



ANNUAL
WATER REPORT

*Water testing
performed in 2010*



Presented By
Indian Wells Valley Water District

PWS ID#: 1510017

Quality First

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

Where Does My Water Come From?

The Indian Wells Valley Water District serves approximately 30,000 people through 12,500 connections in Ridgecrest and the surrounding areas. Our water supply comes from ten wells that draw water from the Indian Wells Valley Aquifer. Water is pumped from these wells through transmission lines to eleven water storage reservoirs with a storage capacity of 17 million gallons. From there, water is delivered by gravity through the distribution lines to the customer.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management has a Web site (www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx) that provides complete and current information on water issues in California.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Violation Information

Since October 2008, the District has been in violation of the new arsenic MCL for Wells 9A and 13. We were in violation of the same MCL for Well 11 during the second quarter of 2010. In subsequent testing, Well 11 tested below the MCL. The District sends out quarterly notices to all customers advising them of the violation and the latest results from testing all three wells. Construction of treatment facilities that will reduce the amount of arsenic in the water from these wells was completed in May 2011. Meanwhile, the District will continue to monitor these wells and send notices until the quarterly running annual average is below 10.5 ppb.

Some people who drink water containing arsenic in excess of the EPA MCL over many years may experience skin damage or circulatory system problems and may have an increased risk of getting cancer.



Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the second Monday of each month, beginning at 7 p.m., in our Board Room, 500 W. Ridgecrest Blvd., Ridgecrest, CA.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Every six to eight weeks, turn on your irrigation system and examine it for leaks and other problems.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Readjust your irrigation timer to reflect temperature and hours-of-daylight changes. Since up to 75% of all water usage occurs outdoors, this could really save water...and money on your water bill!
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Only Tap Water Delivers

We don't often pause to consider the incredible value of a safe, reliable water supply – and the water system that delivers it – in our everyday lives. But consider what tap water does that no other water can do.

...public health protection: In a world where an estimated 3 million people die every year from preventable waterborne disease, water systems in North America allow us to drink from virtually any public tap with a high assurance of safety.

...fire protection: A well-maintained water system is critical in protecting our communities from the ever-present threat of fire. A system that provides reliable water at an adequate pressure can be the difference between a small fire and an urban inferno.

...support for the economy: Businesses or housing developments do not succeed without a safe and sustainable water supply. Tap water is critical to businesses' day-to-day operations and is often the primary ingredient in the products they create.

...the overall quality of life we enjoy: Any measure of a successful society – low mortality rates, economic diversity, productivity, and public safety – is in some way related to access to safe water. In North America, we take for granted that safe water is always accessible to drink, to wash our clothes, to water our landscaping and for a myriad of other purposes. When water service is interrupted, we're all reminded of the extraordinary value of water resources and service.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Renee Morquecho, District Engineer, at (760) 375-5086.

Construction Of Arsenic Treatment Plants Completed

Since November of 2008, all Water District customers have been receiving notices every 3 months regarding arsenic in the drinking water. These notices are being sent to comply with the new arsenic standard adopted by the California Department of Public Health in 2008 that reduced the maximum contaminant level (MCL) of arsenic in drinking water from 50 parts per billion (ppb) to 10 parts per billion. Pascal & Ludwig Constructors of Ontario, CA began construction in January 2010 of two facilities that will reduce the level of arsenic in the water from four wells using a treatment technology designed by Filtronics, Inc. of Anaheim. Construction was completed in May 2011 at a cost of over \$11.5 million. The treatment consists of first binding the arsenic in the water with iron which causes a precipitate to form. This precipitate containing the arsenic is then filtered out of the water using a special media designed by Filtronics.

Even after arsenic is being reduced below the MCL, the District is required to continue sending the quarterly notices to all customers until the quarterly running annual average (average over the last 4 quarters) is below 10.5 ppb.

The District welcomes any questions you may have about these new water treatment facilities. If you would like further information, please give us a call at (760) 375-5086 or send an e-mail to iwvwd@iwvwd.com.



Source Water Assessment

The California Department of Public Health (CDPH) conducted Source Water Assessments for all drinking water sources across the state. The purpose of the assessments was to determine the susceptibility of each drinking water source to potential contaminant sources and to establish a high, moderate, or low relative susceptibility rating for each source. A high rating indicates the lowest susceptibility to contamination.

The Source Water Assessment for the Indian Wells Valley Water District was conducted in 2002, except for Well 34, which was conducted in 2008. All District wells received a moderate susceptibility rating. This rating is not an implication of water quality, but signifies a well's potential to become contaminated. The highest scores are given to those wells located in confined aquifers. A confined aquifer is relatively protected from surface contamination because of a confining layer above the aquifer, usually composed of clay or other impermeable material. The geology of the Indian Wells Valley does not make it possible to locate our wells in confined aquifers. Nevertheless, District wells conform to the highest standards and typically received the full amount of possible points given by the CDPH.

The complete Source Water Assessment report is available at the Indian Wells Valley Water District. If you have questions about the assessment or would like a copy, please contact Renee Morquecho, District Engineer, at (760) 375-5086.

Lead and Drinking Water

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. We are 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.



Fact OR Fiction

There is the same amount of water on Earth now as there was when the Earth was formed. *(Fact: The water that comes from your faucet could contain molecules that dinosaurs drank!)*

About half the water treated by public water systems is used for drinking and cooking. *(Fiction: Actually, the amount used for cooking and drinking is less than 1 percent of the total water produced!)*

A person can live about a month without food, but only about a week without water. *(Fact: Dehydration symptoms generally become noticeable after only 2 percent of one's normal water volume has been lost.)*

The first water pipes in the United States were made of cast iron. *(Fiction: The first water pipes were actually made of fire-charred bored logs.)*

The world's first municipal water filtration plant was opened in the United States. *(Fiction: The first plant was actually opened in Paisley, Scotland, in 1832.)*

A person must consume a half-gallon of water daily to live healthily. *(Fact: A person should drink at least 64 ounces, or 8 cups, of water each day.)*

One gallon of gasoline poured into a lake can contaminate approximately 750,000 gallons of water. *(Fact)*

Substances That Could Be in Water

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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State 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 must 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.

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 can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



Why do I get this report each year?

Community water system operators are required by federal law to provide their customers with an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives the system operators a chance to tell customers what it takes to deliver safe drinking water.

Why does my water sometimes look “milky”?

The “milky” look is caused by tiny air bubbles in the water. The water in the pipes coming into your home or business is under pressure, so gasses (the air) are dissolved and trapped in the pressurized water as it flows into your glass. As the air bubbles rise in the glass, they break free at the surface, thus clearing up the water. Although the milky appearance might be disconcerting, the air bubbles won't affect the quality or taste of the water.

How can I keep my pet's water bowl germ free?

Veterinarians generally recommend that water bowls be washed daily with warm, soapy water, normally when you change the water. Scour the corners, nooks, and crannies of the water dish using a small scrub brush. In addition, once a week, put water bowls into the dishwasher to sanitize them with hot water. In most situations, disinfectants like bleach are not needed; warm, soapy water is all you need to keep your pet's water clean and safe.

How much water is used during a typical shower?

The Federal Energy Policy Act set a nationwide regulation that limits showerheads to a maximum flow of 2.5 gallons per minute (GPM). Showerheads made before 1980 are rated at 5 GPM. Since the average shower is estimated to last 8.2 minutes, the old showerheads use 41 gallons of water while the newer, low-flow showerheads use only about 21 gallons.

Is it okay to use hot water from the tap for cooking and drinking?

No, always use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time.

How many contaminants are regulated in drinking water?

The U.S. EPA regulates over 80 contaminants in drinking water. Some states may choose to regulate additional contaminants or to set stricter standards, but all states must have standards at least as stringent as the U.S. EPA's.

Sampling Results

As required by the CDPH, we regularly sample the water to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic substances. The tables below show only those substances that were detected in the water. We feel it is important that you know exactly what was detected and how much of the substance was present in the water. The state requires us to monitor for certain substances less 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(s) in which samples were taken.

The District detected an unregulated contaminant beyond the Action Level established by CDPH. Action Levels are based on available scientific information and represent concentration levels of contaminants in potable water that have been determined to provide an adequate margin of safety to prevent risk to human health. The detected unregulated contaminant was boron. No MCL has been established for boron; therefore, the District meets current regulatory requirements.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2010	10	0.004	14.7	ND–42	Yes	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chlorine (ppm)	2010	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.60	0.10–1.68	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2007–2008	2.0	1	0.78	0.43–1.2	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2010	15	(0)	2.05	0.76–4.80	No	Erosion of natural deposits
Nitrate [as nitrate] (ppm)	2010	45	45	6.0	ND–8.3	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Uranium (ppb)	2006	20	0.43	4.6	2.1–6.1	No	Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2007–2008	500	NS	58.9	21–210	No	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µS/cm)	2007–2008	1,600	NS	481	310–970	No	Substances that form ions when in water; seawater influence
Total Dissolved Solids (ppm)	2007–2008	1,000	NS	332	220–670	No	Runoff/leaching from natural deposits

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2007–2008	115	87–150
Boron ¹ (ppm)	2007–2008	539	180–1,200
Calcium (ppm)	2007–2008	23	7.5–38
pH (Units)	2007–2008	8.3	7.2–9.0
Potassium (ppm)	2007–2008	1.6	1.0–2.8
Sodium (ppm)	2007–2008	72	35–180
Total Alkalinity (ppm)	2007–2008	113	83–140
Total Hardness (ppm)	2007–2008	67	21–120
Vanadium (ppm)	2007–2008	14	ND–40

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): 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. EPA.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard.

pCi/L (picocuries per liter): A measure of radioactivity.

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

PHG (Public Health Goal): 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 EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

¹The Action Level for boron is 1,000 ppb. District wells 11 and 13 detected boron concentrations of 1,200 and 1,100 ppb, respectively, in 2008.