

Escondido's

WATER REPORT

City of Escondido
Consumer Confidence Report
Annual Report
on
Water Quality
for
2001



Is My Water Safe?

Yes. Last year, as in years past, your tap water not only met, but exceeded, all U.S. Environmental Protection Agency (USEPA) and state drinking water health standards. The City of Escondido vigilantly safeguards its water supplies and is committed to providing high quality drinking water to its customers. In 2001 the City's Water Quality Laboratory analyzed over 12,000 water samples.



What Might Be In My Drinking Water?

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. Therefore, drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. However, the presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water before it is treated 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, 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, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the California Department of Health Services prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations establish limits for contaminants in bottled water that must provide the same protection for public health.



Additional information about contaminants and potential health affects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Do I Need To Take Special Precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants can be

at risk from infections. These people should seek advice from their health care providers about drinking water. Guidelines developed by the USEPA and the Centers for Disease Control and Prevention (CDC) on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

ESCONDIDO WATER SYSTEM



Where Does My Water Come From?

The City of Escondido uses three sources for its drinking water. The first is local water, which originates from the watershed and well fields near Lake Henshaw. This water is transferred to Lake Wohlford via an open canal. The second source of drinking water is imported water from the Colorado River via the Colorado Aqueduct. The third source is imported water from northern California via the State Water Project. Escondido purchases the imported water from the San Diego County Water Authority (CWA), which obtains it from Metropolitan Water District of Southern California. All water, regardless of the source, is treated at the Escondido-Vista Water Treatment Plant adjacent to Lake Dixon Dam.

The treatment of water includes filtration and disinfection to ensure destruction of harmful organisms. After chemical treatment and removal of organic components and suspended

materials, the water is filtered through beds of coal and sand supported by graded rock. Crystal clear water results.

After treatment, water is distributed from the Escondido - Vista Water Treatment Plant to the Vista Irrigation District and throughout Escondido through a system of pipelines and reservoirs.

In December of 2000 the City of Escondido prepared a Sanitary Survey of the local watershed. While the survey identifies a number of activities that have the potential to adversely affect water quality, including residential septic facilities, highway runoff, and agricultural and recreational activities, no contaminants from these activities were detected in the local water supply in 2001.

A copy of the Watershed Sanitary Survey, which is similar to a Source Water Assessment Program, is available for review at City Hall (760-839-4651).

What Is This Report About?

This Consumer Confidence Report is a snapshot of drinking water quality in 2001. Some Escondido residents and businesses receive water from Rincon Del Diablo Municipal Water District, Vallecitos MWD, or Valley Center MWD. This report focuses on water received by the City of Escondido. Included are details about where Escondido's water originates, what it contains, and how it compares to standards set by regulatory agencies. If you have any questions about this report, please contact Mr. Timothy Kwak, Supervising Chemist at (760) 839-6244.



2001 Water Quality Data Table

The tables shown below list all of the regulated drinking water contaminants that were detected during the calendar year of this report. The presence of "contaminants" in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The USEPA or the State requires that monitoring for certain contaminants be less than once per year because the concentrations of these contaminants do not change frequently.

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP Effluent	DLR	Typical Source/Comments
Inorganic Contaminants - Primary Standards							
Fluoride (F)	mg/l	2	1	Range Average	0.24-0.41 0.31	0.1	Erosion of natural deposits; discharge from fertilizer and aluminum factories.
Inorganic Contaminants - Secondary Standards							
Color	Units	15	NS	Range Average	1-1 1	-	Decaying vegetation or other naturally occurring organic materials
Chloride (Cl)	mg/L	500	NS	Range Average	81-88 83	-	Runoff/leaching from natural deposits; seawater influence
Sulfate (SO ₄) ²⁻	mg/L	500	NS	Range Average	150-180 166	0.5	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	mg/L	1000	NS	Range Average	480-530 500	-	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance	umho/cm	1600	NS	Range Average	777-845 805	-	Substances that form ions when in water; seawater influences
pH	Units	6.5-8.5	NS	Range Average	7.37-7.60 7.48	-	
Zinc (Zn)	mg/L	5.0	NS	Range Average	ND-0.55 0.5	0.05	Corrosion control additives

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP Effluent	DLR	Typical Source/Comments
Inorganic Contaminants - Unregulated							
Boron	mg/L	(AL=1)	NS	Range Average	0.12-0.15 0.13	0.1	State regulations requires us to monitor this contaminant while the State considers setting a limit on it
Perchlorate	ug/L	(AL=18)	NS	Range Average	ND-4.3 4.1	4	State regulations requires us to monitor this contaminant while the State considers setting a limit on it

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP Effluent	DLR	Typical Source/Comments
Additional Analyzed							
Total Alkalinity	mg/L	NS	NS	Range Average	102-111 107	-	Erosion of natural deposits; Leaching
Hydroxide (OH ⁻)	ug/L	NS	NS	Range Average	5-10 8	-	Erosion of natural deposits; Leaching
Carbonate (CO ₃) ²⁻	mg/L	NS	NS	Range Average	0.27-0.70 0.5	-	Erosion of natural deposits; Leaching
Bicarbonate (HCO ₃) ⁻	mg/L	NS	NS	Range Average	124-135 131	-	Erosion of natural deposits; Leaching
Hardness as CaCO ₃	mg/L	NS	NS	Range Average	214-243 227	-	Erosion of natural deposits; Leaching
Calcium (Ca)	mg/L	NS	NS	Range Average	51-58 55	-	Erosion of natural deposits; Leaching
Magnesium (Mg)	mg/L	NS	NS	Range Average	21-24 22	-	Erosion of natural deposits; Leaching
Sodium (Na)	mg/L	NS	NS	Range Average	75-83 79	-	Erosion of natural deposits; Leaching
Potassium (K)	mg/L	NS	NS	Range Average	3.7-4.2 4.0	-	Erosion of natural deposits; Leaching
Total Chlorine Residual	mg/L	4	(4)	Range Average	2.15-2.75 2.57	-	Addition of chlorine and ammonia as a combined disinfectant chloramine

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP/D. System	DLR	Typical Source/Comments
Radionuclides Analyzed every four years, for four consecutive quarters (sampled in year 2000)							
Gross Alpha Activity	pCi/L	15	(0)	Range Average	1.8-3.5 2.5	1	Erosion of natural deposits. Sampled in 2000.
Gross Beta Activity	pCi/L	50	(0)	Range Average	2.7-6.6 4.5	4	Decay of natural and man-made deposits. Sampled in 2000.
Combined Radium	pCi/L	5	(0)	Range Average	ND-1.7 0.8	0.5	Erosion of natural deposits. Sampled in 2000.
Uranium	pCi/L	20	(0)	Range Average	ND-2.7 2.0	2	Erosion of natural deposits. Sampled in 2000.

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP/D. SYS	DLR	Typical Source/Comments
MICROBIOLOGICAL							
WTP Effluent Total Coliform Bacteria	%	5	(0)	Range Average	0 0	-	Naturally present in the environment
WTP Effluent Fecal Coliform Bacteria	%	NS	(0)	Range Average	0 0	-	Human and animal fecal waste

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP/D. SYS	DLR	Typical Source/Comments
Microbiological Cantaminants							
Total Coliform Bacteria (Monthly positives) Distribution system	%	5	(0)	Range Distribution System Wide Monthly Highest = 1.56%	0-1.56	-	Naturally present in the environment

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP/D. SYS	DLR	Typical Source/Comments
CLARITY (Turbidity)							
Combined Filter Effluent Turbidity	NTU %	TT=95% (<0.5)	NA	Range %(<0.5NTU)	0.04-0.17 100%	-	Soil runoff
Turbidity in Distribution System	NTU %	5 (<0.5)	(0)	Range %(<0.5NTU)	0.04-0.30 100%	-	Sediment in Distribution System

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP Effluent	DLR	Typical Source/Comments
ICR Disinfection By Products (7/97 - 12/98)							
Chloral Hydrate	ug/L	NS	NS	Range Average	1.7-7.3 4.7	0.5	Disinfection by-products
Chloropicrin	ug/L	NS	NS	Range Average	ND-1.1 0.6	0.5	Disinfection by-products
Cynogen Chloride	ug/L	NS	NS	Range Average	1.6-8.0 4.7	1	Disinfection by-products
Haloacetic Acids (HAA5)	ug/L	NS	NS	Range Average	13.6-60.4 38.2	1	Disinfection by-products
Haloacetonitriles (HANs)	ug/L	NS	NS	Range Average	4.6-13.0 9.3	0.5	Disinfection by-products
Haloketones (Hks)	ug/L	NS	NS	Range Average	1.4-5.4 3.8	0.5	Disinfection by-products
Total Trihalomethanes (TTHMs)	ug/L	100	0	Range Average	28.2-83.3 57.7	0.5	Disinfection by-products
Total Organic Carbon (TOC)	mg/L	NS	NS	Range Average	2.5-4.2 3.4	0.7	Naturally occurring organic material
Total Organic Halides (TOX)	ug/L	NS	NS	Range Average	108-328 216	50	Naturally occurring organic material
Disinfectant Residual	mg/L	4	NS	Range Average	1.8-2.9 2.4	-	Addition of Chlorine and Ammonia as a combined disinfectant, chloramine

PARAMETER	Units	AL	MCLG	90 th Percentile of 52 Samples	Sites > AL	DLR	Typical Source/Comments
Inorganic Contaminates - Copper/Lead in Residential Taps (in year 2000)							
Copper (Cu)	mg/L	1.3	1.3	0.55	1	0.05	Corrosion of household plumbing systems. Sample in 2000.
Lead (Pb)	ug/L	15	0	<5	0	5	Corrosion of household plumbing systems; erosion of natural deposits. Sample in 2000.

PARAMETER	Units	State MCL	PHG (MCLG)	Range Average	WTP Effluent	DLR	Typical Source/Comments
Organic Contaminants - Primary Standards							
WTP Effluent Total Trihalomethanes	ug/L	100	NA	Range Average	31-65 52	0.5	By-product of drinking water chlorination
WTP Effluent Haloacetic Acids (HAA5)	ug/L	60	NA	Range Average	16-32 23	-	By-product of drinking water chlorination
Organic Contaminants - Unregulated							
Chloromethane	ug/L	NS	NS	Range Average	ND-0.6 0.5	0.5	State regulations requires us to monitor this contaminant while the State considers setting a limit on it
Organic Contaminants - Disinfection By-Product in Distribution System							
Total Trihalomethanes (TTHMs)	ug/L	100	0	Range Average	42-70 53	0.5	By-product of drinking water chlorination; sampled quarterly in distribution system.
Total Trihalomethanes (TTHMs) Annual Running Average	ug/L	100	0	Average	54	0.5	By-product of drinking water chlorination; sampled quarterly in distribution system; the highest annual running averages of quarterly samples in the year is 56 ug/L
Haloacetic Acids (HAA5)	ug/L	60	0	Range Average	16-33 23	-	By-product of drinking water chlorination; sampled quarterly in distribution system.
Haloacetic Acids (HAA5) Annual Running Average	ug/L	60	0	Range Average	23-28 26	-	By-product of drinking water chlorination; sampled quarterly in distribution system; the highest annual running averages of quarterly samples in the year is 28 ug/L

Key To Abbreviations

- TT = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
- DLR = Detection Limit for Reporting: A detected contaminant is any contaminant detected at or above its detection level for purposes of reporting.
- PHG = Public Health Goal: 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.
- MCLG = Maximum Contaminant Level Goal: 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.
- MCL = Maximum Contaminant Level: 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.
- PDWS = Primary Drinking Water Standard: MCLs for contaminants that affect health along with their monitoring and reporting requirement, and water treatment requirements.
- ND = Not Detected
- mg/L = Milligrams per liter
- < = Less than
- > = More than
- NS = No Standard
- AL = Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- mg/L = milligram per liter or parts per million (ppm)
- ug/L = microgram per liter, or parts per billion (ppb)
- pCi/L = picocuries per liter
- NTU = Nephelometric Turbidity Units: Turbidity is a measure of the cloudiness of the water. It is a good indicator of the effectiveness of the water treatment process and Distribution System
- NA = Not Applicable

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. Our monitoring indicated the presence of these organisms in our source water one time at a level of 0.2 organisms per liter. None was detected in our treated water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

The City of Escondido Water Distribution System consists of approximately 350 miles of pipelines. Tests are performed each week at various points along the system for compliance with bacteriological and physical parameters. Of concern to all customers is the bacteriological quality of the drinking water. This table shows that drinking water leaving the Water Treatment Plant registered zero coliform bacteria. The distribution system table indicates the amount of positive samples found in the system.

Tests are performed on drinking water turbidity (clarity) at the Water Treatment Plant and in the distribution system. The turbidity tests are done continuously at the Water Treatment Plant. In addition, samples are taken each week at various points in the Distribution System. This table reflects the clarity or turbidity produced at the Water Treatment Plant and in the Distribution System.

In 1997 and 1998 the City of Escondido participated in a national program known as the Information Collection Rule (ICR). It was authorized and run by the USEPA. The purpose was to gather water quality information from around the nation in preparation for determining updated water quality goals and limits. This table shows the level of disinfection by-products measured during the ICR program.

Have There Been Any Monitoring or Reporting Violations?



NONE!

This table shows the levels of copper and lead found in the homes of selected customers. The Copper Lead Rule requires the City to collect special samples from designated residents every three years. The amount of lead and copper found in the samples is an indication of the degree of leaching within the customer-owned copper plumbing and brass faucets.

Getting Involved

The City Council of the City of Escondido normally meets the first four Wednesdays per month at 4 p.m. and 7:30 p.m. in the Council Chambers at City Hall. The address is 201 North Broadway, Escondido, 92025-2798. Telephone 760-839-4880.

Español (Spanish)

Este informe contiene información muy importante sobre la calidad de su agua de beber. Si tiene preguntas favor de llamar al numero: (760) 839-4651.