City of

South Pasadena

Public Works Division

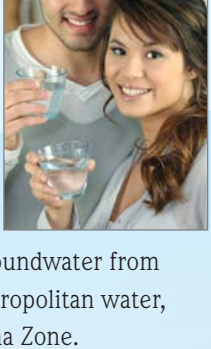
2012 Water Quality Report

Your 2012 Water Quality Report

Introduction

The City of South Pasadena (City) is committed to keeping you informed about the quality of your drinking water. This report is provided to you annually. It includes information describing where your drinking water comes from, the constituents found in your drinking water and how the water quality compares with the regulatory standards.

Where Does My Drinking Water Come From?

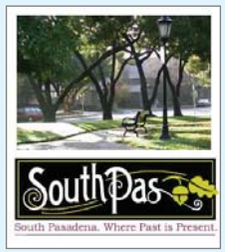


The water supply for the City comes from three sources: (1) groundwater pumped from wells in the Main San Gabriel Groundwater Basin, (2) surface water imported by Metropolitan Water District of Southern California (Metropolitan) from the Colorado River and from Northern California, and (3) groundwater from the City of Pasadena, which includes Metropolitan water, that is supplied to only the City's Pasadena Zone. Metropolitan filters imported surface water and adds chloramines, a combination of chlorine and ammonia, as a residual disinfectant. The City adds chlorine without ammonia, called free chlorine, to groundwater pumped from wells. A residual amount of free chlorine and chloramines in the distribution system helps prevent microorganisms from growing in the pipes.

We Go to Great Lengths to Ensure the Continued Quality of Your Water

What Is in My Drinking Water?

Your drinking water is tested by certified professional water system operators and certified laboratories to ensure its safety. The City routinely tests drinking water from its wells and distribution system pipes for bacterial and chemical contaminants while Metropolitan is responsible for testing its treated surface water purchased by the City. The City of Pasadena is responsible for testing its groundwater purchased by the City for only the Pasadena Zone. The chart in this report shows the average and range of concentrations of the constituents tested in your drinking water during year 2012 or from the most recent tests.



The California Department of Public Health (CDPH) allows the City to monitor for some contaminants less than once per year because the concentrations of these contaminants in groundwater do not change frequently. Some of our data, although representative, are more than one year old.

The chart lists all the contaminants **detected** in your drinking water that have federal and state drinking water standards. Detected unregulated contaminants of interest are also included.

We are proud to report that during 2012, the drinking water provided by the City to your home met or surpassed all federal and state drinking water standards. We remain dedicated to providing you with a reliable supply of high quality drinking water.

Questions about your water? Contact us for answers.

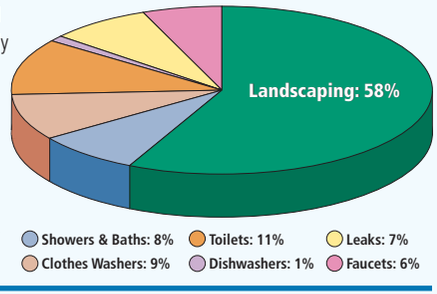
For more information or questions regarding this report, please contact Mr. Marcelino Aguilar at (626) 403-7376.

Regularly scheduled meetings of the City of South Pasadena City Council are held on the first and third Wednesday of each month at 7:30 p.m. at 1424 Mission Street, South Pasadena, California 91030. The meetings provide an opportunity for public participation in decisions that may affect the quality of your drinking water.

How Residential Water is Used in South Pasadena

Outdoor watering of lawns and gardens makes up approximately 60% of home water use. By cutting your outdoor watering by 1 or 2 days a week, you can dramatically reduce your overall water use.

Visit www.bewaterwise.com for water saving tips and ideas for your home and business.



What Contaminants May Be Present in the Sources of My Drinking Water?

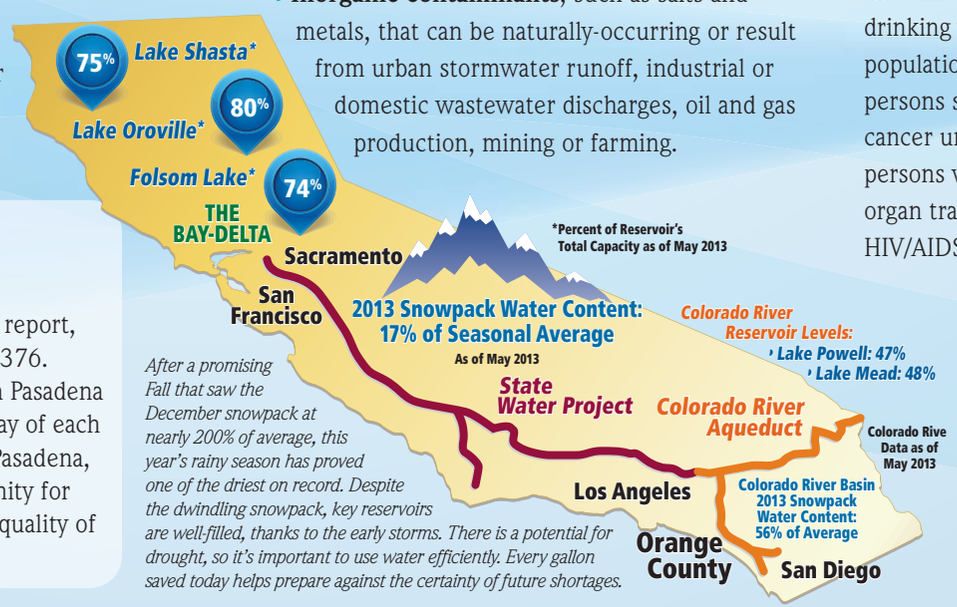
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick 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 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.
- **Radioactive contaminants**, that can be naturally-occurring or be the result of oil and gas production and mining activities.

- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application and septic systems.

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. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's (USEPA's) Safe Drinking Water Hotline (1-800-426-4791).



After a promising Fall that saw the December snowpack at nearly 200% of average, this year's rainy season has proved one of the driest on record. Despite the dwindling snowpack, key reservoirs are well-filled, thanks to the early storms. There is a potential for drought, so it's important to use water efficiently. Every gallon saved today helps prepare against the certainty of future shortages.

Are There Any Precautions the Public Should Consider?

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).

Important Information Everyone Should Know About the Quality of Our Drinking Water

Drinking Water Fluoridation

Metropolitan joined a majority of the nation's public water suppliers by adding fluoride to drinking water in order to prevent tooth decay. The average fluoride level in Metropolitan's treated water is 0.8 milligram per liter (mg/L). The City does not add additional fluoride to the local water because fluoride occurs naturally in groundwater. As shown on the water quality chart, the average fluoride concentration in the City's groundwater is 0.78 mg/L, while the average fluoride concentration in the City of Pasadena's groundwater that is supplied to only the Pasadena Zone is 0.9 mg/L.

About Lead in Tap Water

If present, elevated levels of lead can cause serious 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. The City 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 USEPA Safe Drinking Water Hotline or at http://water.epa.gov/drink/info/lead/index.cfm.

Nitrate in Tap Water

Although nitrate in your drinking water never exceeds the MCL of 45 mg/L, nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

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 for advice from your health care provider.

Source Water Assessments

Groundwater Assessment

In accordance with the federal Safe Drinking Water Act, an assessment of the drinking water sources for the City was completed in December 2002. The assessment concluded that the City's groundwater wells are considered most vulnerable to the following activities or facilities associated with contaminants detected in the water supply: dry cleaners, gasoline stations, automobile repair shops, high density housing and medical/dental office/clinics. In addition, the groundwater wells are considered most vulnerable to the following facility not associated with contaminants detected in the water supply: leaking underground storage tanks. A copy of the complete assessment is available at the City of South Pasadena Water Department at 1414 Mission Street, South Pasadena, California 91030. You may request a summary of the assessment to be sent to you by contacting Mr. Marcelino Aguilar at (626) 403-7376.

Imported (Metropolitan) Water Assessment

Every five years, Metropolitan is required by CDPH to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters. In 2012, Metropolitan submitted to CDPH its updated Watershed Sanitary Surveys for the Colorado River and State Water Project, which include suggestions for how to better protect these source waters. Both source waters are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires, and other watershed-related factors that could affect water quality.

USEPA also requires Metropolitan to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. Metropolitan completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed.

A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling Metropolitan at (213) 217-6850.

Want Additional Information?

There's a wealth of information on the internet about Drinking Water Quality and water issues in general. A good place to begin your research is the **City of South Pasadena** public works website: **www.cityofsouthpasadena.us/publicworks/water.html**.

In addition to extensive information about your local water and the support and services we offer, you'll find links for many other local, statewide, and national resources.

What are Water Quality Standards?

In order to ensure that tap water is safe to drink, the USEPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water standards established by USEPA and CDPH set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

- **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.
- **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.
- **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- **Primary Drinking Water Standard:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- **Regulatory Action Level (AL):** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Notification Level (NL):** An advisory level which, if exceeded, requires the drinking water system to notify the governing body of the local agency in which users of the drinking water reside (i.e. city council, board of directors, and county board of supervisors).

How are Contaminants Measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- parts per million (ppm) or milligrams per liter (mg/L); *(3 drops in 42 gallons – a large bathtub)*
- parts per billion (ppb) or micrograms per liter (μg/L); *(1 drop in 14,000 gallons – an average swimming pool)*
- parts per trillion (ppt) or nanograms per liter (ng/L); *(1 drop in 14,000,000 gallons – an average lake)*

What is a Water Quality Goal?

In addition to mandatory water quality standards, USEPA and CDPH have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes three types of water quality goals:

- **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 USEPA.
- **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.
- **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.

City of South Pasadena 2012 Water Quality Table

Constituents and Measurement Units	MCL or [MRDL]	PHG (MCLG) or (MRDLG)	DLR	SOUTH PASADENA GROUNDWATER Result[a]	Range	Most Recent Test	PASADENA GROUNDWATER (Pasadena Zone Only) Result[a]	Range	Most Recent Test	METROPOLITAN IMPORTED WATER Result[a]	Range	Most Recent Test	Typical Origins
Primary Drinking Water Standards – Health-Related Standards													
Filter Effluent Turbidity (NTU) [b]	TT = 1 NTU TT = 95% of samples ≤0.3 NTU	NA	NA	NR			NR			0.04 100%	– –	Continuous Testing	Soil runoff
Microbiological													
Total Coliforms	5%	(0)	NA	0%	0%	Weekly	MCL Compliance Determined from Testing in the South Pasadena Distribution System			MCL Compliance Determined from Testing in the South Pasadena Distribution System			Naturally present in the environment
Disinfectant and Disinfection Byproducts[c]													
Total Trihalomethanes (TTHM) (µg/L)	80	NA	0.5	2.9	ND – 5.8	Quarterly	MCL Compliance Determined from Testing in the South Pasadena Distribution System			MCL Compliance Determined from Testing in the South Pasadena Distribution System			By-product of drinking water disinfection
Haloacetic acids (five) (HAA5) (µg/L)	60	NA	1	0.8	ND	Quarterly							By-product of drinking water disinfection
Chloramines Residual as Cl2 (mg/L) [d]	[4]	[4]	NA	1.3	0.8 – 1.85	Weekly							Drinking water disinfectant
Chlorine Residual as Cl2 (mg/L)	[4]	[4]	NA	0.46	0.12 – 0.58	Weekly							Drinking water disinfectant
Organic Chemicals													
Carbon Tetrachloride (ng/L) [e]	500	100	0.5	ND	ND	Weekly	650	ND – 4,010	2012	ND	ND	2012	Discharge from industrial activities
cis-1,2-Dichloroethylene (µg/L)	6	100	0.5	ND	ND	Weekly	ND	ND – 0.68	2012	ND	ND	2012	Discharge from industrial activities
Tetrachloroethylene (PCE) (µg/L)	5	0.06	0.5	2.6	1.9 – 3.2	Weekly	0.55	ND – 2.5	2012	ND	ND	2012	Discharge from industrial activities
Trichloroethylene (TCE) (µg/L)	5	1.7	0.5	1.3	0.92 – 1.9	Weekly	0.93	ND – 3.6	2012	ND	ND	2012	Discharge from industrial activities
Inorganic Chemicals													
Aluminum (mg/L)	1	0.6	0.05	ND	ND	2012	ND	ND	2012	0.12	ND – 0.21	2012	Used for filtration treatment of surface water
Barium (mg/L)	1	2	0.1	ND	ND	2012	ND	ND – 0.12	2012	ND	ND	2012	Erosion of natural deposits
Copper (mg/L) [f]	AL = 1.3	0.3	0.05	0.38	0 / 31 Samples Exceeded the AL	2012	MCL Compliance Determined from Testing in the South Pasadena Distribution System				NR		Corrosion of household plumbing system
Fluoride (mg/L) Naturally-occurring	2	1	0.1	0.78	0.43 – 1	2012	0.9	0.4 – 1.5	2012		NR		Erosion of natural deposits
Fluoride (mg/L) Treatment-related	Optimal Range 0.7 – 1.3 mg/L				NR			NR		0.8	0.6 – 1.1	2012	Water additive for dental health
Lead (µg/L) [f]	AL = 15	0.2	5	ND	0 / 31 Samples Exceeded the AL	2012	MCL Compliance Determined from Testing in the South Pasadena Distribution System				NR		Corrosion of household plumbing system
Nitrate as NO_3 (mg/L) [e]	45	45	2	24	20 – 27	Weekly	30	12 – 56	2012	ND	ND	2012	Leaching from fertilizer use
Perchlorate (µg/L) [e]	6	6	4	ND	ND	2012	16	ND – 52	2012	ND	ND	2012	Discharge from industrial activities
Radioactivity													
Gross Alpha Particle Activity (pCi/L)	15	(0)	3	<3	ND – 7.5	2007	2.7	ND – 7.4	2012	ND	ND – 3	2011	Erosion of natural deposits
Gross Beta Particle Activity (pCi/L)	50	(0)	4		NR		4	3 – 5	2011	4	ND – 6	2011	Decay of natural and man-made deposits
Uranium (pCi/L)	20	0.43	1	2.2	ND – 6.5	2011	4.6	4.2 – 5.6	2012	2	1 – 2	2011	Erosion of natural deposits
Secondary Drinking Water Standards – Aesthetic Standards, Not Health-Related													
Aluminum (µg/L) [g]	200	600	50	ND	ND	2012	ND	ND	2012	120	ND – 210	2012	Used for treatment of Metropolitan surface water
Color (Units)	15	NA	NA	ND	ND	2012	2.5	ND – 8	2012	1	1	2012	Naturally occurring organic materials
Chloride (mg/L)	500	NA	NA	32	17 – 57	2012	41	20 – 66	2012	90	85 – 95	2012	Runoff/leaching from natural deposits
Odor-Threshold (Units)	3	NA	1	<1	0 – 1	2012	2	1 – 2	2012	2	2	2012	Naturally occurring organic materials
Specific Conductance (µmho/cm)	1,600	NA	NA	510	360 – 760	2012	618	411 – 822	2012	740	350 – 930	2012	Substances that form ions in water
Sulfate (mg/L)	500	NA	0.5	50	31 – 78	2012	69	45 – 94	2012	140	130 – 160	2012	Runoff/leaching from natural deposits
Total Dissolved Solids (mg/L)	1,000	NA	NA	340	250 – 500	2012	340	162 – 470	2012	470	450 – 490	2012	Runoff/leaching from natural deposits
Turbidity (NTU)	5	NA	NA	0.11	ND – 0.15	2012	0.2	0.05 – 0.56	2012	ND	ND	2012	Soil runoff
Zinc (mg/L)	5	NA	0.05	<0.05	ND – 0.068	2012	ND	ND	2012	ND	ND	2012	Runoff/leaching from natural deposits
Unregulated Chemicals													
Alkalinity (mg/L)	NA	NA	NA	140	100 – 200	2012	165	82 – 204	2012	95	61 – 120	2012	Runoff/leaching from natural deposits
Boron (mg/L)	NL = 1	NA	100	<0.1	ND – 0.14	2003	0.13	0.1 – 0.15	2012	0.13	0.13	2012	Runoff/leaching from natural deposits
Calcium (mg/L)	NA	NA	NA	48	29 – 82	2012	64	36 – 85	2012	46	45 – 48	2012	Runoff/leaching from natural deposits
Chlorate (µg/L)	NL = 800	NA	20		NR		241	86 – 425	2012	66	ND – 80	2012	Industrial waste discharge, By-product of drinking water chlorination
Chromium VI (µg/L)	NA	0.02	1	3.3	2.1 – 4	2001	4.1	2.2 – 6.8	2012	ND	ND	2012	Erosion of natural deposits, Industrial waste discharge
Magnesium (mg/L)	NA	NA	NA	15	9.2 – 26	2012	20	8 – 31	2012	20	19 – 20	2012	Runoff/leaching from natural deposits
pH (pH units)	NA	NA	NA	8	7.9 – 8	2012	7.5	7.2 – 8	2012	8.1	7.9 – 8.6	2012	Runoff/leaching from natural deposits
Potassium (mg/L)	NA	NA	NA	2.1	1.7 – 2.8	2012	2.7	2.5 – 2.9	2012	3.9	3.7 – 4.1	2012	Runoff/leaching from natural deposits
1,2,3-Trichloropropane (ng/L) [h]	NL = 5	0.7	5	21	16 – 27	Quarterly		NR			NR		Discharge from industrial or agricultural activities
Other Constituents of Interest													
Hardness as $CaCO_3$ (mg/L)	NA	NA	NA	180	110 – 310	2012	243	132 – 340	2012	200	80 – 270	2012	Runoff/leaching from natural deposits
Sodium (mg/L)	NA	NA	NA	39	33 – 42	2012	31	29 – 35	2012	78	74 – 82	2012	Runoff/leaching from natural deposits

NOTES:

mg/L = parts per million or milligrams per liter; **AL** = Action Level; **ND** = Not Detected at DLR; **µg/L** = parts per billion or micrograms per liter; **DLR** = Detection Limit for Purposes of Reporting; **NA** = No Applicable Limit; **ng/L** = parts per trillion or nanograms per liter; **MCL** = Maximum Contaminant Level; **NL** = Notification Level; **pCi/L** = picoCuries per liter; **MCLG** = Maximum Contaminant Level Goal; **NR** = Not Required to be Sampled; **µmho/cm** = micromhos per centimeter; **MRDL** = Maximum Residual Disinfectant Level; **PHG** = Public Health Goal; **NTU** = Nephelometric Turbidity Units; **MRDLG** = Maximum Residual Disinfectant Level Goal

(a) The results reported in the table are average concentrations of the constituents detected in your drinking water during year 2012 or from the most recent tests, except for filter effluent turbidity, TTHM, HAA5, chlorine residual, chloramine residual, lead, and copper which are described below.

(b) Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms that are difficult to detect, such as the parasites *Giardia* and *Cryptosporidium*. Consistently low turbidity in Metropolitan's filtered water indicates complete removal of any harmful microorganisms that may be present. The table gives the highest single turbidity measurement that was recorded and the lowest monthly percentage of samples meeting the requirements of the surface water treatment technique.

(c) Samples were collected in the City of South Pasadena distribution system. The running annual averages and the range of the individual results for chlorine residuals, chloramines residuals, TTHM and HAA5 are reported.

(d) For Pasadena Zone only.

(e) The City of Pasadena well water is either blended with Metropolitan water or treated at the Monk Hill Treatment System before being delivered to the customers. Once blended or treated, the chemical was well below the MCL.

(f) Thirty-one lead and copper samples were collected in September 2012 at residential taps. The 90th percentile concentration is reported in the table. Out of 31 residences sampled, copper was detected at or above the DLR in 21 samples but none exceeded the Action Level. Lead was not detected in any sample at or above the DLR.

(g) Aluminum also has a secondary MCL of 200 µg/L.

(h) 1,2,3-Trichloropropane (1,2,3-TCP) was detected at two wells at concentrations above the Notification Level (NL). The NL is an advisory level which, if exceeded, requires the drinking water system to notify the governing body of the local agency in which users of the drinking water reside. Water from these wells was blended with water that had no 1,2,3-TCP detection. The highest concentration of 1,2,3-TCP detected in the distribution system was five times the NL. CDPH recommends source removal if 1,2,3-TCP is detected over 100 times the NL.

For more information or questions, please contact Mr. Marcelino Aguilar, City of South Pasadena, 825 Mission Street, South Pasadena, California 91030, telephone: (626) 403-7376

ABOUT SOUTH PASADENA PUBLIC WORKS

We Provide Far More than Just Water!

The Public Works Department is responsible for streets, public buildings, water, sewer systems, street lighting and park maintenance.

For a name change, or to start water service, call the Finance Department at (626) 403-7259.

Because California's main water sources have been severly impacted by record dry conditions in recent years, we encourage everyone to become more conservation conscious. Visit **bewaterwise.com** to learn more about water savings, and the South Pasadena Public Works website for additional information about smart gardening and drought tolerant plants: **cityofsouthpasadena.us/publicworks/water.html**

This report contains important information about your drinking water.
Translate it, or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua potable. Para mas información ó traducción, favor de contactar a Mr. Marcelino Aguilar at 626-403-7376.

這份報告包含有關閣下飲用水水質的重要資訊，
請找他人爲你翻譯及解釋清楚 .
如果您有任何問題 ，或是須要更多資訊 ，請聯絡

City of South Pasadena
Public Works Department
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South Pasadena, California 91030

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