



# 2008 ANNUAL WATER QUALITY REPORT

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# 2008

## DEAR CUSTOMER,

At United Water Idaho, our goal is to provide you with water that meets or surpasses all the standards for safe drinking water. These health and safety standards are established by the United States Environmental Protection Agency (EPA) and the Idaho Department of Environmental Quality (ID DEQ). Our local team of water professionals works hard to provide you and your family with top quality water and unsurpassed customer service 24 hours a day, 365 days a year.

To ensure the safety of your water, we monitor before, during and after the treatment process. All of our sources of supply (83 wells and surface water from the Boise River) are monitored and tested regularly. We also sample and test water directly from the distribution system on a continual basis. Test results are on file with the ID DEQ, the agency that monitors and regulates drinking water quality in Idaho.

This Water Quality Report provides important information about your drinking water. Federal and state laws require that we mail each customer this report (also known as a Consumer Confidence Report) every year. It shows how your drinking water measured up to stringent government standards during 2008.

Please take a moment to review this information about your drinking water. If you have any questions or would like additional information, please call the United Water Idaho customer service department at 362.7304, visit our website at [www.unitedwater.com/idaho](http://www.unitedwater.com/idaho), or call the EPA Safe Drinking Water Hotline at 800.426.4791. If you have specific questions about water as it relates to your health, we suggest you contact your health care provider.

You'll notice that United Water Idaho, along with all of United Water, has adopted a new logo. You may already have seen this new look on our company vehicles, employee uniforms or on your bill. Our new logo more closely reflects United Water's relationship with its parent company, SUEZ ENVIRONNEMENT. This relationship gives you the best of both worlds -- local service provided by your friends and neighbors as well as access to global resources. Our United Water team is proud to provide essential services right here in our community -- and we're equally proud to be part of a global group that's committed to protecting our planet.

So while our look is new, our dedication and commitment to you has not changed. Thank you for being a United Water Idaho customer. We appreciate your business and value the trust you place in us each and every day.

Sincerely,



Greg Wyatt  
Vice President and General Manager

## CONSERVATION PROGRAMS

United Water Idaho encourages our customers to apply water conservation practices on a daily basis, especially during the peak summer season when water consumption increases by over 400 percent. When you conserve water, you preserve a precious natural resource and save on your water bill. The company offers a comprehensive conservation program to help customers use water wisely, both inside and outside their homes and businesses. Contact us to check out our water efficient landscaping classes, request literature on water saving tips, or pick up water-saving devices. For more information on any of these programs, call 362.7336 or e-mail [uwid@unitedwater.com](mailto:uwid@unitedwater.com).

## UNITED WATER IN THE COMMUNITY

United Water Idaho is proud to be part of Boise. Our employees support numerous community organizations and events, including The Idaho Green Expo, The Boise WaterShed Education Center, Race for the Cure, Boise RiverSweep, Heart Walk, Tend the Foothills and Rake Up Boise.



## BOISE'S SOURCE OF SUPPLY

At United Water Idaho, we take great pride in our ability to provide you with drinking water that meets or surpasses all federal and state regulatory standards. We use a combination of surface and ground water. Approximately 71 percent of your water is supplied from 83 wells located throughout the Boise area. The remaining 29 percent of your water comes from two surface water treatment plants (Marden Water Treatment Plant and Columbia Water Treatment Plant), which both treat water from the Boise River.

## HEALTH NOTE

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at 800.426.4791.

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. EPA/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 at 800.426.4791.

## TREATMENT PRACTICES

Groundwater from our wells is treated with small amounts of chlorine to protect against potentially hazardous microorganisms that can get into the water. We strive to maintain an average chlorine residual between 0.2 and 0.8 parts per million (ppm) throughout the distribution system. We also add very low doses of polyphosphate at 17 of our wells to isolate iron and manganese and keep your water clear. We also pump surface water from the Boise River for treatment at two plants. The Marden Water Treatment Plant is a conventional filtration plant that has an innovative upflow clarification process for pretreatment. The treatment process continues with dual-media filtration to remove particulate matter. The Columbia Water Treatment Plant is a membrane plant that does not require pretreatment and uses microfiltration to remove particulate matter. Both plant processes are followed by disinfection with chlorine to destroy any harmful bacteria. In addition, we adjust the pH at both plants to reduce the corrosivity of the water and decrease the possibility of dissolving metals from household plumbing.



## TO SERVE YOU BETTER

At United Water Idaho, we're constantly working to improve the supply, treatment, delivery, and quality of the drinking water we provide to residents of the Boise area. We make significant investments in our system, and we rigorously train our employees on system operations, as well as state and federal standards.

We also actively promote conservation, because the best way to help our customers save money and preserve our precious water resources is to use less around our homes and businesses. You're invited to visit the Low-Water Demonstration Garden at our Victory Road office, where you can see what water-efficient plants thrive in this area. You can also get information on planting your own low-water garden.

Customers who experience a temporary hardship in paying their bills may be eligible for payment assistance through UW Cares. Call the El-Ada Community Action Agency at 372.0700 for more information and to see if you qualify.

Our Customer Service team is dedicated to meeting your needs, whether it's initiating service, answering questions about your bill, or responding to an emergency. If you have questions about your service, please call us at 362.7304. You can make comments in person at our general office located at 8248 W. Victory Road, or by mail at P.O. Box 190420, Boise, ID 83719, or through our website at [www.unitedwater.com/idaho](http://www.unitedwater.com/idaho).

## FREQUENTLY ASKED QUESTIONS

### **What if my water tastes or smells like chlorine?**

UnitedWater treats all of its water with chlorine. Low doses of chlorine help protect consumers from potentially hazardous microorganisms. We also add chlorine to meet regulatory mandates for safe drinking water. When you take a drink of water, immediately after filling up a glass, it sometimes has a noticeable chlorine odor. This isn't due to the fact that there is too much chlorine in your water. Instead, it's caused by the aerator in your faucet and the change in pressure from the pipes to the atmosphere. The longer your water is exposed to the air, the greater opportunity the chlorine has to dissipate out of your water.

### **What if my water is rusty or discolored?**

Naturally occurring iron and manganese in the water may cause rusty or discolored water. Over time, these minerals form deposits in piping. Occasionally, these minerals will flake off, turning your water pale yellow to dark brown. Although it is aesthetically unappealing, this discoloration is not harmful and your water will generally clear after a few minutes of flushing. If the discoloration only occurs when you use hot water, the problem may be your hot water tank. In this case, you may need to flush your tank and check for corrosion or a missing corrosion anode. If you don't know how to do this, you should consider consulting a plumber.

### **What should I do if my water suddenly discolors?**

As the water moves through the water mains that supply your home, minerals, sand, and sediment settle to the bottom. A sudden flow change, such as opening a fire hydrant, will disturb these sediments

and temporarily discolor the water. If your water suddenly becomes discolored, wait 15 - 20 minutes, then turn on the cold water tap on your bathtub and let it run for five minutes. Normally, this will clear your water and flush the sediment from your service line and plumbing. If flushing doesn't clear your water, call us.

### **What is water hardness?**

Hardness refers to dissolved minerals in the water (calcium and magnesium) that interfere with the sudsing action of soap. The harder the water, the less the sudsing action. The water hardness varies throughout Boise, depending on the wells that are running. If you would like to know the range of hardness for your neighborhood, please feel free to call us.

### **Does United Water Idaho add fluoride to my water?**

Fluoride is a naturally occurring element in the earth's crust and consequently is found at varying levels in our drinking water. No additional fluoride is added to the United Water drinking water supply. For a map showing fluoride levels in your area, go to our website: [www.unitedwater.com/idaho](http://www.unitedwater.com/idaho).

*EPA Safe Drinking Water Hotline: 800.426.4791*

## SOURCE WATER ASSESSMENT

Under the Safe Drinking Water Act Amendments of 1996, all states were required by the EPA to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the watershed and aquifer characteristics. The ID DEQ completed its final source water assessment of the United Water Idaho system in 2003. You may request a summary of the assessment by calling the ID DEQ at 373.0550.

Over the past couple of years, United Water Idaho has tested for Cryptosporidium in the raw, untreated water from the Boise River. The majority of samples we tested were absent of any Cryptosporidium. The most ever detected was one Cryptosporidium cyst in the raw river water. We have never detected any Cryptosporidium in the treated water that goes to your tap.



## DRINKING WATER QUALITY TABLE INFORMATION

Many of the tables in this report list minimum and maximum values for substances detected in our sources of supply. These ranges were determined using test results from 2004 through 2008; the most recent testing was performed in accordance with all regulations. Each of the regulated contaminants compares to a Maximum Contaminant Level (MCL) and a Maximum Contaminant Level Goal (MCLG) established by the EPA and the State of Idaho. Following is additional information on four substances which may be of special interest to our customers.

### **Arsenic**

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA 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.

### **Cryptosporidium**

Cryptosporidium is a parasite that can live in the intestines of humans and animals and is prevalent in surface waters. Ingesting cryptosporidium can cause an illness called Cryptosporidiosis,

which produces symptoms of severe intestinal distress. United Water Idaho started testing for Cryptosporidium in our source water (the Boise River) and treated water when the Marden Water Treatment Plant opened in 1994. We have found very low levels of Cryptosporidium in the Boise River, but have never detected any in the treated water that goes to your tap.

### **Nitrate**

Nitrate in drinking water at levels above 10 parts per million (ppm) is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

### **Turbidity**

Turbidity is a measurement relating to the cloudiness of water. Turbidity can be associated with soil erosion and stream sediments. Surface water is continually monitored for this parameter since it is closely correlated to the effectiveness of treatment practices.

## BOTTLED WATER OR TAP WATER?

The sources of drinking water (for both tap 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 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.
- 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 or farming.
- Pesticides and herbicides, which 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 can also come from gas stations, urban stormwater runoff, and septic systems.

- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that the water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. So, what's the bottom line? If bottled and tap water meet the federal standards, they are both safe to drink. However, your tap water is substantially less expensive than bottled water.



# DRINKING WATER QUALITY TABLE

The water quality table shows how the quality of your drinking water in 2008 compared to the standards set by the EPA and the ID DEQ. When standards differed, the more stringent standard was used for the MCL.

## PRIMARY STANDARDS DIRECTLY RELATED TO THE SAFETY OF DRINKING WATER. WE TEST FOR 82 SUBSTANCES IN THIS CATEGORY AND DETECTED THESE:

Inorganic Chemicals	MCLG	MCL	Highest Result	Range of Results	Violation	Likely Source
Arsenic ppb	NA	10	7	ND - 7	No	Erosion of natural deposits
Barium ppm	2	2	0.13	ND - 0.13	No	Erosion of natural deposits
Cadmium ppb	5	5	1	ND - 1	No	Erosion of natural deposits
Chromium ppb	100	100	9	ND - 9	No	Erosion of natural deposits
Fluoride ppm	4	4	1.3	0.1 - 1.3	No	Erosion of natural deposits
Nitrate as nitrogen ppm	10	10	6	ND - 6	No	Runoff from fertilizer use
Selenium ppb	50	50	5	ND - 5	No	Erosion of natural deposits
	MCLG	AL	90th Percentile	Samples > AL	Violation	Likely Source
Copper ppm (2006)	1.3	1.3	0.54	0	No	Corrosion of household plumbing
Lead ppb (2006)	0	15	ND	0	No	Corrosion of household plumbing
Microbiologicals	MCLG	MCL	Highest Result	Range of Results	Violation	Likely Source
Total Coliforms (% positive in monthly samples)	0	<5% positive samples/month	0.76%	0% - 0.76%	No	Naturally present in the environment
Turbidity, $\leq$ 0.3 NTU	NA	TT**	100%	NA	No	Soil runoff
Turbidity, $\leq$ 1 NTU	NA	TT***	0.6	0.01 - 0.6	No	Soil runoff
Turbidity is the measure of clarity of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.						
**Treatment Technique requires at least 95% of monthly samples to be less than or equal to 0.3 NTU.						
***Treatment Technique requires no single measurement greater than 1 NTU.						
Radionuclides	MCLG	MCL	Highest Result	Range of Results	Violation	Likely Source
Alpha emitters pCi/L	0	15	14	-7.9 - 14	No	Erosion of natural deposits
Beta/photon emitters pCi/L (2005)	0	50	11	ND - 11	No	Decay of natural and man-made deposits
Radium 226 + 228 pCi/L	0	5	5	-8.2 - 5	No	Erosion of natural deposits
Uranium ppb	0	30	26	ND - 26	No	Erosion of natural deposits
Organic Chemicals	MCLG	MCL	Annual Average	Range of Results	Violation	Likely Source
Tetrachloroethylene ppb	0	5	1.8	ND - 3	No	Discharge from factories and dry cleaners
Disinfection By-products	MCLG	MCL	Annual Average	Range of+ Results	Violation	Likely Source
Total Trihalomethanes ppb	NA	80	17.9	ND - 72.2	No	Disinfection by-product
Total Haloacetic Acids ppb	NA	60	7.7	ND - 38	No	Disinfection by-product
Total Organic Carbon Removal <sup>^</sup>	NA	TT	1.0	NA	No	Naturally present in the environment
<sup>^</sup> Finished water Total Organic Carbon is less than 2.0 ppm; therefore no removal is required.						
+ Maximum levels are site specific.						
Disinfection Residuals	MRDLG	MRDL	Annual Average	Range of Results	Violation	Likely Source
Chlorine Residual ppm	4	4	0.76	0.2 - 1.5	No	Disinfection by-product

## SECONDARY STANDARDS RELATED TO THE AESTHETIC QUALITY OF DRINKING WATER

	Guideline	Highest* Result	Range of Results	System+ Average	Violation	Likely Source
Alkalinity (ppm)	NA	250	27 - 250	129	No	Naturally occurring
Aluminum (ppb)	50 - 200	480	ND - 480	120	No	Naturally occurring
Calcium (ppm)	NA	78	4 - 78	35	No	Naturally occurring
Chloride (ppm)	250	32	0.8 - 32	9	No	Naturally occurring
Corrosivity	Non-corrosive	Non-corrosive	Non-corrosive	Non-corrosive	No	Treatment technique
Hardness (ppm)	250	325	14 - 325	109	No	Naturally occurring
Iron (ppb)	300	1110 <sup>^</sup>	ND - 1110	82	No	Naturally occurring
Magnesium (ppm)	NA	16	ND - 16	6	No	Naturally occurring
Manganese (ppb)	50	450 <sup>^</sup>	ND - 450	40	No	Naturally occurring
pH units	6.5 - 8.5	8.4	6.6 - 8.4	7.2	No	Naturally occurring
Sodium (ppm)	50	70	6 - 70	30	No	Naturally occurring
Sulfate (ppm)	250	105	2 - 105	29	No	Naturally occurring
Total Dissolved Solids (ppm)	500	630	24 - 630	192	No	Naturally occurring
Zinc (ppm)	5	0.05	ND - 0.05	0.004	No	Naturally occurring

\*Highest results are based upon the highest single sample. Health effects are determined by the average of all samples during monitoring period.

<sup>^</sup>The ID DEQ permits sequestering treatment to reduce the aesthetic effects of iron and manganese. As a result, United Water is in compliance with the guideline.

+Average of all sources of supply used in United Water Idaho system.

## DEFINITIONS

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

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**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 allow for a margin of safety.

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

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectant to control microbial contamination.

**NA:** Not applicable.

**ND:** Not detected.

**NTU:** Nephelometric Turbidity Unit.

**Parts per billion (ppb):** The equivalent of one second in 32 years.

**Parts per million (ppm):** The equivalent of one second in 12 days.

**Picocuries per liter (pCi/L):** The equivalent of one second in 32 million years.

**Primary Standards:** Federal drinking water regulations for substances that are health related. Water suppliers must meet all primary drinking water standards.

**Secondary Standards:** Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as taste, odor and appearance. Secondary standards are recommendations, not mandates.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**>:** This means "greater than."

**≤:** This means "less than or equal to."



**United Water Idaho**

8248 West Victory Road, PO Box 190420, Boise, Idaho 83719

**THIS REPORT  
CONTAINS  
IMPORTANT  
INFORMATION  
ABOUT YOUR  
DRINKING WATER.**

PWSID # 4010016

**WHERE DOES YOUR  
WATER COME  
FROM?**

United Water Idaho uses a combination of surface and ground water to serve more than 240,000 residents in the Boise area.

Approximately 71 percent of your water is supplied from 83 wells located throughout the area. The remaining 29 percent of your water comes from two surface water treatment plants (Marden Water Treatment Plant and Columbia Water Treatment Plant), which both treat water from the Boise River.



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