

2024 Consumer Confidence Report

Water System Information

Water System Name: Thunderbird County Water District

Report Date: June 28, 2025

Type of Water Source(s) in Use: Groundwater

Name and General Location of Source(s): East Well 001, Well 004, located in district.

Drinking Water Source Assessment Information: The District’s Source Water Assessment was updated on 10/1/2003. Copies are available at the district office.

Time and place of regularly scheduled board meetings for public participation: 3rd Monday of each month at 6:00 pm at the district office: 24737 Standing Rock Road, Apple Valley, CA 92307

For more information contact: Douglas Heinrichs – General Manager, Thunderbird County Water District – (760) 247-2503 or via email at gm@thunderbirdcwd.org.

About This Report

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 to December 31, 2024, and may include earlier monitoring data.

Importance of This Report Statement in Five Non-English Languages (Spanish, Mandarin, Tagalog, Vietnamese, and Hmong)

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Thunderbird County Water District a (760) 247-2503 para asistirlo en español.

Language in Mandarin: 这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 Thunderbird County Water District 以获得中文的帮助: (760) 247-2503.

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa Thunderbird County Water District o tumawag sa (760) 247-2503 para matulungan sa wikang Tagalog.

Language in Vietnamese: Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ Thunderbird County Water District tại (760) 247-2503 để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau Thunderbird County Water District ntawm (760) 247-2503 rau kev pab hauv lus Askiv.

Terms Used in This Report

Term	Definition
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an <i>E. coli</i> MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Maximum Contaminant Level (MCL)	The highest level of a contaminant 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 (U.S. EPA).
Maximum Residual Disinfectant Level (MRDL)	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Term	Definition
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.
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.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Secondary Drinking Water Standards (SDWS)	MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels.
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.
ND	Not detectable at testing limit.
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter ($\mu\text{g/L}$)
ppt	parts per trillion or nanograms per liter (ng/L)
ppq	parts per quadrillion or picogram per liter (pg/L)
pCi/L	picocuries per liter (a measure of radiation)

Sources of Drinking Water and Contaminants that May Be Present in Source 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.

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 are 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 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 are naturally occurring or are the result of oil and gas production and mining activities.

Regulation of Drinking Water and Bottled Water Quality

To ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

About Your Drinking Water Quality

Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, 5, 6, and 8 list all 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 State Board allows us to monitor 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. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Table 1. Sampling Results Showing the Detection of Coliform Bacteria

Complete if bacteria are detected.

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
<i>E. coli</i>	0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

Table 2. Sampling Results Showing the Detection of Lead and Copper

Complete if lead or copper is detected in the last sample set.

Lead and copper (reporting units)	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	Range of Results	AL	PHG	Typical Source of Contaminant
Lead (ppb)	9/15/2024	10	0	0	0	15	0.2	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	9/15/2024	10	.120	0	0-.170	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/Constituent (reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (mg/L)	4/22/2024	54		None	None	Salt is present in the water and is generally naturally occurring
Hardness (mg/L)	4/22/2024	260		None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

Table 4. Detection of Contaminants with a Primary Drinking Water Standard

Chemical/Constituent	Reporting Unit	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Aluminum	ug/L	4/22/2024	0		200 ug/L	.6 mg/L	Erosion of natural deposits
Antimony	ug/L	4/22/2024	0		6 ug/L	1 ug/L	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	ug/L	4/22/2024	2.3		10 ug/L	4 ug/L	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	ug/L	4/22/2024	130		1000 ug/L	4 ug/L	Discharges of oil drilling wastes and
Beryllium	ug/L	4/22/2024	0		4 ug/L	1 ug/L	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries

Boron	ug/L	4/22/2024	130		None	None	Leaching of rocks and soils
Cadmium	ug/L	4/22/2024	0		5 ug/L	40 ug/L	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints
Calcium	mg/L	4/22/2024	80		None	None	Leaching of rocks and soils
Chromium	ug/L	4/22/2024	0		50 ug/L	.02 ug/L	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper	ug/L	4/22/2024	0		1000 ug/L	300 ug/L	Internal corrosion of household plumbing systems; erosion of natural deposits
Cyanide	ug/L	4/22/2024	0		150 ug/L	150 ug/L	Discharge from steel/metal, plastic and fertilizer factories
Fluoride	mg/L	4/22/2024	1.7		2 mg/L	1 mg/L	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	ug/L	4/22/2024	0		None	None	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers
Magnesium	ug/L	4/22/2024	14		None	None	Leaching of rocks and soils
Mercury	ug/L	4/22/2024	0		2 ug/L	1.2 ug/L	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nickel	ug/L	4/22/2024	0		100 ug/L	12 ug/L	Erosion of natural deposits; discharge from metal factories
Nitrate	mg/L	4/22/2024	9.1		10 mg/L	10 mg/L	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite	mg/L	4/22/2024	0		1 mg/L	1 mg/L	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate	ug/L	4/22/2024	0		6 ug/L	1 ug/L	Perchlorate is an inorganic chemical used in solid rocket propellants, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water because of environmental contamination from historic aerospace or other industrial operations that used (or use), store, or dispose of perchlorate and its salts.
Potassium	mg/L	4/22/2024	2.9		None	None	Leaching of rocks and soils
Selenium	ug/L	4/22/2024	0		50 ug/L	30 ug/L	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and

Selenium (continued)							chemical manufacturers; runoff from livestock lots (feed additive)
Thallium	ug/L	4/22/2024	0		2 ug/L	.1 ug/L	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Vanadium	ug/L	4/22/2024	13		None	None	Leaching of rocks and soils

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical/Constituent	Reporting Unit	Sample Date	Level Detected	Range of Detections	SMCL	Typical Source of Contaminant
Aluminum	ug/L	4/22/2024	0		200 ug/L	Erosion of natural deposits
Chloride	mg/L	4/22/2024	78		500 mg/L	Runoff/leaching from natural deposits; seawater influence
Color	units	4/22/2024	3		15 units	Naturally occurring organic materials
Copper	ug/L	4/22/2024	0		1000 ug/L	Internal corrosion of household plumbing systems; erosion of natural deposits
Foaming Agents (MBAS)	mg/L	4/22/2024	0		0.5 mg/L	Municipal and industrial waste discharges
Iron	ug/L	4/22/2024	0		300 ug/L	Leaching from natural deposits; industrial wastes
Manganese	ug/L	4/22/2024	0		50 ug/L	Leaching from natural deposits
Methylterbutylether (MTBE)	ug/L	4/22/2024	0		13 ug/L	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor	units	4/22/2024	1		3 units	Naturally occurring organic materials
Silver	ug/L	4/22/2024	0		100 ug/L	Industrial discharges
Specific Conductance	umhos/cm	4/22/2024	770		1,600 umhos/cm	Substances that form ions when in water; seawater influence
Sulfate	mg/L	4/22/2024	110		500 mg/L	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	mg/L	4/22/2024	470		1000 mg/L	Runoff/leaching from natural deposits
Turbidity	units	4/22/2024	0		5 units	Soil runoff
Zinc	ug/L	4/22/2024	0		5000 ug/L	Runoff/leaching from natural deposits; industrial wastes

Table 6. Detection of Unregulated Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects
Boron (ug/L)	4/22/2024	130		1000 ug/L	Boron exposures resulted in decreased fetal weight (developmental effects) in newborn rats
Vanadium (ug/L)	4/22/2024	13		50	Vanadium exposures resulted in developmental and reproductive effects in rats

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least some small amounts of 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 U.S. EPA'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. U.S. EPA/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).

Lead-Specific Language: 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. Thunderbird County Water District is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Thunderbird County Water District. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Additional Information on Nitrate

Contaminant	Health Effect Language
Nitrate (as nitrogen)	<p>Nitrate in drinking water at levels above 10 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 serious illness.</p> <p>Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies.</p> <p>If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.</p>

Table A: Chlorine Treatment Table

CL2 Monthly Residuals 2024

Date	1. Reservoir	2. DS N of Kenneth	3. DS & Hawkbill	4. SR & Barbara	5. KD & McR	Operator
1/11/2024	0.70	0.75	0.63	0.68	0.71	DH
2/8/2024	0.70	0.71	0.77	0.69	0.68	DH
3/4/2024	0.77	0.79	0.70	0.73	0.77	DH
4/1/2024	0.77	0.79	0.68	0.74	0.76	DH
5/6/2024	0.69	0.71	0.67	0.72	0.68	DH
6/10/2024	0.66	0.70	0.63	0.71	0.66	DH
7/18/2024	0.60	0.66	0.55	0.59	0.61	DH
8/8/2024	0.51	0.60	0.48	0.56	0.59	DH
9/9/2024	1.00	1.10	0.99	0.97	0.89	DH
10/7/2024	0.45	0.81	0.99	0.68	0.79	DH
11/4/2024	0.73	0.69	0.66	0.73	0.68	DH
12/2/2024	0.82	0.88	0.75	0.79	0.84	DH
site and system averages	0.70	0.77	0.71	0.72	0.72	0.72

Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors

Contaminant	Reporting Unit	Sample Date	Level Detected	MCL	PHG	Major Sources in Drinking Water
TTHMs [Total Trihalomethanes]	ug/L	9/24/2024	.55	80	None	Byproduct of drinking water disinfection
HAA5 [Sum of 5 Haloacetic Acids]	ug/L	10/4/2024	1.5	60	None	Byproduct of drinking water disinfection
Chlorine	mg/L	See Table A	.72	4	4	Drinking water disinfectant added for treatment