

2011 Annual Drinking Water Quality Report

TERRA BELLA IRRIGATION DISTRICT

We test the drinking water quality for many constituents as required by State and Federal Regulations. This report shows the results of our monitoring for the period of January 1 – December 31, 2011.

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

We are pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the water and services we have delivered to you over the past year. Our source water comes mainly from the Friant Kern Canal. The period of time that the system relies on groundwater, during maintenance of the Canal, is short. During this last year the Canal was down during the months of January and February, and the entire supply for the month was provided by well water. There are a total of nine (9) active wells identified as Well Numbers 50, 72, 76, 77, 80, 84, 85, 86 and 87, as well as standby wells, Well Numbers 63, 64, 74 and 78.

A source water assessment was conducted for the water supply wells and surface water source of the District water system in March 2003. The water sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: fertilizer, pesticide/ herbicide application; septic systems – low density. The source is considered most vulnerable to the following activities not associated with any detected contaminants: grazing; septic systems – low density; septic systems – high density; lumber processing and manufacturing; automobile – gas stations; sewer collection systems; historic gas stations; wastewater treatment plants and disposal facilities. A copy of the complete assessment may be viewed at: Terra Bella Irrigation District, 24790 Avenue 95, Terra Bella, CA 93270. If you would like a summary of the assessment sent to you or if you have any questions about this report or concerning your water utility, please contact Mr. Tom Day, Operations Superintendent, 559/535-4414.

We want our customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held the 2nd Wednesday of each month at 9:00 a.m., at the office of the Terra Bella Irrigation District located at 24790 Avenue 95 in Terra Bella.

The following are definitions of some of the TERMS USED IN THIS REPORT:

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

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).

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

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.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of drinking water. Supplies with elevated SDWS do not affect the health at the MCL levels.

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.

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

Variances and Exemptions: State Department of Public Health (Department) permission to exceed an MCL or not comply with a treatment technique under certain conditions.

NA: not applicable.

ND: not detectable at testing limit.

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

ppb: parts per billion or micrograms per liter (ug/l).

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

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

In general, sources of drinking water (both tap water and bottled water) may 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.

Constituents that may be present in source water to contamination levels 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, 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 byproducts 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 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 must provide the same protection for public health.

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. Terra Bella Irrigation District 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>.

The tables below and on the following pages list all the drinking water constituents that were detected during the most recent samplings for the constituent. The presence of these constituents in the water does not necessarily indicate that the water poses a health risk. The Department requires us to monitor for certain constituents less than once per year because the concentrations of these constituents are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are therefore more than one year old.

SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique	Turbidity Performance Standards (TPS)**	Lowest monthly percentage of samples that met TPS	Highest single turbidity measurement during the year
Conventional Filtration Treatment with Chlorination	Turbidity of the filtered water must be less than or equal to 0.3 NTU in 95% of measurements in a month.	100%	0.380

** Turbidity (measured in NTU) is a measurement of the cloudiness of water and is an indicator of filtration performance. Filtration which meets performance standards is demonstrated by meeting turbidity requirements.

TEST RESULTS (A)

Lead and Copper Rule	No. of samples collected	MCLG	Action Level	90 th percentile level detected	No. Sites Exceeding Action Level	Typical Source of Contamination
Lead (ppb)	10	2	15	ND	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	10	0.17	1.3	0.25	0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

RADIOACTIVE CONTAMINANTS (B)

Constituent	MCL	PHG (MCLG)	Sample Date	Weighted Average Level Detected (C)	Range (B)	Likely Source of Contamination
Gross Alpha Activity (pCi/L)	15	N/A	2005 to 2011	1.11	< 0.01 to 4.64	Erosion of natural deposits
Combined Radium 226 & 228	5	(0)				
<i>Radium 226 (pCi/L)</i>			<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>Erosion of natural deposits</i>
<i>Radium 228 (pCi/L)</i>			<i>2004 to 2011</i>	<i>0.88</i>	<i>< 0.01 to 1.09</i>	

SAMPLING RESULTS FOR SODIUM AND HARDNESS

Constituent	MCL	PHG [MCLG]	Sample Date	Weighted Average Level Detected (C)	Range	Likely Source of Contamination
Hardness (ppm)	None	None	2010 & 2011	11.58	5.6 to 190	Generally found in ground and surface water
Sodium (ppm)	None	None	2010 & 2011	2.97	1.4 to 53	Generally found in ground and surface water

Disinfection Byproduct Precursors

Control of DBP precursors (TOC)	MCL	MCLG	Range	Major Sources in Drinking Water
Source Water	TT	N/A	0.58 to 1.72	Various natural and manmade sources
Treated Water	TT	N/A	0.50 to 1.22	Various natural and manmade sources

- (A) *Results reported due to regulatory requirement or detection of a constituent.*
- (B) *Results reported include amounts that are less than the State Department of Public Health required detection level for this constituent.*
- (C) *The weighted average reflects the quantity of water provided from each source of supply, be it groundwater (wells) and/or surface water along with the representative concentration for a particular constituent.*
- (D) **ABOUT 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.*
- (E) **ABOUT SECONDARY DRINKING WATER STANDARDS:** *Color, Iron and Manganese were found at levels exceeding the Secondary MCLs. These MCLs are set to protect you against unpleasant aesthetic affects such as color, taste, odor or appearance of drinking water. The elevated levels are due to naturally occurring organic materials.*
- (F) **ABOUT IDSE (Initial Distribution System Evaluation) - Federal EPA Stage 2 Disinfectants and Disinfection Byproduct Rule:** *IDSEs are an important part of the Stage 2 DBPR (Disinfection Byproducts Rule) . They are one-time studies conducted by water systems to identify distribution system locations with high concentrations of Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.*

Additional General Information On Drinking Water

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some constituents. The presence of constituents does not necessarily indicate that the water poses a health risk. More information about constituents, contaminant levels and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1/800/426-4791 or their website <http://www.epa.gov/safewater/hfacts.html>.

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 and 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 microbiological contaminants are available from the Safe Drinking Water Hotline 1/800/426-4791.

Treated