500	na	ND	ND	na	ND	ND-11	ND	NO	2010-2011	Municipal and industrial waste discharges.
Chloride	ppm	500	na	0.9-11	42	na	10	0.2-40	20.6	NO	2010-2011	Runoff/leaching from natural deposits and sewer influence.
Iron	ppb	300	na	ND-30	30	na	ND	ND-03	ND	NO	2010-2011	Leaching from natural deposits; industrial wastes.
Cyan Triethyld	ppb	2	na	ND	ND	na	ND	1	1	NO	2010-2011	Naturally-occurring organic material.
Specific Conductance	microm	1600	na	350-190	748	na	370	250-850	361	NO	2010-2011	Substances that form ions when in water; seawater influence.
Sulfate	ppm	500	na	22-220	95	na	8.8	9-50	35.8	NO	2010-2011	Runoff/leaching from natural deposits; industrial wastes.
Turbidity	ntu	5	na	ND-1	0.32	na	ND	0.16	0.11	NO	2010-2011	Soil runoff.
Zinc	ppm	5	na	ND	ND	na	ND	ND-20	0.01	NO	2010-2011	Runoff/leaching from natural deposits; industrial wastes.
Color	pcu	5	na	ND	ND	na	ND	ND-3	ND	NO	2010-2011	Naturally-occurring organic material.
Total Filterable Residue	ppm	200-500-500	na	ND	ND	na	ND	90-350	235	NO	2010-2011	Runoff/leaching from natural deposits.
Total Dissolved Solids	ppm	1000	na	210-740	470	na	370	ND	ND	NO	2010-2011	Runoff/leaching from natural deposits and industrial wastes.
MICROBIOLOGICAL CONTAMINANTS												
Total Coliform Bacteria	% (fa per month)	0	0	ND	ND	na	ND	ND-18	0.3	NO	2010-2011	Naturally present in the environment.
Fecal Coliform and E. Coli	(fa)	(fa)	(fa)	ND	ND	na	ND	ND	ND	NO	2011	Human and animal fecal waste.
RADIOLOGICAL CONTAMINANTS												
Gross Alpha	pCi/L	5	0	0.1	85-4	3.5	na	ND	ND	NO	2010-2011	Erosion of natural deposits.
Gross Beta	pCi/L	50	0	ND	ND	na	ND	ND-4	ND	NO	2010-2011	Erosion of natural and man-made deposits.
Radium 226	pCi/L	5	0.03	ND	ND	na	ND	ND-16	0.1	NO	2010-2011	Erosion of natural deposits.
Uranium	pCi/L	20	0.43	ND	ND	na	ND	ND-3.1	0.5	NO	2010-2011	Erosion of natural deposits.
ADDITIONAL PARAMETERS												
Alkalinity	ppm	na	na	50-240	82	na	86	45-90	63.7	na	2010-2011	
Calcium	ppm	na	na	35-90	66	na	54	32-72	35.3	na	2010-2011	
Magnesium	ppm	na	na	0.2-20	6	na	5	2.5-20	6	na	2010-2011	
Potassium	ppm	na	na	16.3-3	2.3	na	1	14-2.6	1.9	na	2010-2011	
pH	na	na	na	7.6-1	7.6	na	7.3	7.5-7.7	8	na	2010-2011	
Sodium	ppm	na	na	0-42	26	na	31	22-80	32.6	na	2010-2011	
Chloroform	ppb	10	na	ND-14	0.23	na	ND	ND	ND	na	2011	
Bromoform	ppb	10	na	ND-1	0.17	na	ND	ND	ND	na	2011	
Lead/lead at Source Temp	na	na	na	ND-79	0.5	na	ND	ND	ND	na	2011	
Aspartame (MSB)	na	na	na	0-3.6	0.3	na	ND	ND	ND	na	2010-2011	
Total Solid	ppm	na	na	ND	ND	na	5	ND	ND	na	2011	
Hardness	ppm	na	na	10-50	3.6	na	80	50-220	90.5	na	2010-2011	
Total Organic Carbon	ppm	1.20	na	ND	ND	na	ND	10-2.5	2	na	2010-2011	
Bicarbonate	ppm	na	na	40-200	2.8	na	100	53-90	16.2	na	2010-2011	
UNREGULATED CONTAMINANTS												
Chromium VI (Hexavalent Chromium)	ppb	na	na	2.5-1.1	0.3	na	ND	12-7	3.2	na	2003-2011	
Vanadium	ppb	na	na	ND	ND	na	ND	ND-5	5	na	2010-2011	
Boron	ppb	na	na	ND	ND	na	10	ND-100	0.9	na	2010-2011	
1,2,3-Trichloropropane	ppb	na	na	ND	ND	na	21	ND	ND	na	2011	
Abbreviations:												
na/c/m: microsiemens; n/a: not applicable; nd: not detectable at testing limit; ppb: parts per billion or micrograms per liter; ppm: parts per million or milligrams per liter; ppt: parts per trillion; TT: Treatment Techniques; AL: Action Level; NL: Notification Level; pCi/L: picocuries per liter (a measure of radiation);												
UMH/cm: micromhos per centimeter; NTU: Nephelometric Turbidity Units; TON: Threshold Odor Number; TDS: Total Dissolved Solids												
(a): Fecal coliform/E. coli MCLs: The occurrence of two (2) consecutive total coliform-positive samples, one of which contains fecal coliform/E. coli, constitutes an acute MCL violation. The MCL was not violated in 2011. (b): Aluminum has both primary and secondary standards.												
The City strives to deliver water at levels well below the set MCL.												
* Trihalomethanes and Haloacetic Acids are a collection of sample results taken throughout the City from imported and blended water as a blended supply of all water.												

CITY OF CHINO HILLS ASSESSMENT OF SOURCE WATER

The CDPH conducted a source water assessment of all operable City water wells. The assessment is designed to make the public and the City aware of contaminants detected in the City's groundwater supply. In addition, the assessment highlights possible sources of these and future contaminants. The focus of the program is information gathering with attention to activities that may affect drinking water quality. The program enables public water systems to better protect and manage surface and groundwater resources. A copy of the complete assessment is available at California Department of Public Health's San Bernardino District Offices located at 464 West 4th Street, Suite 437, San Bernardino, California, 92401. You may request a summary of the Assessment by contacting CDPH Engineer, Faraz Asad at (909) 383-4328.

As all potable water in existence continues to recycle for our use, pure quality does not exist; all water contains chemicals, organic or inorganic. While this table lists chemicals detected in City-owned well water, no chemicals at or above allowable limits enter the water distribution system or reach our customers. Water from the wells is treated by trained and certified City staff using approved treatment processes and approved blending plans.

Source Number	Source ID	Most Vulnerable Activities (*PCA)	Chemical Detected
001	Well 1-A	Known contaminant plumes Agricultural drainage Furniture repair/manufacture Sewer collection systems Airports-maintenance/fueling areas	Nitrate Nitrate Chromium VI Nitrate None
009	Well 7-A	Chemical/petroleum processing/storage Known contaminant plumes Sewer collection systems Metal plating/finishing/fabricating Fleet/truck/bus terminals Furniture repair/manufacturing Railroad yards/maintenance/fueling areas	Selenium Nitrate Nitrate Selenium None None None
010	Well 7-B	Chemical/petroleum processing/storage Known contaminant plumes Sewer collection systems Metal plating/finishing/fabricating Fleet/truck/bus terminals Furniture repair/manufacturing	Selenium Nitrate Nitrate Selenium None None
014	Well 15-B	Known contaminant plumes Sewer collection systems Appliance/electronic repair Fleet/truck/bus terminals	Arsenic Nitrate Arsenic None
015	Well 16	Sewer collection systems Housing - high density Appliance/electronic repair Fleet/truck/bus terminals	Nitrate Nitrate Arsenic None
017	Well 17	Known contaminant plumes Electrical/electronic manufacturing Sewer collection systems Appliance/electronic repair Chemical/petroleum processing/storage	Arsenic Arsenic Nitrate Arsenic None
019	Well 19	Known contaminant plumes Sewer collection systems Housing - high density Automobile - body shops Automobile - repair shops Automobile - gas stations Chemical/petroleum processing/storage Historic gas stations	Arsenic Nitrate Nitrate None None None None None

SPECIAL NOTE TO PERSONS WITH COMPROMISED IMMUNE SYSTEMS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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).

Water Tips

- If your shower can fill a one-gallon bucket in less than 20 seconds, then replace it with a low-flow showerhead. They're inexpensive, easy to install, and can save your family more than 500 gallons of water per week.
- Wash only full loads of laundry and dishes and save up to 50 gallons per week.
- Turn off the water while you brush your teeth and save up to 2.5 gallons each time.
- Check your sprinkler system for leaks, overspray, and broken sprinkler heads and repair promptly. This can save up to 500 gallons per month.
- Set automatic irrigation timers to water between the hours of 6:00 p.m. and 8:00 a.m.

LEAD AND COPPER PROGRAM

The USEPA promulgated National Primary Drinking Water Regulations for Lead and Copper on June 7, 1991. Three monitoring protocols are included in the final rule: (1) Water Monitoring for Lead and Copper; (2) Water Quality Parameter Monitoring; (3) Source Water Monitoring for Lead and Copper. Monitoring tap water for lead and copper determines the lead and copper concentrations in drinking water. In 2010, the City took its latest round of sampling as required by the USEPA. The established action level for lead is 0.15 mg/L. Sample results for the 90th percentile was .006 mg/L. The established action level for copper is 1.3 mg/L. Of 30 sites sampled, none exceeded the established action level; the 90th percentile for copper was .44 mg/L. 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 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 in your pipes 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>.

WATER QUALITY DATA

The Water Quality table provided lists all drinking water contaminants that were detected during the 2011 calendar year. The presence of the contaminants in the water does not necessarily indicate that the water poses or did pose a health risk. Unless otherwise noted, the data presented in this table is from testing conducted January 1, 2011 through December 31, 2011. The State requires the City to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly. Terms and abbreviations used in water quality data tables are provided.

NITRATE

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness, symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

PERCHLORATE

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 effects 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.

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.

ARSENIC

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Arsenic found in City wells is caused by erosion of natural deposits in the deep aquifers.

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Public Meeting Schedule

All public meetings are held at 7:00 p.m. in the Council Chambers at City Hall, 14000 City Center Drive, Chino Hills, unless otherwise noted. Notices of public meetings and their agendas are posted outside the Council Chambers at City Hall.

The City of Chino Hills publishes this Water Quality Consumer Confidence Report annually. A copy of this report can also be found on the City's website, www.chinohills.org/ccr. For additional information, or to get answers to questions you may have about your water, call:

Paul Fonseca, Water Quality Technician, at (909) 396-2808.

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

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

Chỉ tiết này rất quan trọng. Xin nhớ người dịch cho quý vị.

City of Chino Hills

Consumer Confidence Report

The City of Chino Hills publishes this *Consumer Confidence Report* annually. It can also be found at www.chinohills.org/ccr.

Postal Customer
Chino Hills, CA 91709

City Council
Art Bennett, Mayor
Peter Rogers, Vice Mayor
Ed Graham
Gwenh Norton-Perry
Bill Kruger

Public Works Commission
Debra Hernandez, Chair
William P. McDonnell, Vice Chair
Tom Boyd
Barry Fischer
Delliah Peterson

City of Chino Hills
Public Works Department
14000 City Center Drive
Chino Hills, CA 91709