



MID-PENINSULA  
WATER DISTRICT

# 2012

## Consumer Confidence ..... REPORT



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. Tradúzcalo o hable con alguien que lo entienda bien.  
此份水質報告，內有重要資訊。請找他人為你翻譯和解說清楚。

## ABOUT MPWD

### MID-PENINSULA WATER DISTRICT

#### *A Green Business*

3 Dairy Lane  
Belmont, CA 94002  
650-591-8941  
www.midpeninsulawater.org

### BOARD OF DIRECTORS

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The Board of Directors meets every fourth Thursday of the month at 6:30 p.m. at 3 Dairy Lane, Belmont.

### OFFICERS

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*General Manager*

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*District Secretary*

Joan L. Cassman  
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*District Engineer*

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*District Treasurer*



## Dear Valued Customer,



Since 1929, the Mid-Peninsula Water District has provided safe, quality water to its customers. **We are pleased to announce that in 2012 we have once again met and surpassed all federal and state water quality regulations.** You will find detailed information in the following 2012 Consumer Confidence Report that shows what substances were detected in your drinking water, where it comes from, and other important water quality information.

Providing reliable round-the-clock water service to your home or business requires that we maintain a team of water quality experts, employ the most up-to-date technologies and continually improve our water infrastructure. Many of MPWD's underground water distribution pipelines are more than 50 years old and need to be replaced. In the past, MPWD has spent an average of \$1 million annually to replace aging structures such as water storage tanks and pipelines and to maintain the overall system. In 2013/2014, we plan to invest close to \$2 million in infrastructure improvements to maintain our legacy of providing a quality, reliable water source to you and your family.



Please review the information in this year's Consumer Confidence Report and contact us with any questions or concerns you have. Your satisfaction is our top priority.

Sincerely,

– Tammy Rudock  
*General Manager, MPWD*



## 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, which 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**, which can be naturally occurring or be the result of oil and gas production and mining activities.

### CONTACT US!

650-591-8941

[www.midpeninsulawater.org](http://www.midpeninsulawater.org)

## Water Quality: Contaminants & Regulations

SFPUC's **Water Quality Division (WQD)** regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure that the water delivered to you meets or exceeds federal and state drinking water standards. In 2012, WQD staff conducted more than 60,640 drinking water tests in the transmission and distribution systems. This monitoring effort is in addition to the extensive treatment process control monitoring performed by our certified and knowledgeable treatment plant staff and online instruments.

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. Such substances are called contaminants. 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.



In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and California Department of Public Health (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. More information about contaminants and potential health effects can be obtained by calling the **USEPA's Safe Drinking Water Hotline 800-426-4791**.

## Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, 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 guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the **Safe Drinking Water Hotline 800-426-4791** or at [www.epa.gov/safewater](http://www.epa.gov/safewater).

## Key Water Quality Terms *Following are definitions of key terms referring to standards and goals of water quality noted on the adjacent data table.*

**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 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 USEPA.

**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 (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

**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 Standard (PDWS):** MCLs and

MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Regulatory Action Level:** 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.

**Turbidity:** A water clarity indicator that measures cloudiness of the water, and is also used to indicate the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

**Cryptosporidium** is a parasitic microbe found in most surface water. The SFPUC regularly tests for this waterborne pathogen, and found it at very low levels in source water and treated water in 2012. However, current test methods approved by the USEPA do not distinguish between dead organisms and those capable of causing disease. Ingestion of *Cryptosporidium* may produce symptoms of nausea, abdominal cramps, diarrhea, and associated headaches. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

## Emerging Contaminant Monitoring

Unregulated microorganisms and synthetic or naturally-occurring chemicals that are not commonly monitored by the water utilities are termed contaminants of emerging concern (CEC). More than 100,000 chemicals are registered in the US. New chemicals are registered and new microorganisms are identified everyday. Some of these contaminants can be detected at extremely low levels in the environment by ever-improving laboratory methods. The health significance of these trace contaminants is typically unknown. The WQD has been proactive in addressing CEC through participation in national research projects and conducting independent monitoring of our source waters. To help focus the resources, WQD developed its own approach to organize and prioritize work on the CECs in drinking water and enhance public engagement in CEC issues. Evaluation is conducted every three years and reviewed by the San Francisco Department of Public Health, SFPUC Citizens' Advisory Committee and the Commission. By virtue of its pristine drinking water sources, the SFPUC water has not been vulnerable to many CECs that may concern other water suppliers; e.g., pesticides and pharmaceutical products. Periodic review will allow WQD to adjust priorities based on new information and conditions; e.g., new information on the health significance, occurrence and treatment of CECs. See the link below for SFPUC's CEC approach <http://sfwater.org/modules/showdocument.aspx?documentid=1691>.

**DID YOU KNOW?** Dripping faucets can waste about 2,000 gallons of water each year. Leaky toilets can waste as much as 200 gallons each day.

# Consumer Confidence Report

In 2012, WQD staff conducted more than 60,640 drinking water tests in the transmission and distribution systems. This monitoring effort is in addition to the extensive treatment process control monitoring performed by our certified and knowledgeable treatment plant staff and online instruments.

## DETECTED CONTAMINANTS

<b>TURBIDITY</b>	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.2 - 0.5 <sup>(2)</sup>	[2.8] <sup>(3)</sup>	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 <sup>(4)</sup>	N/A	-	[0.26]	Soil runoff
	-	Min 95% of samples ≤ 0.3 NTU <sup>(4)</sup>	N/A	100%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 <sup>(4)</sup>	N/A	-	[0.17]	Soil runoff
	-	Min 95% of samples ≤ 0.3 NTU <sup>(4)</sup>	N/A	100%	-	Soil runoff
<b>DISINFECTION BYPRODUCTS AND PRECURSOR (SFPUC Regional System) - for information only</b>						
Total Trihalomethanes	ppb	80	N/A	18 - 63	[46] <sup>(5)</sup>	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	8 - 45	[36] <sup>(5)</sup>	Byproduct of drinking water disinfection
Total Organic Carbon <sup>(6)</sup>	ppm	TT	N/A	2.3 - 3.7	2.7	Various natural and man-made sources
<b>DISINFECTION BYPRODUCTS AND PRECURSOR</b>						
Total Trihalomethanes	ppb	80	N/A	29.4 - 53.3	[43.6] <sup>(5)</sup>	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	23 - 44	[36.7] <sup>(5)</sup>	Byproduct of drinking water disinfection
Total Organic Carbon <sup>(6)</sup>	ppm	N/A	N/A	2.3 - 3.7	2.7	Various natural and man-made sources
<b>MICROBIOLOGICAL</b>						
Total Coliform <sup>(7)</sup>	-	NoP ≤ 5.0% of monthly samples	(0)	-	[2]	Naturally present in the environment
Giardia lamblia	cyst/L	TT	(0)	<0.01 - 0.06	<0.01	Naturally present in the environment
<b>INORGANICS</b>						
Fluoride (source water) <sup>(8)</sup>	ppm	2.0	1	ND - 0.8	0.3 <sup>(9)</sup>	Erosion of natural deposits; water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	.7 - 2.7	[2.1] <sup>(10)</sup>	Drinking water disinfectant added for treatment

### KEY

< / ≤ = less than / less than or equal to

AL = Action Level

Max = Maximum

Min = Minimum

N/A = Not Available

ND = Non-detect

NL = Notification Level

NoP = Number of Coliform-Positive Sample

NTU = Nephelometric Turbidity Unit

ORL = Other Regulatory Level

ppb = part per billion

ppm = part per million

µS/cm = microSiemens / centimeter

## DETECTED CONTAMINANTS

### CONSTITUENTS WITH SECONDARY STANDARDS

	Unit	SMCL	PHG	Range	Average	Typical Sources of Contaminant
Aluminum <sup>(11)</sup>	ppb	200	600	ND - 90	ND	Erosion of natural deposits; some water treatment residue
Chloride	ppm	500	N/A	2 - 20	12.3	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 7	<5	Naturally occurring organic materials
Specific Conductance	µS/cm	1600	N/A	31 - 344	202	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 - 40	20	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 195	108	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 0.2	0.1	Soil runoff

### LEAD AND COPPER

	Unit	AL	PHG	Range	90th Percentile	Typical Sources in Drinking Water
Copper	ppb	1300	300	<1.0 - 82.2 <sup>(12)</sup>	60.1	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	<1.0 - 8.1 <sup>(13)</sup>	3.4	Internal corrosion of household water plumbing systems

### OTHER WATER QUALITY PARAMETERS

	Unit	ORL	Range	Average
Alkalinity (as CaCO <sub>3</sub> )	ppm	N/A	10 - 111	61
Bromide	ppb	N/A	<10 - 24	<10
Calcium (as Ca)	ppm	N/A	3 - 28	15
Chlorate <sup>(14)</sup>	ppb	(800) NL	53 - 399	221
Hardness (as CaCO <sub>3</sub> )	ppm	N/A	8 - 114	62
Magnesium	ppm	N/A	0.2 - 10.8	6.1
pH	-	N/A	6.7 - 9.7	8.5
Silica	ppm	N/A	3.2 - 5.3	4.1
Sodium	ppm	N/A	3 - 25	15.7

### KEY

< / ≤	= less than / less than or equal to
AL	= Action Level
Max	= Maximum
Min	= Minimum
N/A	= Not Available
ND	= Non-detect
NL	= Notification Level
NoP	= Number of Coliform-Positive Sample
NTU	= Nephelometric Turbidity Unit
ORL	= Other Regulatory Level
ppb	= part per billion
ppm	= part per million
µS/cm	= microSiemens / centimeter

### FOOTNOTES:

- (2) Turbidity is measured every four hours. These are monthly average turbidity values.
- (3) The highest turbidity of the unfiltered water in 2012 was 2.9 NTU but the water was not served to customers. The brief turbidity spike indicated in the table was not observed upstream in San Joaquin Pipelines.
- (4) There is no turbidity MCL for filtered water. The limits are based on the TT requirements for filtration systems in the State drinking water regulations.
- (5) This is the highest quarterly running annual average value.
- (6) Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SWWTP only.
- (7) The Mid-Peninsula Water District had 2 positive samples in 2012.
- (8) The SFPUC adds fluoride to an optimum level of 1.0 ppm to help prevent dental caries in consumers. The CDPH specifies the fluoride levels in the treated water to be maintained within a range of 0.8 ppm - 1.5 ppm. In 2012, the range and average of the fluoride levels were 0.4 ppm - 1.3 ppm and 1.0 ppm, respectively.
- (9) The fluoride levels in the Hetch Hetchy and SWWTP raw water were ND and 0.2 ppm, respectively. The HTWTP raw water had elevated fluoride levels of 0.6 ppm - 0.8 ppm attributed to the transfer of fluoridated Hetch Hetchy & SWWTP treated water into the Lower Crystal Springs Reservoir, which supplies water via the San Andreas Reservoir to the HTWTP for treatment.
- (10) This is the highest quarterly running annual average value.
- (11) Aluminum also has a primary MCL of 1000 ppb.
- (12) The most recent Lead and Copper Rule monitoring was in 2012. 0 of 33 site samples collected at consumer taps had copper concentrations above the Action Level.
- (13) The most recent Lead and Copper Rule monitoring was in 2012. 0 of 33 site samples collected at consumer taps had lead concentrations above the Action Level.
- (14) The detected chlorate in the treated water is a degradation byproduct of sodium hypochlorite used by the SFPUC for water disinfection.

**Note:** Additional water quality data may be obtained by calling the Mid-Peninsula Water District phone number at (650) 591-8941.



## Drinking Water Sources and Treatment

The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs, and wells. For the San Francisco Regional Water System, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine Sierra water source meets all federal and state criteria for watershed protection. The SFPUC also maintains stringent disinfection treatment practices, extensive bacteriological-quality monitoring, and high operational standards. As a result, the CDPH and USEPA have granted the Hetch Hetchy water source a filtration exemption.



The Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the Alameda Watershed – within the greater 128,424-acre Southern Alameda Creek Watershed and spanning more than 35,000 acres in Alameda and Santa Clara counties – are collected in the Calaveras Reservoir and San Antonio Reservoir for subsequent treatment at the Sunol Valley Water Treatment Plant, where filtration and disinfection are provided.

Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs Reservoir, San Andreas Reservoir, and Pilarcitos Reservoir and treated at the Harry Tracy Water Treatment Plant. Similar treatment processes to Sunol plant are used for treating this local source.

In 2012, the Hetch Hetchy Watershed provided the majority of the total water supply, with the remainder contributed by the two local watersheds.

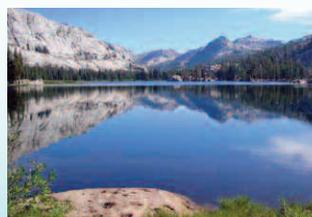
### Reducing Lead from Plumbing Fixtures

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.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 levels 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 800-426-4791, or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).**

### Protecting Our Watersheds

The SFPUC actively protects the water resources entrusted to its care. It's annual update of Hetch Hetchy Watershed Sanitary Survey evaluates the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities with partner agencies (such as the National Park Service and US Forest Service). The SFPUC also conducts sanitary surveys every five years to detect and track sanitary concerns for the Bay Area watersheds and the approved standby water sources in Early Intake Watershed, which includes Cherry Lake and Lake Eleanor. The latest 5-year surveys were



completed in 2011 for the period of 2006-2010. These surveys identified wildlife, stock, and human activities as potential contamination sources. **They are available for review at the CDPH San Francisco District office, 510-620-3474.**