



Annual **WATER**
QUALITY
REPORT

Reporting Year 2011



Presented By _____
City of Paso Robles

PWS ID#: 4010007

Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets and exceeds all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to providing high-quality drinking water emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

Community Participation

We welcome your comments, questions, and concerns regarding your drinking water. We encourage you to directly contact the city Utilities Department at (805) 237-3861, or you can voice your concerns at the City of Paso Robles city council meetings during the public comment portion. The meetings are held on the first and third Tuesdays of each month at 7:30 p.m. at the City Hall/Library Complex, 1000 Spring Street.

To view a copy of this report or get more information regarding the City of Paso Robles Water Division, visit us at www.pasowater.com.

Where Does My Water Come From?

The City of Paso Robles currently relies on groundwater as its only source of water. In 2011, we pumped more than 2 billion gallons of water. This total was 20 percent less than in 2008 due to an exemplary community-wide conservation effort in response to summer-time water shortages. Twelve wells pump from the deeper portion of the Paso Robles Groundwater Basin. We also have seven wells located near the Salinas River that pump from the river underflow. Water that is not immediately used in the system fills water storage tanks with approximately 12 million gallons of capacity. These tanks provide for system emergencies, fire fighting, and maintaining system pressure.

Substances That Could Be in 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) 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. 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 water poses a health risk.

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 can 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, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Save Money and Protect the Environment by Turning Down Your Water Softener

Did you know the salt you use in your water softener is discharged to the Salinas River in the city's treated wastewater? That's because the wastewater treatment process does not remove salt. Over 6 tons of salt go into the river each day. Even before Lake Nacimiento water becomes available, there are steps you can take to save money and reduce the amount of salt discharged to the environment. How? Simply adjust your softener to a lower hardness setting. Although the total hardness of the city's water averages about 20-25 grains/gallon, many people are satisfied with the quality of water produced with a water softener setting in the range of 10-15 grains/gallon. Try this easy fix and cut the amount of salt you buy each month by up to half.

Water Conservation-Dry Year in 2012 Prompts Level 2 Watering Restrictions

To prevent water shortages this summer, please cut back on outdoor watering and water only on the three assigned days for your area. To help you reduce your water use, the city provides rebates for toilet replacements and converting turf to drought tolerant landscaping. For information, call (805) 227-7250 or visit www.pasowater.com.

Outdoor Water Conservation Tips:

- Water during the early morning, when winds and temperatures are lowest.
- Limit spray irrigation run times to 12 minutes on assigned days (this is a guideline and may be adjusted depending on your site).
- Adjust sprinkler heads to minimize spray onto sidewalks and driveways.
- When brown spots occur in your lawn, check first for coverage problems before increasing run times.
- Water brown spots by hand instead of increasing run times.
- Regularly inspect irrigation equipment in operation and repair drip-line leaks and broken sprinkler heads.
- Trim plants that prevent spray from reaching its target.
- Use a higher setting to mow lawns. Longer lawns need 30 percent less water.
- Aerate your lawn to increase air and water transfer to the root zone.

For more information, visit pasowater.com.

Fact or Fiction

Tap water is cheaper than soda pop. *(Fact: You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.)*

Methods for the treatment and filtration of drinking water were developed only recently. *(Fiction: Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle. And, Hippocrates, known as the father of medicine, directed people in Greece to boil and strain water before drinking it.)*

A typical shower with a non-low-flow showerhead uses more water than a bath. *(Fiction: A typical shower uses less water than a bath.)*

Water freezes at 32 degrees Fahrenheit. *(Fiction: You can actually chill very pure water past its freezing point (at standard pressure) without it ever becoming solid.)*

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Kelly Dunham at (805) 237-3866 or email us at water@prcity.com.

Lake Nacimiento Water – Improved Water Quality and Water Supply Reliability

New water rates are now in place that will enable the much-needed Lake Nacimiento water treatment plant project to move forward, providing improved water quality and water supply reliability. Currently, the city's wells cannot produce enough water to meet daily summer demands without implementation of periodic watering restrictions. This is because regional groundwater level declines have reduced the production capacity of the city's basin wells to approximately 60 percent of their original capacity. The Nacimiento water supply will be significantly lower in hardness and total dissolved solids, so the use of water softeners can be greatly reduced or eliminated.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Lead in Home Plumbing

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. We are 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 www.epa.gov/safewater/lead.

Source Water Assessment

The City of Paso Robles has completed an assessment of our drinking water sources. The assessment found our sources potentially vulnerable to agricultural drainage, auto repair shops, gas stations, home manufacturing, low-density septic systems, sewer collection systems, metal plating/finishing/fabricating, animal operations, agriculture and irrigation wells, and plastic and synthetics producers. This simply means that these activities take place in the general vicinity of some wells. It does not mean there are any problems resulting from these activities, only that a potential vulnerability exists. If you would like to view the completed assessments or have questions regarding them, please contact Kelly Dunham at the Paso Robles Water Division, at (805) 237-3866.

Sampling Results

During the year, the city takes hundreds of water samples to confirm that water quality meets or exceeds standards established by federal and state health agencies. The table below shows those substances that were detected in the water. The state of California requires frequent (weekly) samples for bacteria. Other substances are required to be monitored less than once per year if the concentration of the substance does not change frequently in the water supply. In these cases, the most recent sample data is included in the table. Concentration values below are flow-weighted averages.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic ¹ (ppb)	2011	10	0.004	1.88	ND-7.7	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2011	1	2	0.05216	ND-0.26	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2011	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.3	1.1-1.4	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2011	2.0	1	0.36	0.3-0.515	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2011	15	(0)	3.74	ND-9.8	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2011	60	NA	6.4	3.0-9.8	No	By-product of drinking water disinfection
Nitrate [as nitrate] ² (ppm)	2011	45	45	6.82	1.25-29	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite (as N) (ppb)	2011	10000	NA	1558.05	ND-3600	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium ³ (ppb)	2011	50	30	7.39	ND-26.25	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	23.35	18.4-28.3	No	By-product of drinking water disinfection
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2011	No more than 1 positive monthly sample	(0)	1	NA	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2011	TT	NA	0.031	0.007-0.031	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	100	NA	No	Soil runoff
Uranium (pCi/L)	2011	20	0.43	2.66	ND-5.3	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2010	1.3	0.3	0.29	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2011	500	NS	66.08	35–190	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2011	15	NS	0.41	ND–10	No	Naturally occurring organic materials
Iron (ppb)	2011	300	NS	4.4	ND–200	No	Leaching from natural deposits; industrial wastes
Odor–Threshold (Units)	2011	3	NS	1.08	1–2	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2011	1,600	NS	871.87	420–1,100	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2011	500	NS	124.76	26–240	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2011	1,000	NS	567.04	390–720	No	Runoff/leaching from natural deposits
Turbidity ⁵ (NTU)	2011	5	NS	0.07	ND–1.22	No	Soil runoff

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (HC03) (ppm)	2011	310.35	250–420
Boron (ppb)	2011	173.94	ND–780
Calcium (ppm)	2011	88.96	24–130
Lab pH (Units)	2011	7.7	7.2–8.3
Lead (ppb)	2009	0.9	ND–5.4
Magnesium (ppm)	2011	35.69	16–46
Potassium (ppm)	2011	1.72	1.1–3.1
Sodium (ppm)	2011	56.28	33–150
Total Alkalinity (as CaC03) (ppm)	2011	256.38	210–340
Total Hardness (as CaC03) (grains/gal)	2011	22.02	7.6–32.7
Vanadium (ppb)	2011	11.94	3.4–53

¹ TP effluent sampled at Wells 9 and 11.

² Butterfield Well 12 on quarterly monitoring.

³ Thunderbird 10 and 13 blended for compliance.

⁴ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Ronconi TP only.

⁵ Lab turbidity.

Definitions

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

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

grains/gal (grains per gallon): Grains of compound per gallon of water.

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 (SMCLs) 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 are set by the U.S. EPA.

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 contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

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

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 EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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