

“Dedicated to Quality, Service, and Innovation”



2012

Annual Water Quality Report

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10575 Central Avenue • Post Office Box 71
Montclair, California 91763

www.mvwd.org



Welcome

Dear Valued Customer,

The mission of Monte Vista Water District (MVWD) is to provide high quality water service while ensuring fiscal responsibility, ethical conduct, and environmental stewardship. MVWD's top priority is to serve the highest quality water to our customers, and our dedicated staff works diligently to fulfill that commitment.

This Annual Water Quality Report is an important measurement of the quality of the water provided by MVWD. We are proud to report that last year, as in years past, your tap water met all federal and state drinking water health standards.

We hope you will take some time to read the report and learn about the efforts and challenges that are involved in providing high quality drinking water. Included are details about where your water comes from, what it contains, and how it compares to federal and state standards. We are committed to providing you with information because informed consumers are more likely to protect drinking water supplies and appreciate the value of clean drinking water for our communities.

For more information on your water supply sources, water quality, and water distribution system, we invite you to visit the “Your Water” section of our website, www.mvwd.org.

Sincerely,

MVWD Board of Directors

Sandra S. Rose, President
Tony Lopez, Vice President/Auditor
Philip L. Erwin, Director

G. Michael Milhiser, Director
Manny Martinez, Director

MVWD General Manager
Mark Kinsey

MVWD Water Sources

MVWD obtains its drinking water supply from the following sources:

- ◆ **Groundwater:** Over many years, water that falls on the ground travels through the soil, is naturally filtered, and collects in “aquifers” hundreds of feet below the earth’s surface. Groundwater is pumped from the ground through production wells, disinfected, and distributed to customers. In 2012, approximately 77 percent of MVWD’s water supply was produced from a series of aquifers known collectively as the Chino Groundwater Basin.
- ◆ **Imported Surface Water:** Water from rivers and streams in northern California is collected and transported through the California Aqueduct to southern California. MVWD’s imported water supply is treated at the Agua de Lejos Treatment Plant in the city of Upland prior to distribution to customers. In 2012, approximately 15 percent of MVWD’s water supply was imported from northern California.
- ◆ **City of Upland:** MVWD is a shareholder in the San Antonio Water Company and entitled to a portion of the company’s water supply. MVWD currently receives this entitlement through a connection to Upland’s water system. The source of Upland’s water supply originates from local mountain and canyon runoff, groundwater, and imported water. In 2012, approximately 8 percent of MVWD’s water supply was received from San Antonio Water Company through Upland’s water system.

For more information about MVWD’s water supply sources, visit www.mvwd.org and follow the “Your Water” link.

MVWD Water Treatment and Testing

State-of-the-art technologies are used to treat and test the water served to MVWD’s customers. To ensure proper disinfection, MVWD adds chlorine in the form of sodium hypochlorite, a chemical similar to household bleach, to the water supply produced by its groundwater wells. The chlorine kills harmful bacteria and viruses that might enter the system via a broken main or well contamination. Treated water from the Agua de Lejos Treatment Plant and the city of Upland distribution system is introduced directly into MVWD’s distribution system.

Groundwater produced by MVWD’s wells requires very minimal treatment prior to distribution. However, the groundwater basin from which MVWD draws water has areas of high concentrations of nitrates, a salt that at certain levels may pose a health risk to vulnerable populations (see below). One of MVWD’s newest wells is equipped with an ion exchange treatment facility that removes nitrates from the pumped groundwater. MVWD also operates three nitrate blending facilities that ensure nitrate levels in water entering the distribution system meets drinking water requirements.

MVWD safeguards the distribution system by actively monitoring for 146 contaminants. MVWD collects water samples from sixteen State Department of Public Health-approved locations evenly dispersed throughout our distribution system every week, as well as from each of the District’s active wells each month.

Your Drinking Water Sources

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

Source water assessments were conducted in 2002 and 2008 to determine the contamination vulnerabilities of MVWD’s active wells. The sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: high density housing and commercial complexes, parks and schools, graveyards, grazing, sewer collection systems, automobile body shops, and industrial sites. In addition, the sources are considered most vulnerable to these activities: gas stations, dry cleaners, mining operations, hospitals, parking and transportation, above ground storage tanks, and permitted waste discharges. You may request a summary of the assessment by contacting the California Department of Public Health sanitary engineer for MVWD at (909) 383-5289 or MVWD at (909) 624-0035.

Stay Informed

MVWD encourages customers to stay informed by attending our regularly scheduled Board of Directors meetings, which are held on the 2nd and 4th Wednesdays of each month, 6:30 p.m., at MVWD’s offices located at 10575 Central Avenue, Montclair. Meeting agendas can be found on the MVWD website at www.mvwd.org. A time for public comment is included on each meeting’s agenda.

Questions?

If you have any questions regarding this report, please contact Henry Aceves, Water Systems Supervisor, at (909) 624-0035.

¿Necesita este informe traducido al español?

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para conseguir copias de este informe traducidas al español, llame al (909) 624-0035 o visite www.mvwd.org.



About Your Water

In 2012, MVWD collected more than 4,000 water samples that were analyzed for 146 different contaminants. Only contaminants that were detected are included in the tables below. If a contaminant is not listed, it was not detected. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Table 1 lists contaminants regulated by Primary Drinking Water Standards. These standards have been developed to monitor contaminants that have been determined to pose a risk to health (see Key Terms).

Table 2 lists contaminants regulated by Secondary Drinking Water Standards. Generally, these standards have been developed to address the aesthetic properties of drinking water. In addition to constituents regulated by secondary standards, we have included data regarding sodium and hardness, which may be of interest to consumers.

Table 3 contains data on contaminants that are not regulated. Unregulated contaminant monitoring helps USEPA and the California Department of Public Health to determine where certain contaminants occur and whether the contaminants need to be regulated.

Water Quality Data Tables

Table 1: Parameter	Units	Primary MCL [MRDL]	PHG (MCLG) [MRDLG]	Range	Avg.	Major Sources in Drinking Water
INORGANIC & ORGANIC CHEMICALS, sampled in 2010 - 2012						
Aluminum	ppb	1000	600	ND - 110	18.34	Residue from water treatment process; erosion of natural deposits
Arsenic	ppb	10	0.004	ND - 4.7	2.59	Erosion of natural deposits; runoff from orchards; glass and electronics production waste
Barium	ppb	1000	2000	ND - 34	2.51	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Dibromochloropropane (DBCP)	ppt	200	1.7	ND - 110	8	Banned nematocide that still may be present in soils due to runoff/leaching
1,1-Dichloroethylene	ppb	6	10	ND - 0.52	0.03	Discharge from industrial chemical factories
Fluoride (naturally occurring)	ppm	2	1	ND - 0.27	0.17	Erosion of natural deposits; discharge from aluminum and fertilizer factories
Nitrate (as NO ₃)	ppm	45	45	1.3 - 39	18.65	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Perchlorate	ppb	6	6	ND - 4.5	0.26	Historic aerospace uses or industrial operations
DISINFECTION BY-PRODUCTS (DBP), sampled in year 2012						
Chlorine Residual	ppm	4	4	0.01 - 1.43	0.8	Drinking water disinfectant added for treatment
Control of DBP Precursors (TOC)	ppm	TT	N/A	1.7 - 2.4	2	Various natural and man-made sources
Haloacetic Acids	ppb	60	N/A	ND - 14	8.4	By-product of drinking water chlorination
Total Trihalomethanes	ppb	80	N/A	ND - 82	51.4	By-product of drinking water chlorination
RADIOLOGICALS, sampled in 2010 - 2012						
Gross Alpha	pCi/L	15	0	ND - 4.4	0.08	Erosion of natural deposits
Gross Beta	pCi/L	50	0	ND - 4	ND	Decay of natural and man made deposits
Uranium	pCi/L	20	0.43	ND - 1	0.15	Erosion of natural deposits
MICROBIOLOGICAL, sampled 2012						
Total Coliform Bacteria	% positive	Less than 5	0	ND - 2	0.25	Naturally present in the environment
LEAD & COPPER, measured at the consumer's tap in 2010						
Copper	ppm	AL = 1.3	0.3	30 samples, 0 sites above AL	90% 0.14	Internal corrosion of household plumbing, erosion of natural deposits, leaching from wood preservatives
Lead	ppb	AL = 15	0.2	30 samples, 1 site above AL	90% ND	Internal corrosion of household plumbing, erosion of natural deposits, discharges from industrial manufacturers

Table 2: Parameter	Units	Secondary MCL	Range	Avg.	Major Sources in Drinking Water
SECONDARY STANDARDS--Aesthetic Standards, plus sodium and hardness, sampled in 2010 - 2012					
Aluminum	ppb	200	ND - 110	18.34	Residue from from water treatment process; erosion of natural deposits
Chloride	ppm	500	6.2 - 52	22.9	Runoff/leaching from natural deposits; seawater influence
Foaming Agents (MBAS)	ppb	500	ND - 110	0.4	Municipal and industrial waste discharges
Hardness (CaCO ₃) (Total Hardness)	ppm	N/A	94 - 210	108.4	Leaching from natural deposits
Odor Threshold	TON	3	1 - 2	1.2	Naturally occurring organic materials
Sodium	ppm	N/A	22 - 53	36.14	Runoff/leaching from natural deposits; seawater influence
Specific Conductance	µS/cm	1600	300 - 510	409.1	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	19 - 46	32.54	Leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	210 - 330	265.5	Runoff/leaching from natural deposits
Turbidity	NTU	5	0.1 - 0.29	0.13	Soil runoff

Table 3: Parameter	Units	Notification Level	Range	Avg.	Major Sources in Drinking Water
UNREGULATED CHEMICALS, sampled in 2010 - 2012					
Boron	ppb	1000	ND - 108	15.3	Runoff/leaching from natural deposits; industrial wastes
Vanadium	ppb	50	0.59 - 15	9.06	Naturally occurring; industrial waste discharge

Key Terms

Below are terms to assist consumers in understanding 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.
- ◆ **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.
- ◆ **Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- ◆ **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.
- ◆ **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.

Acronyms

- ◆ **ppm:** Parts per million, equivalent to one second in 11.5 days.
- ◆ **ppb:** Parts per billion, equivalent to one second in 31.7 years.
- ◆ **ppt:** Parts per trillion, equivalent to one second in 317.1 centuries.
- ◆ **pCi/L:** Picocuries per liter, a measure of radioactivity.
- ◆ **TON:** Threshold odor number, a number indicating the greatest dilution of a water sample.
- ◆ **ND:** Monitored for but not detected.
- ◆ **NTU:** Nephelometric turbidity unit, the cloudiness in a water sample.
- ◆ **µS/cm:** Micro Siemens per Centimeter.

Public Health Information

Nitrate in drinking water at levels above 45 ppm 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 ppm 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 advice from your health care provider.

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. MVWD 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>.

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).