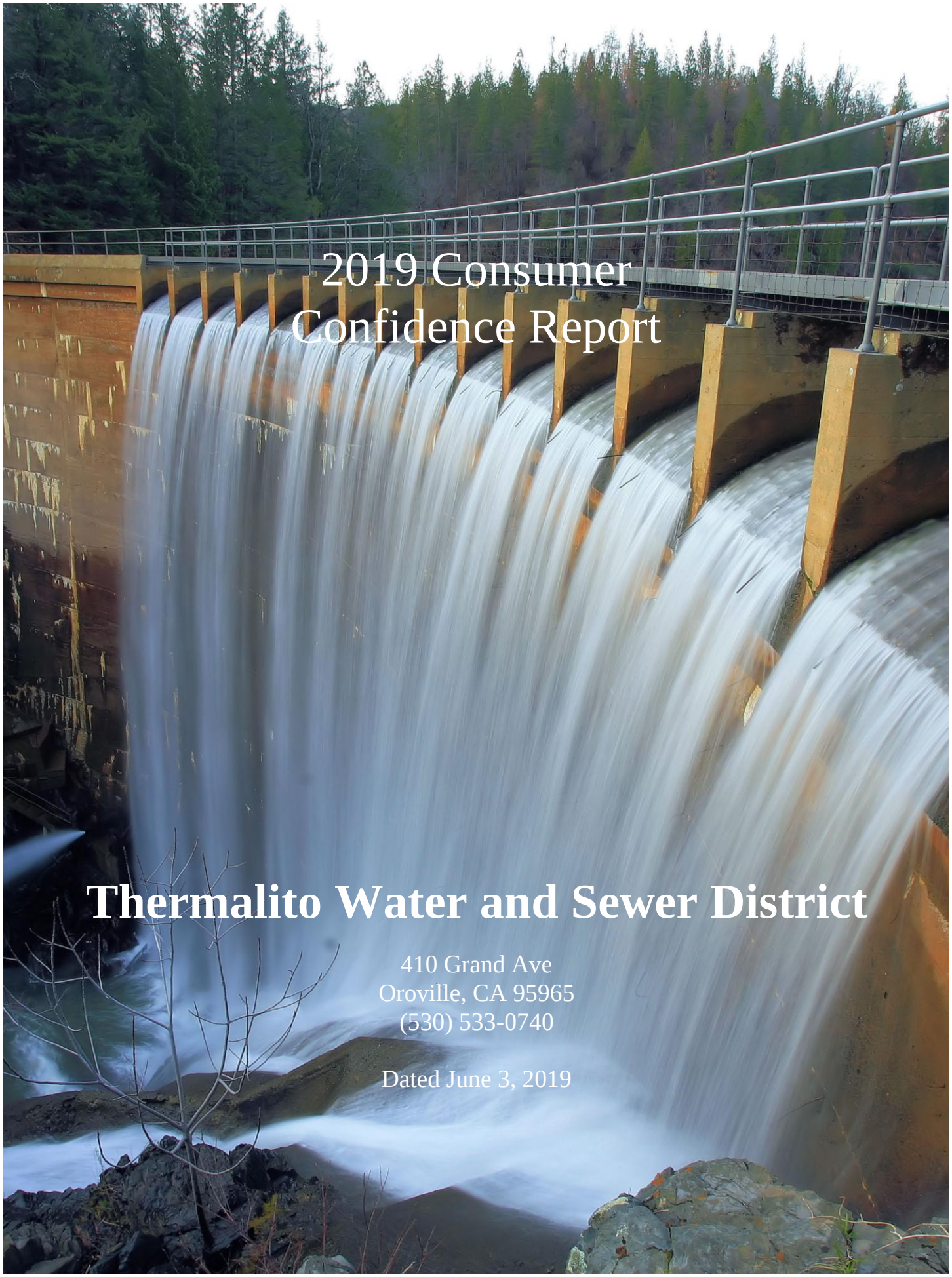

2019 Consumer Confidence Report

Thermalito Water and Sewer District

410 Grand Ave
Oroville, CA 95965
(530) 533-0740

Dated June 3, 2019

2019 Consumer Confidence Report

Water System Name: **Thermalito Water & Sewer District** Report Date: June 3, 2019

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, 2018 and may include earlier monitoring data.

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

Type of water source(s) in use: Surface Water & Groundwater (6 Total Sources)

Name & general location of source(s): Surface water from the Powers Canal (1), Well #2 Biggs Ave (2), Well #3 12th St. (3), Well #4 Table Mt. Blvd. (4), Well #5 at the Treatment Plant (5) and lastly TWSD has an interconnection with California Water Service of Oroville (6). The interconnection is for emergency uses only.

Drinking Water Source Assessment information: A Drinking Water Source Assessment was completed on February 19, 2003. Listed below is a summary of the vulnerability findings of the assessment:

Groundwater Wells:
Sewer Collection Systems (Wells #1,2 and 3)
Crops, Golf Courses, Water Supply Wells (Well #4)
Drinking Water Treatment Plants, Water Supply Wells (Well #5)

Surface Water:
Airports, concentrated aquatic animal production, historic gas stations, septic systems and wastewater treatment plants

A copy of the complete assessment may be viewed at:

DHS Valley District Office
415 Knollcrest Drive Suite 110
Redding, CA 96002
Attn: Reese Crenshaw, 530-224-4861

or

Thermalito Water and Sewer District
410 Grand Avenue
Oroville, CA 95965
Attn: Jayme Boucher, 530-533-0740

Time and place of regularly scheduled board meetings for public participation: Third Tuesday of every month at 2:00 pm. The public is welcome to attend.

For more information, contact: Christopher Heindell Phone: (530) 533-0740

Water Treatment System Description (Micro Membrane Filtration)

April 1st 2008, TWSD introduced the operation of a Micro Membrane water filtration system where by the District filters surface water without the addition of chemical additives. The raw water is pumped against a membrane facility that has a pore size (membrane openings) small enough to screen particles smaller than bacteria and viruses. This is very similar to the way bottled water is processed, but at a much greater volume. The pore sizes utilized by the Micro Membrane filtration process achieves a total of 4-log removal and inactivation credit through filtration and the use of disinfection for viruses. The State requires that a residual disinfectant be injected into the filtered water and allowed enough contact time to be able to provide adequate residual disinfection throughout the distribution system. TWSD injects sodium hypochlorite (chlorination) into the finished water stream to meet the disinfectant requirement. The sodium hypochlorite is created onsite and is chemically equivalent to 0.8% bleach. If you, your family or class at school would like to take a tour of the facility, please contact the District office to make an appointment.

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.

Variances and Exemptions: State Board permission 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 (µg/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)

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 Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board 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 State Board 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.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**			**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria (State Total Coliform Rule)	0			0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli* (State Total Coliform Rule)	0			0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	**Sample Date**	**Number of Schools Requesting Sampling**	**No. of samples collected**	**Range**	**90th percentile level detected**	**No. sites exceeding AL**	**MCL (AL)**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	2018	5	25	ND	1.3	None	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppb)	2018	5	25	ND	223	None	1300	300	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives

Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 3 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Source**	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Aluminum (ppm)	Treatment Plant Well #2	2015 2015	< 0.01 <0.01	< 0.01 <0.01	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	Treatment Plant Wells #2-5	2018 2018	< 2 2.5 Average	<2 <2-4	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	Treatment Plant Wells #2-5	2015 2015	<0.1 0.3 Average	< 0.1 0.1-0.4	2.0	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Hexavalent Chromium (ppb)	Treatment Plant Wells #2-5	2018 2018	<1.0 < 1.0	<1.0 <1.0	N/A	1	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate as N (ppm)	Treatment Plant Wells #2-5	2018 2018	<0.4 1.18 Average	<0.4 <0.4-1.1	10 (as N)	45 (as N)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Nitrite as N (ppm)	Treatment Plant Wells #2-5	2018 2018	< 0.4 0.425 Average	< 0.4 <0.4-0.5	1.0 (as N)	1.0 (as N)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate (ppb)	Treatment Plant Wells #2-5	2018 2018	< 4.0 <4.0	< 4.0 <4.0	6	6	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.
Chloride (ppm)	Treatment Plant Wells #2-5	2015 2015	11 6.5 Average	11 5.0-8.0	500	None	Runoff/leaching from natural deposits; seawater influence
Hardness (ppm)	Treatment Plant Wells #2-5	2015 2015	38.9 81.9 Average	38.9 53.8-128.0	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring
Sodium (ppm)	Treatment Plant Wells #2-5	2015 2015	7.0 19.0 Average	7.0 11.0-29.0	None	None	Salt present in the water and is generally naturally occurring
Sulfate (ppm)	Treatment Plant Wells #2-5	2015 2015	3.0 13.25 Average	3.0 5.0-25.0	500	None	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	Treatment Plant Wells #2-5	2015 2015	20.0 142.5 Average	20.0 90.0-210.0	1000	None	Runoff/leaching from natural deposits
Gross Alpha (pCi/L)	Treatment Plant Wells #2-5	2016 2016	0.19 Average 0.82 Average	0.19 0.46-1.55	15	0	Erosion of natural deposits
Radium 228 (pCi/L)	Treatment Plant Wells #2-5	2016 2016	0 0.059 Average	0 0-0.092	5	0.019	Erosion of natural deposits
1,2,3-Trichloropropane (ppb)	Treatment Plant Wells #2-5	2018 2018	<0.005 <0.005	<0.005 <0.005	0.005	0.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardouse waste sites; used as a cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasgin agent; byproduct during the production of other compounds and pesticides

TABLE 4 – DETECTION OF DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS AND DISINFECTION BYPRODUCT PRECURSORS

Chemical or Constituent (and reporting units)	**Source**	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
TTHMs [Total Trihalomethanes] (ppb)	57 Titanio Ct. 12th & Plumas 58 Hawes Way 1123 Sierra Ave.	1/2/18 4/3/18 7/2/18 10/2/18	30.0 Average 42.25 Average 34.50 Average 33.25 Average	6.0-60.0 23.0-68.0 26.0-45.0 0.0-61.0	80	None	Byproducts of drinking water disinfection
Haloacetic Acids (ppb)	57 Titanio Ct. 12th & Plumas 58 Hawes Way 1123 Sierra Ave.	1/2/18 4/3/18 7/2/18 10/2/18	35.0 Average 42.25 Average 42.50 Average 37.75 Average	13.0-58.0 29.0-55.0 37.0-47.0 0.00-55.0	60	None	Byproducts of drinking water disinfection
Chlorine (ppm)	Treatment Plant	1st Qtr. 2nd Qtr. 3rd Qtr. 4th Qtr.	0.78 Average 0.90 Average 0.96 Average 0.86 Average	0.59-0.93 0.59-1.12 0.59-1.18 0.59-1.18	4.0	4.0	Drinking water disinfectant added for treatment

***Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.*

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 6 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique [a] (Type of approved filtration technology used)	Microfiltration
Turbidity Performance Standards [b] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.1 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU anytime based on 15-minute monitoring intervals 3 – Not exceed 50 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	A single hourly reading was above the 0.10 requirements. Possible misread. All other samples were below the 0.10 NTU requirement
Highest single turbidity measurement during the year	0.20 NTU
Number of violations of any surface water treatment requirements	None

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

** Any violation of a TT is marked with an asterisk. Additional information regarding the violation is provided below.*

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).

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) 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 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. Thermalito Water and Sewer 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.

Thermalito Water and Sewer District's Treatment Plant (535 Table Mtn. Blvd.)