Moulton Niguel Water
Leading the Way in Service

It's better on tap.

Proudly serving the community since 1960.

2014 WATER QUALITY REPORT

MNWD 2014 Water Quality Report

It's Better on Tap.

Letter from the General Manager

Finely crafted in nature's best environments, we provide some of the nation's best in quality water directly to your in-home tap.

Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. This year's report covers calendar year 2014 drinking water quality testing and reporting.

Moulton Niguel Water District (MNWD) vigilantly safeguards its water supply, and as in years past, MNWD is pleased to report that the drinking water provided to your home meets or exceeds the standards required by state and federal regulatory agencies.

MNWD is committed to providing our customers with high quality water and excellent customer service, while offering you with some of the lowest rates in South Orange County.

Thirsty for more information? Visit **www.mnwd.com** for more information on nature's resource we are most proud of - our water. If you have any questions, please contact our Outreach Department at (949) 448-4020, or email us at **outreach@mnwd.com**.

Remember, the next time you thirst for a refreshing cool glass...it's better on tap!

Sincerely,

Joone Lopez

Joone Lopez
General Manager

The United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board, Division of Drinking Water (DDW) are the agencies responsible for establishing drinking water quality standards. The Metropolitan Water District of Southern California (MWD), which supplies treated imported water to MNWD tests for unregulated chemicals in our water supply. In some cases, MWD goes beyond what is required by testing for unregulated chemicals that may have known health risks but do not have drinking water standards. Unregulated chemical monitoring helps USEPA and DDW determine where certain chemicals may be present and whether new standards need to be established to protect public health.

Through drinking water quality testing programs carried out by MWD for treated imported water and MNWD for the distribution system, your drinking water is constantly monitored from source to tap for regulated and unregulated constituents.

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequency. Some data, though representative, is more than one year old.

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.

"هذا ألتقرير يحتوي على معلومآ ت مهّمة تتعلق بمياه ألشفة (أو ألشرب). ترجم ألتقرير , أو تكلم مع شخص يستطيع أن يفهم ألتقرير."

此份有关你的食水报告,内有重要资料和讯息,请找他人为你翻译及解释清楚。

Questions about your water? Contact us for answers.

For information or questions about this report, please call Megan Yoo Schneider at (949) 448-4020.

To reach MNWD Customer Service and for other information, please call (949) 831-2500 or visit **www.mnwd.com**.

A copy of this report is also available on our website: **www.mnwd.com/CCR**. For more information about the health effects of the listed contaminants in this report, call the USEPA Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

The MNWD Board of Directors generally meets the third Thursday of each month beginning at 6 p.m. at MNWD, 27500 La Paz Road, Laguna Niguel, CA 92677. More information is available at **www.mnwd.com**.

The Quality of Your Water is Our Primary Concern

Sources of Water Supply

MNWD relies on imported water from MWD, which sources its water supply from the Colorado River and the State Water Project, which draws water from the Sacramento-San Joaquin River Delta.

MWD provides drinking water to nearly 19 million people in parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino and Ventura counties, and delivers an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area.

Your water is treated at the Diemer Filtration Plant in Yorba Linda by MWD and delivered to the MNWD distribution system. MNWD's pipelines, pump stations, and reservoirs are utilized to deliver water to you when and where it is needed.

This winter's historically low snowpack and below average rainfaill increased the intensity of the state's water supply issues. Reduced water allocations continue to affect Southern California's water supply. MNWD continues to encourage water smart behaviors as a way of life.

Basic Information About Your Drinking Water

Drinking water, both tap and bottled, may reasonably be expected to contain trace amounts of some contaminants. The presence of trace contaminants does not indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline, (800) 426-4791, or visit **water.epa.gov**.

The sources of drinking water, both tap and bottled, include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it can dissolve 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, protozoa and bacteria that may come from wastewater 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 USEPA and DDW prescribe regulations that limit the amounts of certain contaminants in water provided by public water systems. California Department of Public Health and U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that provide similar protection for public health.

Information the EPA Would Like You to Know

Drinking Water Fluoridation

Fluoride has been added to drinking water supplies in the United States since 1945. Of the 50 largest cities in the United States, 43 fluoridate their drinking water. In December 2007, MWD joined a majority of the nation's public water suppliers in adding fluoride to drinking water in order to prevent tooth decay.

In line with recommendations from the DDW, as well as the U.S. Centers for Disease Control and Prevention, MWD adjusted the national fluoride level in imported treated water from the Colorado River and State Water Project to the optimal range for dental health of 0.7 to 1.3 parts per million. Fluoride levels in drinking water are limited under California State regulations at a maximum dosage of two (2) parts per million.

There are many places to go for additional information about the fluoridation of drinking water, including:

U.S. Centers for Disease Control and Prevention
(800) 232-4636 | www.cdc.gov/fluoridation/

State Water Resources Control Board, Division of Drinking Water
www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml

American Water Works Association
www.awwa.org

For more information about MWD's fluoridation program, please contact Edgar G. Dymally at (213) 217-5709 or at edymally@mwdh2o.com.

Immuno-Compromised People

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 or have HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These individuals should seek advice about drinking water from their health care providers.

Chloramines

All of MNWD's drinking water is imported from MWD and is disinfected by MWD with chloramines, which is a combination of chlorine and ammonia. In addition, MNWD maintains disinfection levels in stored water through the addition of chloramines, as needed. Chloramines are effective killers of bacteria and other microorganisms that may cause disease. Compared to chlorine alone, chloramines last longer in the distribution system, minimize byproduct formation, and have minimal odor.

Individuals who use kidney dialysis machines may want to take special precautions and consult their health care providers for the appropriate type of supplementary water treatment, if required. Customers who maintain fish ponds, tanks, or aquariums should also make necessary adjustments in water quality treatment, as these disinfectants may be toxic to fish. For further information, or if you have any questions about chloramines, please call MNWD at (949) 448-4020.

Cryptosporidium

Cryptosporidium is a microbial pathogen that originates from animal or human waste and is found in surface waters throughout the United States. When ingested, it can cause diarrhea, fever, and other gastrointestinal symptoms.

MWD tested source waters and treated surface waters for *Cryptosporidium* in 2014 and did not detect it. If detected, *Cryptosporidium* is eliminated by an effective treatment combination including sedimentation, filtration, and disinfection.

The USEPA and Federal Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminates are available from the USEPA Safe Drinking Water Hotline at (800) 426-4791 between 7 a.m. to 1 p.m. Pacific Time.

Water Quality Issues that Could Affect Your Health

Water Hardness

Levels of calcium and magnesium, which occur naturally in water, are the primary substances that determine whether water is hard or soft. Water from the Colorado River, one of MNWD's sources of water, contains fairly high levels of these minerals and is considered "hard." Water hardness does not negatively affect your health; however, hard water does require more soap than soft water and will leave mineral deposits on plumbing fixtures over time. In 2014, the hardness found in your water averaged 283 parts per million or 16.51 grains per gallon.

About Lead in Tap Water

MNWD meets all standards for lead in the USEPA Lead and Copper Rule. 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.

MNWD 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 two 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, (800) 426-4791, or at: **www.epa.gov/safewater/lead**.

WHAT CAN I DO?

TO HELP CONSERVE WATER SUPPLIES MNWD ENCOURAGES CUSTOMERS TO FOLLOW THESE BEST WATER MANAGEMENT PRACTICES:

DO

Replace your lawn with drought-tolerant landscaping in the fall

Check for and fix leaks, breaks or malfunctions

Ensure outdoor watering does not produce excessive water flow or runoff

DON'T

Wash down hard or paved surfaces

Wash your car at home; instead, use a commercial car wash

Request water at restaurants unless you're going to drink it

Metropolitan Water District of Southern California Imported Drinking Water Quality Results for 2014

Parameter	Unit of Measure	MCL	PHG (MCLG)	Average Imported MWD Treated Water	Range of Detections	MCL Violation?	Typical Sources in Drinking Water
Radiologicals							
Alpha Radiation	pCi/L	15	(0)	ND	ND – 4	No	Erosion of Natural Deposits
Beta Radiation	pCi/L	50	(0)	5	4 – 6	No	Decay of Natural and Man-Made Deposits
Uranium	pCi/L	20	0.43	3	2 – 3	No	Erosion of Natural Deposits
Inorganic Chemicals							
Aluminum	ppm	1	0.6	0.167	0.080 – 0.310	No	Treatment Process Residue, Natural Deposits
Arsenic	ppb	10	0.004	ND	ND	No	Erosion of Natural Deposits
Barium	ppb	1,000	2,000	112	112	No	Erosion of Natural Deposits
Fluoride (treatment-related)	ppm	Control Range 0.7-1.3 ppm		0.8	0.7 – 1.0	No	Water Additive for Dental Health
Hexavalent Chromium	ppb	10	0.02	ND	ND	No	Erosion of Natural Deposits; Industrial Discharge
Nitrate	ppm as N	10	10	ND	ND	No	Fertilizers, Septic Tanks
Nitrite	ppm as N	1	1	ND	ND	No	Fertilizers, Septic Tanks
Secondary Standards (to maintain aesthetic qualities such as taste, odor, and color)							
Aluminum	ppb	200*	600	167	80 – 310	No	Treatment Process Residue, Natural Deposits
Chloride	ppm	500*	n/a	90	87 – 92	No	Leaching from Natural Deposits; Seawater Influence
Odor	TON	3*	n/a	1	1	No	Naturally-Occurring Organic Substances
Manganese	ppb	50	n/a	ND	ND	No	Runoff or Leaching from Natural Deposits
Specific Conductance	µS/cm	1,600*	n/a	982	964 – 1,000	No	Ions in Water; Seawater Influence
Sulfate	ppm	500*	n/a	232	223 – 241	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids	ppm	1,000*	n/a	627	603 – 651	No	Runoff or Leaching from Natural Deposits
Turbidity	NTU	5*	n/a	ND	ND	No	Erosion of Natural Deposits
Unregulated Chemicals							
Boron	ppb	NL=1,000	n/a	100	100	n/a	Runoff or Leaching from Natural Deposits
Calcium	ppm	NR	n/a	72	70 – 74	n/a	Runoff or Leaching from Natural Deposits
Corrosivity (as Aggresiveness Index)	AI	NR	n/a	12.5	12.5	n/a	Elemental Balance in Water
Corrosivity (as Saturation Index)	SI	NR	n/a	0.64	0.58 – 0.69	n/a	Elemental Balance in Water
Magnesium	ppm	NR	n/a	26	25 – 27	n/a	Runoff or Leaching from Natural Deposits
pH	pH units	NR	n/a	8.1	8.1	n/a	Acidity, Hydrogen Ions
Potassium	ppm	NR	n/a	4.6	4.4 – 4.8	n/a	Runoff or Leaching from Natural Deposits
Sodium	ppm	NR	n/a	94	89 – 99	n/a	Runoff or Leaching from Natural Deposits
Total Alkalinity	ppm as $CaCO_3$	NR	n/a	124	123 – 125	n/a	Runoff or Leaching from Natural Deposits
Total Hardness	ppm as $CaCO_3$	NR	n/a	287	282 – 292	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon	ppm	TT	n/a	2.6	2.4 – 2.9	TT	Various Natural and Man-Made Sources
Vanadium, Total	ppb	NL=50	n/a	ND	ND	n/a	Runoff or Leaching from Natural Deposits

Your water has been tested for many more chemicals than are listed above, including metals (such as mercury), pesticides, and volatile organic compounds. Chemicals not detected in any water sources are not included in the table.

ppb: parts per billion; **ppm**: parts per million; **pC/L**: picoCuries per liter; **NTU**: nephelometric turbidity units; **ND**: not detected; **n/a**: not applicable; **NR**: not required to be tested; **<**: average is less than the detection limit for reporting purposes; **MCL**: Maximum Contaminant Level; **(MCLG)**: federal MCL Goal; **PHG**: California Public Health Goal; **µmho/cm**: micromho per centimeter; **NL**: Notification Level; **TT**: Treatment Technique

*Regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Turbidity Combined Filter Effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Sources in Drinking Water
1) Highest single turbidity measurement	0.3 NTU	0.06	No	Soil Run-Off
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil Run-Off

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms.
Low turbidity in MWD's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT).
A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

Moulton Niguel Water District Distribution System Water Quality Results for 2014

Parameter	Unit of Measure	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Sources in Drinking Water
Disinfection Byproducts						
Total Trihalomethanes	ppb	80	38.0	29.5 – 65.0	No	Byproducts of Chlorine Disinfection
Haloacetic Acids	ppb	60	16.0	7.5 – 25.4	No	Byproducts of Chlorine Disinfection
Chlorine Residual	ppm	4.0	2.03	0.6 – 3.5	No	Disinfection Added for Treatment
Aesthetic Quality						
Color	color units	15*	<5	ND – <5	No	Erosion of Natural Deposits
Turbidity	NTU	5*	0.19	0.08 – 0.49	No	Erosion of Natural Deposits
Odor	threshold odor number	3*	0.8	0.0 – 2.0	No	Erosion of Natural Deposits

Eight (8) locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; 52 samples are tested monthly for color and odor, and weekly for chlorine residual and turbidity.
MRDL: Maximum Residual Disinfectant Level; **MRDLG**: Maximum Residual Disinfectant Level Goal
*Contaminant is regulated by a secondary standard

Bacterial Quality	MCL	MCLG	Highest Monthly %	MCL Violation?	Typical Sources in Drinking Water
Total Coliform Bacteria	5.00%	0.00%	0.79%	No	Naturally Present in the Environment

No more than 5% of the monthly samples may be positive for total coliform bacteria.
The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/E.coli, constitutes an acute MCL violation.

Parameter	Unit of Measure	Action Level (AL)	Public Health Goal	90th Percentile Value	Sites Exceeding AL/ Number of Sites	AL Violation?	Typical Sources in Drinking Water
Copper	ppm	15	0.2	<0.5	3/51	No	Corrosion of House-hold Plumbing
Lead	ppb	1.3	0.3	0.200	0/51	No	Corrosion of House-hold Plumbing

The most recent lead and copper at-the-tap samples were collected from 51 residences in 2012.
Lead was detected in three homes and copper was detected in 22 homes, but none of the samples for copper and only the three samples for lead exceeded the respective regulatory Action Level (AL).
A regulatory Action Level is the concentration of a contaminant which, if exceeded in more than 10% of samples, triggers treatment or other requirements that a water system must follow.

Chart Legend

What are Water Quality Standards?

Drinking water standards established by USEPA and DDW set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The tables in the report show 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 are economically and technologically feasible. Secondary MCLs 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.

Secondary MCLs: Set to protect the odor, taste, and appearance of drinking water.

Primary Drinking Water Standard: MCLs 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.

What is a Water Quality Goal?

In addition to mandatory water quality standards, the USEPA and the DDW 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 guidelines and direction for water management practices. The tables in this report include 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 the 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.

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)
- parts per billion (ppb) or micrograms per liter (µg/L)
- parts per trillion (ppt) or nanograms per liter (ng/L)

Source Water Assessment

Imported (MWD) Water Assessment

Every five years, MWD is required by DDW to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

In 2012, MWD submitted to DDW 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.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban and stormwater runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban and stormwater runoff, wildlife, agriculture, recreation, and wastewater.

USEPA also requires MWD to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWD 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 MWD at (213) 217-6850.

EVERY DROP COUNTS!

HOW YOU CAN HELP CALIFORNIA SAVE WATER DURING THE DROUGHT AND STAY WITHIN YOUR WATER BUDGET:

STAY WITHIN YOUR BUDGET

- **Monitor your household's indoor and outdoor water use**
- **Carefully review your water bill, which lists your custom water budget for the month**
- **Apply for available conservation and rebate programs featured on MNWD's website**
- **Take advantage of MNWD's home water use surveys and tips on ways to save water**

For more information, please visit **www.mnwd.com**