Irvine Ranch
Water District.
Water Quality.

2015 WATER QUALITY REPORT

IRWD 2015 Water Quality Report

Since 1990, California public water utilities have provided an annual Water Quality Report to their customers. **This year's report covers calendar year 2014 drinking water quality testing and reporting.** IRWD vigilantly safeguards its water supply and, as in years past, the water delivered to your home meets the quality standards required by federal and state regulatory agencies. The U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board, Division of Drinking Water (DDW) are the agencies responsible for establishing and enforcing drinking water quality standards.

In some cases, IRWD goes beyond what is required by testing for unregulated chemicals that may have health risks, but do not have drinking water standards. For example, the Orange County Water District (OCWD), which manages the groundwater basin, the Metropolitan Water District of Southern California (MWD), which supplies imported treated surface water, and IRWD, which operates a local surface water treatment plant and several groundwater treatment plants, all test for unregulated chemicals in our water supply. Unregulated chemical monitoring helps USEPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals.

Through drinking water quality compliance testing programs carried out by OCWD (groundwater), MWD (treated surface water) and IRWD (treatment plants and the distribution system), your drinking water is constantly monitored from source to tap for regulated and unregulated constituents.

The State allows drinking water agencies to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. 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.

يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك. يرجى ترجمته، أو ابحث التقرير مع صديق لك يفهم هذه المعلومات جيداً.

Arabic

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

Chinese

Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

French

Der Bericht enthält wichtige informatienen über die Wasserqualität in threr Umgebung. Der Bericht sollte entweder offiziell uebersetzt werden, oder sprechen Sie mit Freunden oder Bekannten, die gute Englischkenntnisse besitzen

German

Questo rapporto contiene informazioni inportanti che riguardano la vostra aqua potabile. Traducetelo, o parlate con una persona qualificata in grado di spiegarvelo.

Italian

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

Japanese

이 보고서에는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 변역하거나 충분히 이해하시는 친구와 상의하십시오.

Korean

Este informe contiene información muy importante sobre su agua potable. Para mas información ó traducción, favor de contactar a Customer Service Representative. Telefono: (949) 453-5300.

Spanish

Bản báo cáo có ghi những chi tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhờ người thông dịch, hoặc hỏi một người bạn biết rõ về vấn đề này.

Vietnamese

Questions about your water? Contact us for answers.

For information or questions about this report, please call Lars Oldewage, IRWD Water Quality Manager, at (949) 453-5858.
To reach IRWD Customer Service and for other information, please call (949) 453-5300, or email customerservice@irwd.com.

Community Participation

The IRWD Board of Directors meets the second and fourth Monday of each month beginning at 5 p.m. at IRWD, 15600 Sand Canyon Avenue, Irvine, California 92618.

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

The Quality of Your Water is Our Primary Concern

Sources of Supply

IRWD is committed to providing a clean and reliable water supply for our customers. Our drinking water is a blend of groundwater from the Orange County Groundwater Basin and surface water imported by the MWD. MWD's imported water sources are a blend of water from the State Water Project and the Colorado River Aqueduct. Local groundwater comes from a natural underground reservoir that stretches from the Prado Dam and fans across the north-western portions of Orange County, stretching as far south as the El Toro "Y." Additional groundwater comes from the Harding Canyon Dam watershed in the Cleveland National Forest. Local groundwater comprises approximately 65 percent of the total IRWD drinking water supply.

This winter's historically low snowpack and below average rainfall increased the intensity of the state's water supply issues. Reduced water allocations combined with judicially imposed environmental pumping restrictions from the State Water Project in Northern California continue to affect Southern California's water supply. IRWD and its customers have always understood that smart water use needs to be our way of life. Visit www.irwd.com to learn how, together, we can make this happen.

Basic Information About Drinking Water Contaminants

Drinking water sources (both tap and bottled water) may include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the layers of the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Radioactive contaminants,** which can be naturally occurring or be the result of oil and gas production or mining activities.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application and septic systems.

In order to ensure that tap water is safe to drink, USEPA and the DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DDW 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 Safe Drinking Water Hotline at (800) 426-4791.

Information the EPA Would Like You to Know

Drinking Water Fluoridation

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 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 help 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 natural fluoride level in imported treated water from the Colorado River and State Project water to the optimal range for dental health of 0.7 to 1.3 parts per million.

Our local groundwater contains naturally occurring fluoride, but is not supplemented with fluoride. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million.

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

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 people, such as those with cancer who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Chloramines

Water imported from MWD and locally produced groundwater contains chloramines, a combination of chlorine and ammonia, as a drinking water disinfectant. Chloramines effectively kill bacteria and other microorganisms that may cause disease. Chloramines have no odor when used properly. People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment.

Customers who maintain fish ponds, tanks or aquariums should also make necessary adjustments in water quality treatment, as these disinfectants are toxic to fish. For further information or if you have any questions about chloramines please visit www.irwd.com or call (949) 453-5300.

Cryptosporidium

Cryptosporidium is a microscopic organism that, when ingested, can cause diarrhea, fever, and other gastrointestinal symptoms.

The organism comes from animal and/or human waste and may be in surface water. MWD tested the 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 the federal Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline at (800) 426-4791 between 10 a.m. and 4 p.m. Eastern Time (7 a.m. to 1 p.m. in California).

Water Quality Issues that Could Affect Your Health

Arsenic Advisory

This advisory was issued because, in 2014, we recorded an arsenic measurement in the drinking water supply between 5 and 10 micrograms per liter.

While your drinking water meets the federal and state standard for arsenic of 10 micrograms per liter, it does contain low levels of arsenic.

The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water.

The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

About Lead in Tap Water

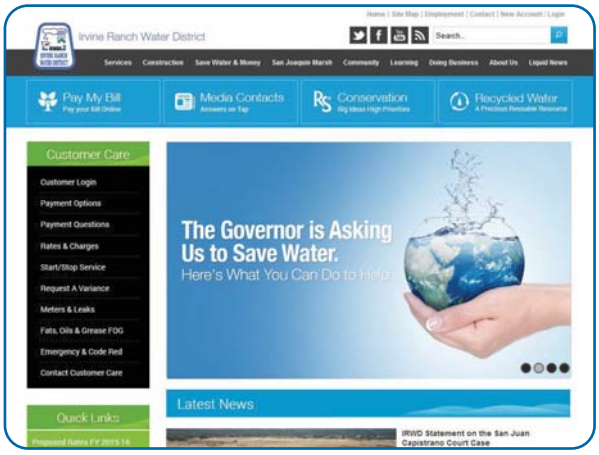
IRWD meets all standards for lead in the USEPA Lead and Copper Rule. If lead were present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

IRWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting for an extended period of time and you have a concern, you can minimize the potential for lead exposure by briefly flushing your tap before using water for drinking or cooking. If you do so, IRWD encourages you to collect the flushed water and reuse it for another beneficial purpose, such as irrigating potted plants.

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://water.epa.gov/drink/info/lead/index.cfm.

Want More Information? Explore Water Online.



There's a wealth of information on the internet about drinking water quality, water reliability and water issues in general. A good place to begin your research is the IRWD website: **www.irwd.com**.

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

Enjoy keeping in-the-know via Social Media? Follow IRWD's water updates here:

IRWD is on Facebook.com
Join our fan page:
Irvine Ranch Water District

Follow IRWD on Twitter
@IRWDnews

View our YouTube channel:
www.youtube.com/IrvineRanchWD

Irvine Ranch Water District Local and Imported Drinking Water Quality Results for 2014

Chemical	MCL	PHG (MCLG)	Avg. Local Treated Groundwater	Avg. Imported MWD Treated Water	Range of Detections	MCL Violation?	Typical Source of Contaminant
Radiologicals – Tested in 2012 to 2014							
Alpha Radiation (pCi/L)	15	(0)	<3	<3	ND – 4	No	Erosion of Natural Deposits
Beta Radiation (pCi/L)	50	(0)	NR	5	4 – 6	No	Decay of Natural and Man-Made Deposits
Uranium (pCi/L)	20	0.43	<0.30	3	ND – 3	No	Erosion of Natural Deposits
Inorganic Chemicals – Tested in 2010 to 2014							
Aluminum (ppm)	1	0.6	ND	0.167	ND – 0.310	No	Treatment Process Residue, Natural Deposits
Arsenic (ppb)	10	0.004	<2.0	ND	ND – 5.76	No	Erosion of Natural Deposits
Barium (ppm)	1	2	ND	0.112	ND – 0.112	No	Erosion of Natural Deposits
Fluoride (ppm) naturally-occurring	2	1	0.44	NR	0.12 – 1.5	No	Erosion of Natural Deposits
Fluoride (ppm) treatment-related	Control Range 0.7 – 1.3 ppm Optimal Level 0.8 ppm		NR	0.8	0.7 – 1.0	No	Water Additive for Dental Health
Hexavalent Chromium (ppb)	10	0.02	<1.0	ND	ND – 1.5	No	Erosion of Natural Deposits; Industrial Discharge
Nitrate (ppm as Nitrate)	45	45	<2.0	ND	ND – 22	No	Fertilizers, Septic Tanks
Nitrate+Nitrite (ppm as N)	10	10	<0.4	ND	ND – 5.0	No	Fertilizers, Septic Tanks
Secondary Standards* – Tested in 2012 to 2014							
Aluminum (ppb)	200*	600	ND	167	80 – 310	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	25.0	90	13.5 – 92	No	Leaching from Natural Deposits; Seawater Influence
Color (color units)	15*	n/a	<2	1	ND – 7	No	Naturally-Occurring Organic Substances
Iron (ppb)	300	n/a	<100	ND	ND – 329	No	Runoff or Leaching from Natural Deposits
Odor (TON)	3*	n/a	<1	1	ND – 8	No	Naturally-Occurring Organic Materials
Manganese (ppb)	50	n/a	<20	ND	ND – 20.3	No	Runoff or Leaching from Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	482	982	342 – 1000	No	Ions in Water; Seawater Influence
Sulfate (ppm)	500*	n/a	54.1	232	3.1 – 241	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	280	627	168 – 651	No	Runoff or Leaching from Natural Deposits
Turbidity (NTU)	5*	n/a	0.3	ND	ND – 4.2	No	Erosion of Natural Deposits
Unregulated Chemicals – Tested in 2011 to 2014							
Bicarbonate (ppm as HCO_3)	Not Regulated	n/a	169	NR	86.7 – 238	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL = 1	n/a	0.053	0.1	ND – 0.53	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	31	72	2.5 – 74	n/a	Runoff or Leaching from Natural Deposits
Carbonate (ppm)	Not Regulated	n/a	3.2	NR	ND – 22	n/a	Runoff or Leaching from Natural Deposits
Corrosivity (Aggressiveness)	Not Regulated	n/a	11.7	12.5	11.0 – 12.5	n/a	Elemental Balance in Water
Corrosivity (Langlier Index)	Not Regulated	n/a	(-)0.07	0.64	(-)0.78 – 0.71	n/a	Elemental Balance in Water
Magnesium (ppm)	Not Regulated	n/a	6.2	26	ND – 27	n/a	Runoff or Leaching from Natural Deposits
ortho-Phosphate (ppm)	Not Regulated	n/a	0.28	NR	ND – 6.8	n/a	Drinking Water Treatment Chemical for Aesthetic Quality
pH (pH units)	Not Regulated	n/a	8.2	8.1	7.2 – 9.0	n/a	Acidity, Hydrogen Ions
Potassium (ppm)	Not Regulated	n/a	1.4	4.6	0.50 – 4.8	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	59.5	94	28.7 – 116	n/a	Runoff or Leaching from Natural Deposits
Total Alkalinity (ppm as $CaCO_3$)	Not Regulated	n/a	144	124	72.2 – 231	n/a	Runoff or Leaching from Natural Deposits
Total Hardness (ppm as $CaCO_3$)	Not Regulated	n/a	103	287	7 – 292	n/a	Runoff or Leaching from Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	6	17	0.4 – 17	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	0.74	2.6	ND – 6.8	TT	Various Natural and Man-Made sources
Vanadium (ppb)	NL = 50	n/a	3.8	ND	ND – 9.3	n/a	Runoff or Leaching from Natural Deposits
Additional Parameters That Are Not Required, But May Be Of Interest To Customers – Tested in 2014							
1,4-Dioxane (ppb)	NL = 1	n/a	<1	NR	ND – 1.49	n/a	Industrial Waste Discharge

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; **pCi/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

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

Turbidity combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
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.

Unregulated Chemicals Requiring Monitoring at Entry Points to the Distribution System

Chemical	Notification Level	PHG (MCLG)	Average Local and Imported	Range of Detections	Most Recent Sampling Date
1,4-Dioxane (ppb)	1	n/a	0.1	ND – 0.45	2014
Bromochloromethane (ppb)	n/a	n/a	<0.06	ND – 0.12	2014
Chlorate (ppb)	800	n/a	169	ND – 710	2014
Chromium, Hexavalent (ppb)**	MCL = 10	0.02	0.22	ND -0.72	2014
Chromium, Total (ppb)***	MCL = 50	MCLG = 100	0.2	ND – 0.7	2014
Molybdenum, Total (ppb)	n/a	n/a	6.4	1.3 – 19	2014
Strontium, Total (ppb)	n/a	n/a	536	163 – 1100	2014
Vanadium, Total (ppb)	50	n/a	2.6	0.7 – 4.3	2014

**Hexavalent chromium is regulated with an MCL of 10 ppb but was not detected, based on the detection limit for purposes of reporting of 1 ppb. Hexavalent chromium was included as part of the unregulated chemicals requiring monitoring.

***Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb. Total chromium was included as part of the unregulated chemicals requiring monitoring.

2014 Irvine Ranch Water District Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	44	3.5 – 45	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	29	ND – 22	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	2.2	ND – 4.1	No	Disinfectant Added for Treatment
Aesthetic Quality					
Color (color units)	15*	<1	ND – 6.0	No	Erosion of Natural Deposits
Turbidity (NTU)	5*	0.2	ND -19	No	Erosion of Natural Deposits
Odor (threshold odor number)	3*	<1	ND – 1.0	No	Erosion of Natural Deposits
Other					
Fluoride (mg/L)	2/0.8**	0.59	0.11 – 1.0	No	Erosion of Natural Deposits, Water Treatment

Twelve locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; 99 locations 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; **MCL/Optimum Level for our climate.

Bacterial Quality	MCL	MCLG	Highest Monthly % Positive Samples	MCL Violation?	Typical Source of Contaminant
Total Coliform Bacteria	5%	0	0.5%	No	Naturally Present in the Environment
Heterotrophic Plate Count Bacteria	5%	n/a	0.0%	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.
A system is in non-compliance if more than 5% of samples collected in a given month have Heterotrophic Plate Counts greater than 500 colony forming units per milliliter and no detectable chlorine residual.

Lead and Copper Action Levels at Residential Taps

	Action Level (AL)	Public Health Goal	90th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation	Typical Source of Contaminant
Copper (ppm)	1.3	0.3	0.18	1/85	No	Corrosion of Household Plumbing
Lead (ppb)	15	0.2	<5	0/85	No	Corrosion of Household Plumbing

The most recent lead and copper at-the-tap samples were collected from 85 residences in 2013.
Lead was detected in no homes and copper was detected in 38 homes, but none of the samples for lead and only one sample for copper 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.

Unregulated Chemicals Requiring Monitoring in the Distribution System

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Chlorate (ppb)	800	n/a	265	31.5 – 710	2014
Chromium, Hexavalent (ppb)**	MCL = 10	0.02	0.24	0.09 – 0.54	2014
Chromium, Total (ppb)***	MCL = 50	MCLG = 100	0.2	ND – 0.5	2014
Molybdenum, Total (ppb)	n/a	n/a	5.8	2.9 – 17	2014
Strontium, Total (ppb)	n/a	n/a	431	185 – 1000	2014
Vanadium, Total (ppb)	50	n/a	2.6	1.6 – 3.9	2014

**Hexavalent chromium is regulated with an MCL of 10 ppb but was not detected, based on the detection limit for purposes of reporting of 1 ppb.
Hexavalent chromium was included as part of the unregulated chemicals requiring monitoring.
***Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb.
Total chromium was included as part of the unregulated chemicals requiring monitoring.

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 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 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, USEPA and 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 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.

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 Assessments

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/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/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.

(IRWD) Groundwater Assessment

An assessment of the groundwater sources in the Lake Forest service area of IRWD was completed in December 2002. This groundwater is considered most vulnerable to contamination from dry cleaners and sewer collection systems.

An assessment of the groundwater sources in the Dyer Road Well Field was completed in July 2003. This groundwater is considered most vulnerable to contamination from gas stations, historic gas stations, metal plating/ finishing/ fabrication facilities, military installations and plastics/synthetics producers.

An assessment of the groundwater sources in the Wells 21-22 Desalter Project was completed in May 2009. This groundwater is considered most vulnerable to contamination from sewer collection systems, automobile (gas stations), historic gas stations and underground storage tanks (confirmed leaking tanks).

An assessment of the groundwater sources in the Irvine Desalter Project was completed in March 2006. This groundwater is considered most vulnerable to contamination from crop irrigation and fertilizers.

An assessment of the groundwater source in the Orange Park Acres service area of IRWD was completed in March 2003. This groundwater is considered most vulnerable to contamination from sewer collection systems.

An assessment of the groundwater in the Santiago Canyon service area of IRWD was completed in January 2003. There have been no contaminants detected in the water supply, however the source is still considered vulnerable to contamination from historic mining operations.

Copies of the complete assessments may be viewed at the IRWD Water Quality Department, 3512 Michelson Drive, Irvine. You may request a summary of the assessments by writing to Leslie Bonkowski, District Secretary, Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California 92618.

How You Can Help California Save Water During the Drought

With California now in an historic drought, we must use our high-quality water supplies as efficiently as possible. Because 60 to 65 percent of household water is used outdoors, we are asking customers to focus on saving water outside. Here are three important things that IRWD customers can do right now to help save water:

1. Remove Water-Thirsty Turf: Say good-bye to water-thirsty turf and hello to drought tolerant landscaping. Visit **irwd.com/RightScape** for ideas and rebates.

2. Reduce Outdoor Watering by 50%: Use the percent key on your timer or adjust the number of days and duration.

3. Fix Water Leaks: Check for leaks outside and inside your home. Maintaining the right equipment in your irrigation system ensures efficient landscape watering. Consider installing drip irrigation and replacing pop-up spray head nozzles with water efficient nozzles.

The IRWD RightScape™ program offers many helpful resources, such as rebates and a free planting guide. Visit **RightScapeNow.com** to learn more.

Live in an apartment or condo? There are still ways to save!

Use a water-efficient clothes washer, dishwasher and shower nozzles. Rebates arevavailable at **irwd.com/rebates**.

Run only full dishwasher and clothes washer loads.

Take up to five-minute showers.