

# 2014 WATER QUALITY REPORT



# Weathering the Drought

Our relationship with water is changing. The severe and lasting drought has led the water industry and all Californians to reevaluate the role of water in our daily lives. We're proud to say that Desert Water Agency has prioritized partnering with customers on conservation, while continuing to provide safe and reliable water around the clock.

On top of constrained supplies, we are also facing new water quality regulations and infrastructure needs. Desert Water Agency is fortunate to be one of the only systems in our region not to see a serious impact from the state's new regulation on chromium-6. DWA does not need to develop any additional treatment or facilities since our water currently meets the new standard.

I am proud of all that our team of 75 experts and professionals has accomplished this year. We have continued to serve and engage a growing community. We've increased our investment in conservation programs by sixfold to include a turf buyback program, which helps reduce water usage in our service area. This year we also produced more recycled water than ever before and began work on the Reclamation Plant Shallow Ground water wells to expand recycled water production even further.

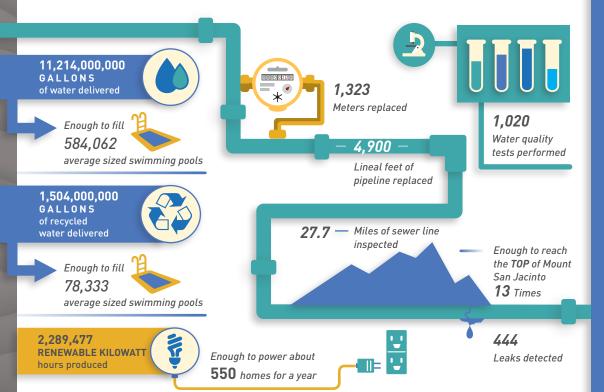
Desert Water Agency is here to serve you, our customers and the community. We work to do the best possible job, using the most of every dollar from our customers. If you ever have any questions about your service, please don't hesitate to stop by our offices or give us a call. You can also find us on Facebook and Twitter.



David K. Luker General Manager and Chief Engineer

Visit: dwa.org/2014wqr - to see a video interview.

### Desert Water Agency Year at a Glance



#### Your Water Quality

Desert Water Agency is committed to serving healthy, safe drinking water and to keeping our community informed about the quality of the water that comes to your tap. Our dedicated staff samples water daily to ensure that it meets all standards. As drought conditions in California continue to affect water supply, it is important for us to support our customers and work together to protect this precious local resource.

From explaining the sources of our water, to listing and defining the constituents in the water, this report is our way of providing clear, transparent information to our customers. To make going through our report easier for customers we've included informational videos; we hope that you enjoy them. The board and staff of DWA take their responsibility to provide high-quality water very seriously and we're proud to report that our water meets and beats the strictest standards in the nation. If you have any questions when reviewing this report, please contact Beth Amheiser, Laboratory Director, at (760) 323-4971 ext. 169.

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Visit dwa.org/2014wqr to see a video interview.

# Our Water Supply

#### **Desert Water Agency**

Established in 1961, Desert Water Agency (DWA) is a public nonprofit agency and State Water Contractor serving residents and tourists in a 325-square-mile area that includes parts of Cathedral City, Palm Springs, and Desert Hot Springs, as well as some unincorporated areas of Riverside County. The Agency's responsibility is to provide a safe, reliable water supply to its service area while protecting its interests in the State Water Project. DWA's ratepayers are represented by a five-member elected board, which makes policy decisions on their behalf.



#### Water Sources

Water is a precious and limited resource; only about .007 percent of the water found on Earth is suitable for drinking.

Desert Water Agency's groundwater comes from the Whitewater River Sub-basin of the Coachella Valley Groundwater Basin, a giant aquifer, or natural reservoir storing water beneath the valley floor. Mountain streams also bring water by way of Chino Creek, Falls Creek and Snow Creek.

Natural groundwater replenishment is supplemented with Colorado River water, which is imported through the Colorado River Aqueduct and percolated into the groundwater basin via recharge ponds near Windy Point and in Mission Creek.



#### Water Quality Monitoring

Unless otherwise noted, data presented in this report was obtained between January 1, 2014 and December 31, 2014. Water quality monitoring was performed in accordance with regulations established by the California Department of Public Health and the U.S. Environmental Protection Agency.

In some cases, the California Department of Public Health allows DWA to test for certain contaminants less than once a year, because the Agency's system is not susceptible to these contaminants, or because the levels recorded are expected to vary little from year to year.

### Water Source Information

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.





#### Source Water Assessment

- A Source Water Assessment Plan (SWAP), last updated October 2007, is available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.
- These sources are considered vulnerable to activities normally associated with residential, commercial and industrial development. However, all water provided by Desert Water Agency meets all U.S. EPA and CDPH guidelines. To review the SWAP, please contact our office during regular business hours.

# Water Quality Regulations & Chromium-6

You may have heard about chromium-6 in local groundwater and California's new standard. Desert Water Agency is fortunate have very low levels of chromium-6, a mineral that occurs naturally in our groundwater. Levels are below the 10 parts per billion standard.

The other agencies in our region and across the state will have to spend a great deal of capital to build the facilities needed to comply, not to mention the ongoing costs to operate and maintain the facilities. California is the first state to regulate chromium-6 and has some of the strictest standards in the nation. The standard on chromium-6 is just one of hundreds that DWA complies with.



Like the other agencies, Desert Water Agency is subject to state standards and the costs that come with them. More regulations mean more samples and lab tests each year on top of any facilities or treatment needed, driving costs up. Since Desert Water Agency is a not-for-profit government entity, we are required by law to pass testing and compliance costs along to our customers.

#### Did you know? ~

Desert Water Agency tests its water for contaminants in concentrations as small as one part per billion, meaning one part of a substance in one billion molecules of water.

That's equivalent to:

- One drop of water in an Olympic swimming pool
- One penny in \$10 million
- One second in 32 years
- One foot on a trip to the moon!

Since the 1980s, DWA has committed to sustainability. Today, those practices include:

Supplying recycled water to all the public golf courses we serve, saving millions of gallons of potable water each year.

Powering 100% of operations at the DWA headquarters and recycled water plant with solar power.

Generating almost two million kilowatts of power through hydroelectric and solar sources to offset energy costs.

These commitments are beneficial to the ratepayer as well as the environment, protecting resources while helping to keep rates as low as possible.

# Powering our Operations Sustainably and with Savings

Desert Water Agency is committed to protecting local water resources while keeping rates affordable. As part of this commitment, DWA has been using clean energy and recycled water for more than 20 years.

The hydroelectric facilities currently in operation at Snow Creek and Whitewater Canyon produce more than half a megawatt of electricity. The Snow Creek facility generates power from the water flow of the creek and the Whitewater facility generates power from the water flow of the Colorado River Aqueduct. The production from our hydropower facilities has decreased due to low flows from drought conditions. We still produced more power in 2014 than in 2013 due to our solar facilities.

In 2005, a solar facility was built in Palm Springs to provide power to our headquarters. Since then, its capacity has been tripled to include 4,500 solar panels. The electricity generated from the expanded solar project now powers both our operations center and the water treatment facilities. Another benefit is that any unused electricity can be sold back to Southern California Edison, making the facility a great lasting investment for the Agency. Keeping a diverse portfolio of both water and energy makes our operation extremely reliable and cost effective for our customers.

The energy generated by our renewable facilities can power about 550 homes and offsets 1,200 tons of CO2, which is the equivalent of taking about 200 cars off the road every year. These renewable energy projects have already led to nearly a million dollars in savings for DWA customers.





Visit dwa.org/2014wqr to see a video interview.

### Common Questions on Water Quality

#### Why does tap water sometimes smell funny?

When your water tastes or smells funny, the problem may or may not be in the water. Odors might actually be coming from your sink drain where bacteria grow on hair, soap, food, and other things that get trapped. Gases in the drain that smell get stirred up when water pours into the pipe. Odor can also come from bacteria growing on devices such as water heaters.

#### Why does water have faint chlorine smell?

A small amount of chlorine is added to meet drinking water regulations. It is a disinfectant that is used to provide continuous protection against possible microbial contamination. Regulations limit the amount of chlorine added to tap water so that the water is safe to drink. A slight smell or taste of chlorine is normal.

TIP An easy way to reduce the chlorine smell is to let water sit in a glass for a few minutes. Then, put the water in a covered container and chill in the refrigerator. Cold water tastes and smells better than water at room temperature.

Visit dwa.org/2014wqr to see a video interview.

#### Why does my water have a rotten egg or sulfur smell?

This smell can occur under some conditions when sulfate is present in the water supply. Circumstances that may contribute to this odor are improperly maintained water heaters or lack of water circulation within a residence during warmer months.

TIP If the odor is only present in hot water, then the odor may be a result of sulfur-reducing bacteria growing in the water heater tank and increasing the water heater's temperature.

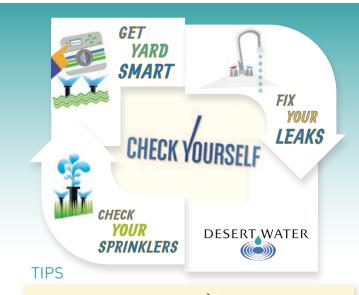
#### Why does my water look cloudy?

Occasionally, tiny air bubbles in tap water cause a cloudy appearance. Air dissolves into water when pressurized which occurs in the groundwater basin and in the water pipes that deliver water to your tap.

#### Do I need a softener?

No. Desert Water Agency tap water meets all drinking water standards and does not need to be conditioned or filtered. DWA does not prohibit the use of water softeners, but Agency ordinance does prohibit the discharge of excess salt down the drain. Discharged salt can harm the groundwater and may require additional treatment, which would increase the future costs of providing sewer and water services.

### Conservation Counts



- → Install a SMART IRRIGATION controller cut your water use by 15%.
- → WATER AT NIGHT and turn off sprinklers when it rains.
- → Easily CHECK FOR LEAKS, fixing them can save water and money.
- → Go online to view new MANDATORY RESTRICTIONS.

California is experiencing a severe and lasting drought. Desert Water Agency is doing its part by recycling water for irrigation and partnering with the community to conserve. We are doing everything we can to help customers check their water use. In 2014, DWA expanded rebates for smart controllers, turf removal and toilet retrofits for its customers.

DWA has been working to raise awareness on the need to conserve. The Agency launched a new water waste app, a public service announcement video in collaboration with Palm Springs High School, a variety of advertising, and direct mailers. We also participate in community events. We want all of the families and businesses we serve to know about the tools they have available to help them save water.



The state recently required DWA to meet a 36% savings target. Stay informed on the latest mandatory restrictions in place by visiting dwa.org/restrictions



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# Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

	. Unit of	MCL [MRDL]	PHG (MCLG) [MRDLG]	Groundwater Source			Surfa	ace Water S	ource	Dis	ystem	Violation		Likely source of	
Substance	Measure			Year Sampled	Amount Detected*	Range (Low-High)	Year Sampled	Amount Detected*	Range (Low-High)	Year Sampled	Amount Detected*	Range (Low-High)	Yes	No	contamination
Barium	mg/L	1.0	2.0	2013	0.08	ND-0.16	ND	ND	ND	NA	NA	NA		*	Discharge from metal refineries; Erosion of natural deposits
Chlorine	mg/L	4.0 as Cl <sub>2</sub>	4.0 as Cl <sub>2</sub>	NA	NA	NA	NA	NA	NA	2014	0.5∞	ND-1.79		*	Drinking water disinfectant added for treatment
Chromium (Total)	ug/L	50	(100)	2014	1.0	0.25-3.4	NA	NA	NA	NA	NA	NA		*	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride	mg/L	2.0	1.0	2013	0.44	0.13- 0.83	2014	0.08	ND-0.13	NA	NA	NA		*	Erosion of natural desposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity	pCi/L	15	(0)	2009- 2014	0.8	ND-4.1	2013	ND	ND	NA	NA	NA		*	Erosion of natural desposits
Activity  Haloacetic Acids [HAA5]	ug/L	60	NONE	NA	NA	NA	NA	NA	NA	2014	28.7∞	ND-28.7		*	By-product of drinking water disinfection
															Discharge from electroplating

Regula	Hexavalent Chromium	ug/L	10	0.02	2014	1.06	0.062- 3.8	NA	NA	NA	NA	NA	NA	*	leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.
	Nitrate	mg/L	45	45	2014	4.9	ND – 18	2014	ND	ND	NA	NA	NA	*	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
	Tetrachloroethylene [PCE]	ug/L	5	0.06	2013	0.02	ND-0.5	NA	NA	NA	NA	NA	NA	*	Runoff/leaching from natural deposits
	Total Coliform Bacteria (Total Coliform Rule)	%	more than 5% of monthly samples are positive	0	NA	NA	NA	NA	NA	NA	2014	1.4°	ND-1.14	*	Naturally present in the environment
	Total Trihalomethanes [TTHM]	pCi/L	80	NONE	NA	NA	NA	NA	NA	NA	2014	27.0¹	ND-27.0	*	By-product of drinking water disinfection
	Turbidity <sup>1</sup>	NTU	5	NONE	2013	0.4	ND-3.7	2014	1	0.19-1	2014	0.04	ND-0.65	*	Soil runoff
	Uranium	pCi/L	20	0.43	2009- 2014	9.4	2.5-20	2013	9.4	NA	NA	NA	NA	*	Erosion of natural deposits.
	Chloride	mg/L	500	NONE	2013	34	5.5-84	2014	2.3	1.5-2.9	NA	NA	NA	*	Runoff/leaching from natural deposits; seawater influence
S	Color	Units	15	NONE	2013	ND	NA	2014	ND	ND	2014	0.04	ND-1.3	*	Naturally occuring organic materials
Substances	Methelyne Blue Active Substances	mg/L	0.5	NONE	2013	0.01	ND-0.21	2014	ND	NA	NA	NA	NA	*	Municipal and industrial waste discharge
y Sub	Odor-Threshold	Units	3	NONE	2013	1	NA	2014	1	NA	2014	1	NA	*	Naturally occuring organic materials
Secondary	Specific Conductance	μS/cm	1600	NONE	2013	560	240-940	2014	180	110-270	NA	NA	NA	*	Substances that form ions when in water; seawater influence
S	Sulfate	mg/L	500	45	2013	92	20-210	2014	4.6	1.2-11	NA	NA	NA	*	Runoff/leaching from natural deposits; industrial wastes
	Total Dissolved Solids	mg/L	1000	NONE	2013	360	140-610	2014	110	70-170	NA	NA	NA	*	Runoff/leaching from natural deposits

	Aggressive Index	AI	Non- aggressive	NONE	2009	12.5	12-5	2009	10.84	10.65- 11.19	NA	NA	NA		<b>★</b>	Influenced by hydrogen, carbon, oxygen, and temperature
	Alkalinity	mg/L	NONE	NONE	2013	130	98-170	2014	88	61-130	NA	NA	NA		*	Function of carbonate, hydroxide, and bicarbonate; naturally occuring
S	Bicarbonate	mg/L	NONE	NONE	2013	160	120-210	2014	110	75-160	NA	NA	NA		*	Naturally occurring
Other Substances	Calcium	mg/L	NONE	NONE	2013	64	19-100	2014	23	14-37	NA	NA	NA		*	Contributes to water hardness; naturally occurring
ier S	Hardness	mg/L	NONE	NONE	2013	210	77-320	2014	66	39-110	NA	NA	NA		*	Naturally occurring
Otk	Magnesium	mg/L	NONE	NONE	2013	11	1.9-20	2014	1.9	1.1-3.4	NA	NA	NA		*	Contributes to water hardness; naturally occuring
н	Potassium	mg/L	NONE	NONE	2013	4	2.3-8	2014	3.1	2.0-4.8	NA	NA	NA		*	Leaching from water softeners, fertilizers and natural deposits
	рН	NA	NONE	NONE	2013	7.7	7.3-8.1	2014	7.6	7.2-7.8	2014	7.9	6.9-8.7		$\bigstar$	Naturally occuring
	Sodium	mg/L	NA	NA	2013	30	20-78	2014	10.4	9.5-12	NA	NA	NA		$\Rightarrow$	
		Unit of Measure	Notifie	oation									vstem		tion	Likely Source of
ated sces			Lev		Year Sampled	Amount Detected*	Range (Low-High)		Amount Detected*	Range (Low-High)	Year Sampled	Amount Detected*	Range (Low-High)	Yes	No	Contamination
Unregulated Substances	Boron	μg/L	1000		2013	2.9	ND-100	2014	ND	ND	NA	NA	NA		<b>★</b>	Drinking water disinfectant added for treatment
U <sub>1</sub>	Chlorate	ug/L	NONE		2014	64	22-380	NA	NA	NA	NA	NA	NA		$\bigstar$	Erosion of natural deposits
	Molybdenum	ug/L	NONE		2014	4.7	3.4-13	NA	NA	NA	NA	NA	NA		$\bigstar$	
	Strontium	ug/L	NONE		2014	250	70-450	NA	NA	NA	NA	NA	NA		<b>★</b>	
	Vanadium	ug/L	5	0	2014	5.4	2.0-16	2014	2.3	ND-3.2	NA	NA	NA		<b>★</b>	Erosion of natural deposits
• Amount detected based on average of samples   1 Highest RAA from first three quarters   2 Turbidity is a measure of the cloudiness of the water.											er.					

<sup>•</sup> Amount detected based on average of samples | Highest RAA from first three quarters | Turbidity is a measure of the cloudiness of the water.

#### **GLOSSARY**

Maximum Contaminant Level (MCL): Micrograms Per Liter (µg/L): A measure of Parts Per Billion (PPB): One part per billion Running Annual Average (RAA): The The highest level of a contaminant that is a contaminant in a known quantity of water. allowed in drinking water. Primary MCLs 1 µg/L equals 1 part per billion (see parts are set as close to the (PHGs or MCLGs) as per billion). is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal per million). (MCLG): The level of a contaminant in drinking water, below, which there is no NA: Not applicable. known or expected risk to health. MCLG's

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a

or expected risk to health. MRDLGs do not water quality. reflect the benefits of the use of disinfectants to control microbial contaminants, MRDLGs, Notification, Level (NL): Health-based

which determines the ability of the water to requirements and recommendations apply. conduct electrical current.

Milligrams Per Liter (mg/L): A measure of a Parts Per Million (PPM): One part per Treatment Technique (TT): A required contaminant in a known quantity of water. 1 mg/L equals 1 part per million (see parts

are set by the U.S. Environmental Protection Nanograms per Liter (ng/L): A measurement of a contaminant in a known quantity of water. lng/L equals 1 part per trillion. (see parts per trillion).

> ND: Not detected or below the detection limit for reporting.

Nephelometric Turbidity Units (NTU): A measure of cloudiness due to undissolved Maximum Residual Disinfectant Level Goal solids in the water. We measure turbidity (MRDLG): The level of a drinking water because it is a good indication of the disinfectant below which there is no known effectiveness of our filtration system and/or

are set by the U.S. Environmental Protection advisory levels established by the State for chemicals in drinking water that lack maximum caontaminant levels (MCLs). Microsiemens Per Centimeter (µS/cm): A When chemicals are found at concentrations measurement of the electrolytes in the water, greater than their notification levels, certain

corresponds to one minute in 2,000 years average of sample analytical results for or one penny in \$10,000,000. (Ten million samples taken during the previous four dollars)

two years or one penny in \$10,000. (Ten contaminant in drinking water. thousand dollars)

pH: An expression of the intensity of the Monitoring Rule basic or acid condition of a liquid. The pH may range from 0 to 14, where 0 is most acid, 14 most basic and 7 neutral.

PicoCuries per Liter (pCi/L): A measure of conditions. the radioactivity in the water.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment

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.

Regulatory Action Level (AL): The if exceeded, triggers treatment or other requirements, such as public notification, that a water system must follow.

calendar quarters.

million corresponds to one minute in process intended to reduce the level of a

**UCMR**: Unregulated Contaminant

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain

means the lowest detectable levels is 0.2 and that the contaminant was less than 0.2 and therefore not detected.

means any sample tested having a value greater than 1.



## Health Information

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).







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. Desert Water Agency 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.



# Regulatory Information

## 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).



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#### Contact Us:

1200 Gene Autry Trail South Palm Springs, CA 92264 (760) 323-4971 www.dwa.org

Board Meetings are held first and third Tuesdays of each month at 8 a.m. at the Desert Water Agency's Operations Center - Board Room, 1200 Gene Autry Trail South, Palm Springs, California.



