

WATER CONSERVATION PROGRAM

The City of Modesto thanks its water customers for doing their part to help combat the increasing demand for water. Our water flow reports indicate a decrease in consumption over the past several years. Since 2003, water consumption by City of Modesto water customers has reduced almost 20% and is at or around 1997 levels. Modesto is not experiencing a critical water shortage like much of the State; however, it is still vitally important to conserve water year round as it is a precious resource.

In March of 2003, the Modesto City Council adopted Stage One Water Restrictions of the City's Drought Contingency Plan. This plan was developed to address water capacity issues, including implementing measures to reduce water consumption through the water restrictions and the year-round watering schedule. Stage One Water Restrictions include:

- Outdoor water use is prohibited on Mondays.
- Outdoor water use is prohibited daily between the hours of noon and 7 p.m.
- Addresses ending in odd-numbers are only allowed to water on Wednesday, Friday and Sunday.
- Addresses ending in even-numbers are only allowed to water on Tuesday, Thursday and Saturday.

Year-round watering schedule for City of Modesto customers.

For more information, or to report water waste call **209.342.4580**

ODD NUMBERED ADDRESSES END IN 1, 3, 5, 7, 9
EVEN NUMBERED ADDRESSES END IN 0, 2, 4, 6, 8

	SUN	MON	TUES	WED	THURS	FRI	SAT
IF YOUR ADDRESS IS...	ODD	DO NOT WATER	EVEN	ODD	EVEN	ODD	EVEN
MIDNIGHT TO NOON	WATER	DO NOT WATER	WATER	WATER	WATER	WATER	WATER
NOON - 7:00 PM	DO NOT WATER						
7:00 PM - MIDNIGHT	WATER	DO NOT WATER	WATER	WATER	WATER	WATER	WATER

- Car washing is subject to the above-cited limitation with the use of a positive shut-off nozzle.
- Hosing of concrete areas, building exteriors, etc. may only be done with a City-issued permit and a positive shut-off nozzle.
- Water leaks, once identified, must be repaired within 24 hours.
- Restaurants are encouraged to serve water only upon request.
- New landscaping (residential and commercial) must comply with existing landscape ordinances.
- All new single-family residences must have a water meter installed.

Water conservation is more important than ever to maintain our quality of life in the valley. Using only the proper amount of water and avoiding peak usage times has many benefits for the community such as:

- Preventing the waste of a precious resource that we all depend upon daily.
- Improving the pressures in the distribution system so customers and fire departments have enough water when they need it.
- Saving money by reducing the electricity demands necessary to pump the water to your home and business.
- Reducing unnecessary wear on equipment, which reduces maintenance costs.

CONTACT US

FIELD SERVICES - WATER
209.342.2246

REPORT WATER WASTE
209.342.4580

WATER QUALITY
209.342.2246

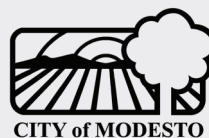
UTILITY BILLING
209.577.5395

WEB SITE:
www.modestogov.com/pwd
click on Utilities, then click on the Water Services Division.

MAILING ADDRESS
City of Modesto
Water Division
PO Box 642
Modesto, CA 95353

GET INVOLVED
You are always welcome to participate in City Council meetings and voice your concerns about drinking water. The Modesto City Council meets the 1st, 2nd and 4th Tuesday of each month at 5:30 p.m. (unless otherwise posted) in the basement of Tenth Street Place, located at 1010 Tenth Street.

COMCATE
www.modestogov.com/comcate
An easy way to send your questions, complaints and compliments directly to the City staff person who can help you.



CITY OF MODESTO 2009 ANNUAL DRINKING WATER QUALITY REPORT FOR PUBLIC WATER SYSTEM 5010023

The City of Modesto's water is safe and healthy to drink for most people. People with special health concerns can learn more about important health information on page 1.

This report is being mailed to you as a requirement of the federal Safe Drinking Water Act and covers the data for the calendar year from January 1, 2009 to December 31, 2009.

This report contains important information about your drinking water. If the report is not available in your native language, we encourage you to identify someone who understands it and can translate for you.

Este informe contiene información importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para información en español, llame por favor al (209) 342-2246.

WHAT IS THIS REPORT ABOUT?

The City of Modesto supplies you with clean, reliable water and we are extremely pleased to have provided you with water that met or surpassed U.S. Environmental Protection Agency standards for safety.

The City works diligently to comply with emerging environmental issues and drinking water regulations to meet the needs of our region. This is an important document about your drinking water and we hope you find it to be helpful.

IS MY WATER SAFE TO DRINK?

Yes! In order to ensure your tap water is safe to drink, the California Department of Public Health (CDPH) and the federal Environmental Protection Agency set regulations which limit the amount of certain contaminants in water provided by public water systems. The City of Modesto's Water Operations Division treats water according to the CDPH regulations. Regulations within the CDPH Food and Drug Branch also established limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of these 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 EPA's Safe Drinking Water Hotline at 1.800.426.4791.

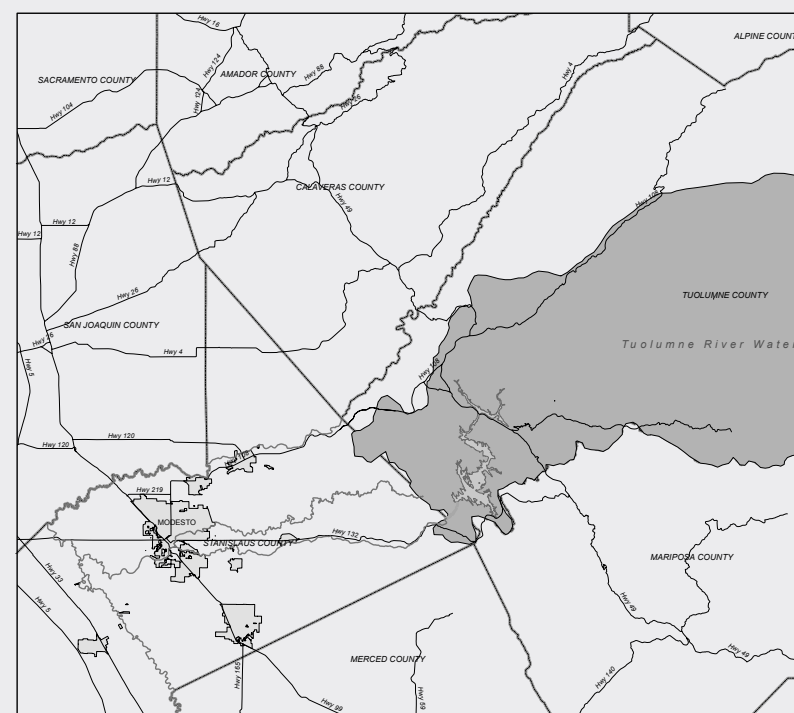
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer who are undergoing chemotherapy or those who have undergone organ transplants; people with HIV/AIDS or other immune system disorders; some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. 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.

HOW DO I GET MY DRINKING WATER?

The City of Modesto supplies drinking water to residents in Modesto, Empire, Salida, Waterford, Hickman, Grayson, Del Rio, parts of Ceres and Turlock, and county areas adjacent to the City's system. About 250,000 residents receive their drinking water from the City system and are billed by either a rate structure or by water meter.

For many years, the City's water customers received all of their water from 113 wells. The wells pump drinking water from the Modesto Basin, which is an unconfined alluvial aquifer common in the Central Valley of California. To continue to deliver clean, dependable water to its customers, the City partnered with the Modesto Irrigation District in the early 1990s to construct a surface water treatment plant. A third partner, the Del Este Water Company, was purchased by the City in 1995. The surface water treatment plant is located on 30-acres at the Modesto Reservoir and treats surface water from the Tuolumne River. This treated water is distributed to City water customers at an average of 30 million gallons per day (mgd). Average daily water consumption has exceeded 74 mgd, peak demand days have been as high as 133 mgd, and peak hourly demands have reached 187 mgd.

Water quality regulations require that all surface water be treated to meet strict drinking water standards for pollutants and pathogens. The plant's state-of-the-art treatment process ensures that the water supply meets or exceeds all state and federal drinking water standards now and in the future. There are seven steps in the surface water treatment process:



Three storage tanks and associated booster pumping stations are needed to assist in meeting peak demands in the north, west and southeast portions of the City of Modesto water system. The tanks will range in size from approximately 4-million to 6-million gallons.

These new tanks are intended to be filled during off-peak demand periods by the MID transmission system. This is not possible now unless the majority of the MID connections (or diversion) points are equipped with pressure regulating and/or flow control valves, so that pressure and/or flow can be controlled from the MID system into the City system.

In order to complete the upgrades, additional transmission mains are needed to connect the proposed storage tanks to the existing MID transmission mains for filling. More distribution pipelines are also needed to move water from these new tanks throughout the City's system.

In the end, the downstream improvements will include a total of 14-miles of pipeline, 34 connection (or diversion) point modifications and 3 storage tanks/booster pump stations.

SURFACE WATER SUPPLY PROJECT

Additional water is needed in the South Modesto area and a lot of the existing groundwater supply in South Modesto cannot be used due to water quality issues. Developing new wells in this area has been difficult. The City of Modesto is looking at options, such as a Surface Water Treatment Plant, which would be a long-term, reliable source of water. Treated surface water would be delivered to the participating communities via a system of pipelines and the construction of a "terminal facility" at the end of the proposed pipeline.

EXTENDING WATER MAINS

The City of Modesto Public Works Department was notified earlier this year that State Route 132 (Yosemite Avenue) would be repaved beginning in June 2010. Water Division staff recognized an opportunity to repair and upgrade aging water system infrastructure along the Yosemite Avenue corridor that would be difficult to accomplish after the paving was complete. Specifically, the need to replace the 50-year old water line from Dry Creek to Phoenix Avenue before

the new paving project starts. Crews coordinated with Caltrans and other contractors to obtain the required permits and to begin work. Upgrades will be complete prior to paving.

WATER SYSTEM REHABILITATION

Pipes, valves and services in older areas in the water system are upgraded and replaced to prevent leaks and property damage, to improve water quality and improve water delivery pressures. Recent projects included Western Avenue in Waterford; Tuolumne Boulevard in west Modesto; and the Airport Neighborhood. Planned projects include: the East Coolidge neighborhood and East Orangeburg from Sunrise to Coffee.

NEW WELLS

Contaminated wells are replaced and new wells are drilled for growth and to improve system pressure and supply. A new well is scheduled for construction in 2010 at Mildred Perkins Park. Property purchasing discussions are underway for new well locations in Waterford, Hickman, the Village One area in Modesto, the Tivoli Development in Modesto, and in Del Rio. A new well in each of these locations will greatly assist in optimal water pressure in homes and will also allow adequate flow on high demand summer days which ensures fire protection if needed.

WATER METER PROGRAM

In September 2004, State Assembly Bill 2572 became law, requiring the installation of water meters on all water connections built before 1992, and mandating that all metered customers be billed based on the actual volume of water used. Volume-based billing for customers with meters installed at their residence must begin in 2010 and meters must be installed on all residences by 2025.

Most of Modesto was built prior to 1992; the year mandatory installation of water meters on new construction began. As a result, most of the city's residential water customers did not have water meters. In 2004, the City developed a plan to install water meters on all water connections; the work began in 2006, and by the year 2025, more than 76,000 water meters will be operating.

The City is installing an Automated Meter Reading (A.M.R.) system which allows a meter reader to electronically gather data simply by driving past (usually within 300 feet) of the meters on the route. This allows for a much faster collection of meter data. The system also detects leaks, so readings and billings are more accurate and service repairs are more efficient. To date, the City of Modesto Water Division has installed more than 44,000 water meters and upgraded more than 42,500 meters with A.M.R. technology. Some regions of the water system, such as Grayson and Del Rio, have been fully metered for several years and are billed by their metered water consumption. Salida and some areas of Northwest Modesto have been metered since November 2008 and billing by consumption has begun in those metered areas as well.

Once a water meter is installed, the meter measures how much water is used. The meter is read once a month, and a bill is produced based on the difference between the current month's and the previous month's usage. Studies by the California Public Utilities Commission have shown that communities with metered water systems use 7-20 percent less water than non-metered areas. In addition, city services are more cost effective and operate more efficiently with an automated water metering system in place. By metering water use and billing customers accordingly, we can begin working together to conserve water, which is our most precious natural resource.

For more information on where meters have already been installed and the planned future installations, please visit www.modestogov.com/pwd/utilities/water/meters/installation_map.asp or call (209) 342-2246.

WATER SYSTEM IMPROVEMENTS

The City of Modesto plans and implements projects to improve the quality of life, protect the quality of our water supply and to ensure a continued reliable water supply for the present and future. Some of the ways the City is accomplishing this includes:

MID SURFACE WATER PLANT EXPANSION

Since 1995, the Modesto Regional Water Treatment Plant (MRWTP) has provided approximately 30 million gallons per day (mgd) of treated surface water to the City of Modesto water system. Together, the City and the Modesto Irrigation District (MID) have been working on the expansion of the MRWTP from its existing average annual daily basis of 30 mgd to 60 mgd.

The MRWTP currently treats water from the Modesto Reservoir and conveys it to the City's service area to combine with groundwater sources to meet the City's water supply needs. The MRWTP began operation in 1995, significantly reducing the City's reliance on groundwater pumping and also eliminating the groundwater overdraft condition. The Phase Two Expansion project is needed to provide existing customers with a continued reliable water source and keep pace with the City's projected growth.

The MRWTP Phase Two Expansion project will double the current capacity on an average daily basis. The project also includes upgrades to the current plant's disinfection facilities and the Terminal Reservoir pumping capacity. The plant is 95% complete and should be ready to be placed into service by 2011.

DOWNSTREAM IMPROVEMENTS

In addition to the expansion project at the MRWTP, the City of Modesto has determined that its existing water system needs additional improvements to fully integrate the expanded MRWTP with the City's distribution system. These downstream improvements primarily consist of additional storage reservoirs, transmission mains, and pressure regulating valves to control the flow of water between the MID-owned transmission facilities and the City system.

1. Water from Modesto Reservoir flows by gravity into the water treatment plant where ozone is added for the first round of disinfection.
2. Two additives (liquid alum and polymers) are mixed rapidly into the disinfected water to attract suspended particles in the water and cause them to come together into a substance known as floc.
3. The water then flows into sedimentation basins to allow the floc to settle at the bottom before the water goes to the filters.
4. Next, the water moves through a filter of anthracite coal and gravel where the floc is removed.
5. Chlorine is added as the final disinfection.
6. Next, lime and carbon dioxide are added to make the water less corrosive and more compatible with the groundwater it is about to be mixed with.
7. Treated water is then moved into water storage reservoirs, pumped into the distribution system and delivered to the City's customers.

The treated drinking water travels more than 20 miles from the plant to Modesto and into two large tanks where it is pumped out as needed into what are called transmission lines. These transmission lines are spread out through Modesto and feed into smaller water mains that go to the different neighborhoods. The mains feed into service lines that take the drinking water directly to homes and you get to drink it, cook with it, bathe with it, etc.



WHAT'S IN MY DRINKING WATER?

The sources of City of Modesto drinking water (both tap water and bottled water) include rivers, streams, reservoirs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and some radioactive materials, and substances resulting from the presence of animals or from human activity. Contaminants that may be present in the source water include:

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production or mining activities.

SPECIAL NOTIFICATIONS FOR THE MODESTO WATER SYSTEM

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. The U.S. Environmental Protection Agency 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.

How to Read the Tables

The table below lists contaminants which: 1) have associated primary Maximum Contaminant Levels (MCLs) that are regulated and 2) were detected by the City of Modesto's Water Services Division. Contaminants were detected below, at or above the California Department of Public Health's Detection Limits for Purposes of Reporting (DLR) during the 2009 calendar year. *The presence of these contaminants in the drinking water does not necessarily indicate that the water poses a health risk.* More information about contaminants and potential health risks can be obtained by calling the U.S. Environmental Protection Agency (EPA) at (800) 426-4791 or visiting the agency's Web site at www.epa.gov/safewater/facts.html. California action levels are available on the Department of Public Health Web site at www.cdph.ca.gov.

Table 1 lists all regulated contaminants with Primary MCLs that the City of Modesto's Water Services Division detected in the drinking water below, at or above the state DLR.

Table 2 lists regulated contaminants with Secondary MCLs that were detected at or above the state DLR.

Table 3 lists disinfection residuals and disinfection by-products that were detected in the treated water.

Definitions of Terms

AL (action level): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

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 feasible using the best available treatment technology. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

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 allow for a margin of safety.

MRDL (maximum residual disinfectant level): 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.

MRDLG (maximum residual disinfectant level goal): 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 contamination.

TT (treatment technique): a required process intended to reduce the level of a contaminant in drinking water.

Abbreviations

CDPH: California Department of Public Health

DLR: detection limit for reporting

mg/L: number of milligrams in one liter of water

n/a: not applicable

NTU: nephelometric turbidity units

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

ppb: parts per billion

ppm: parts per million

ppt: parts per trillion

TT: treatment technique

µS/cm: micro-siemens/cm

<: less than

>: greater than

TABLE 1 - DETECTED REGULATED CONTAMINANTS WITH MCL'S

INORGANIC CONSTITUENTS

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	AVERAGE	RANGE	YEAR SAMPLED	VIOLATION	TYPICAL SOURCE OF CONTAMINANTS
Arsenic	ppb	10	0.004	2	6.5	n/a	2008	NO	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride	ppm	2	1	0.1	0.13	n/a	2008	NO	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate	ppm	45	45	2	8.1	4.5-11.7	2009	NO	Erosion of natural deposits; runoff/leaching from fertilizer use, septic tanks and sewage

RADIOACTIVE CONSTITUENTS

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	AVERAGE	RANGE	YEAR SAMPLED	VIOLATION	TYPICAL SOURCE OF CONTAMINANTS
Gross Alpha	pCi/L	15	n/a	3	2.9	0.7-4.1	2005	NO	Erosion of natural deposits
Uranium	pCi/L	20	0.43	1	2.6	0.7-3.4	2005	NO	Erosion of natural deposits

AT THE TAP CONTAMINANTS - LEAD AND COPPER RULE

CONTAMINANT	UNITS	ACTION LIMIT	PHG (MCLG)	CDPH DLR	NUMBER OF SAMPLES	90TH PERCENTILE CONCENTRATION	YEAR SAMPLED	# SAMPLES > ACTION LIMIT	TYPICAL SOURCE OF CONTAMINANTS
Copper	ppm	1.3	0.17	0.05	9	0.025	2008	0	Erosion of natural deposits; internal corrosion of household plumbing systems; leaching of wood preservatives
Lead	ppb	15	2	5	9	0	2008	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TABLE 2 - DETECTED REGULATED CONTAMINANTS WITH SECONDARY MCL'S

INORGANIC CONTAMINANTS

CONTAMINANT	UNITS	STANDARDS	PHG (MCLG)	CDPH DLR	AVERAGE	RANGE	YEAR SAMPLED	VIOLATION	TYPICAL SOURCE OF CONTAMINANTS
Chloride	ppm	250	n/a	n/a	13	n/a	2008	NO	Runoff and leaching from natural deposits; seawater influence
Specific Conductance	µS/cm	1600	n/a	n/a	267	260-270	2008	NO	Substances that form ions when in water; seawater influence
Sulfate	ppm	250	n/a	n/a	6.4	n/a	2008	NO	Runoff/leaching from natural deposits; industrial waste
Total Dissolved Solids	ppm	500	n/a	n/a	200	n/a	2008	NO	Runoff/leaching from natural deposits

ADDITIONAL INORGANIC CONSTITUENTS

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	AVERAGE	RANGE	YEAR SAMPLED	VIOLATION	TYPICAL SOURCE OF CONTAMINANTS
Hardness (as CaCO3)	ppm	n/a	n/a	n/a	8.8	N/A	2008	NO	n/a
pH	UNITS	n/a	n/a	n/a	8.2	N/A	2008	NO	n/a
Sodium	ppm	n/a	n/a	n/a	24	N/A	2008	NO	n/a

TABLE 3 - DETECTED DISINFECTION RESIDUAL

DISINFECTION RESIDUAL

CONTAMINANT	UNITS	MCL MRDL	MCLG MRDLG	CDPH DLR	AVERAGE	RANGE	YEAR SAMPLED	VIOLATION	TYPICAL SOURCE OF CONTAMINANTS
Chlorine	mg/L	4.0	4.0	n/a	0.72	0.67-0.89	2009	NO	Drinking water disinfectant added for treatment