



# 2004 ANNUAL WATER QUALITY REPORT FOR THE CITY OF BISHOP

Welcome to our 16<sup>th</sup> Annual Water Quality Report. This report is designed to inform you about the quality of water we deliver to you. For over 100 years our goal has not changed - to provide you with a safe and dependable supply of drinking water.

The City of Bishop water source is the Bishop Cone where it is pumped by three wells:

\*Well #4 is the primary source of water for the City. It is located approximately 2 miles west of Bishop on Highway 168. This well produced about 476 million gallons of water in 2004.

\*Well #2 is the backup source of water and is located on Sierra Street within the City limits. This well produced about 102 million gallons of water in 2004. This well typically only runs in the summer months when landscape irrigation is heaviest.

\*Well #1 is a standby well located behind the Bishop Police Department. It produced no water in 2004.

In the Fall of 2005, Well #2 will be undergoing some major improvements, the most important being a Variable Speed Drive. This will make Well #2 many times more energy efficient.

New to the Public Works Department is the Water and Sewer Commission. This Commission meets bi-monthly (second Tuesday of the odd numbered months at 7 P.M. in the Council Chambers) to discuss water and sewer issues and holds a public comment period at the beginning of each meeting for the general public to make comment.

This year we would like to take the opportunity to stress the importance of water conservation. Water needs to be used wisely in our homes as well as on our landscaping. The national average for gallons per person per day (G/P/D) is 125 gallons. In the City of Bishop, the average (G/P/D) for 2004 was 428. During the winter months, we averaged 260 (G/P/D) and in the summer months, the average was 608 (G/P/D). July was the highest month for water production averaging about 717 (G/P/D). Looking at these numbers, it can be assumed that irrigation consumes the largest share of our water produced. We can cut the costs of water delivery services and protect our existing structures like wells by exercising simple conservation techniques.

We as water users can irrigate our lawns and gardens more efficiently and effectively by using some simple irrigating practices. Irrigating tips can be found by contacting your local nursery or the City of Bishop Public Works Department at 760/873-8458.

## **Water is a Valuable Resource Use it Wisely**

The following tables are a list of contaminants the City monitors and are listed for your information.



# 2004 Consumer Confidence Report

Water System Name: City of Bishop

Report Date: May 19, 2004

*We test the drinking water quality for many constituents as required by State and Federal Regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2004.*

**Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.**

Type of water source(s) in use: Groundwater

Name & location of source(s): Two wells, (#2, #4

Drinking Water Source Assessment information: A source water assessment for these sources was Completed in May 2003 by Inyo County Environmental Health, and these sources are considered most vulnerable to the following activities NOT associated with any detected contaminants: historic gas stations, sewer collection systems, and animal activities.

Time and place of regularly scheduled board meetings for public participation: The second Tuesday every other month, at 301 West Line Street, Bishop, CA 93514

For more information, contact Deston Dishion

Phone: (760) 873-8458

## TERMS USED IN THIS REPORT:

**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. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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

**Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

**NA:** not applicable

**ND:** not detectable at testing limit

**ppm:** parts per million or milligrams per liter (mg/L)

**ppb:** parts per billion or micrograms per liter (ug/L)

**pCi/L:** picocuries per liter (a measure of radiation)

**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.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

**Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

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

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.

**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*, 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, that are byproducts 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 tap water is safe to drink, USEPA and the state Department of Health Services (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.

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

**TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA**

Microbiological Contaminants (to be completed only if there was a detection of bacteria)	Highest No. of detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.) 0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

**TABLE 2 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER**

Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	No. of samples collected	90 <sup>th</sup> percentile level detected	No. Sites exceeding NL	NL	MCLG	Typical Source of Contaminant
Lead (ppb) 9/23/03	20	ND	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm) 9/23/03	20	0.150	0	1.3	0.17	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	12/6/04	8.5	5.9-11	none	none	Generally found in ground and surface water
Hardness (ppm)	12/6/04	54	41-67	none	none	Generally found in ground and surface water

TABLE 4 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Gross Alpha (pCi/L)	Quarterly 2002	1.5	ND-3.2	15	(0)	Erosion of Natural Deposits
Arsenic (ppb)	12/6/04	4.9	2.1-7.8	50	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Flouride (ppb)	12/6/04	0.41	0.24-0.59	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	12/6/04	2.6	2.5-2.8	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

**Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors**  
Federal Rule, currently being implemented in California per USEPA

TTHMs [Total Trihalomethanes] (ppb)	Quarterly 2004	0.27	ND-0.54	80	NA	Byproduct of drinking water chlorination
Chlorine (ppm)	Quarterly 2004	0.25	0.24-0.26	[MRDL= 4.0 (as Cl <sub>2</sub> )]	[MRDLG = 4.0 (as Cl <sub>2</sub> )]	Drinking water disinfectant added for treatment

TABLE 5 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Total Dissolved Solids [TDS] (ppm)	12/6/04	74	50-98	1,000	NA	Runoff/leaching from natural deposits
Specific Conductance (micromhos)	12/6/04	134	98-170	1,600	NA	Substances that form ions when in water; seawater influence
Chloride (ppm)	12/6/04	6.1	5.7-6.6	500	NA	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	12/6/04	12	11-13	500	NA	Runoff/leaching from natural deposits' industrial wastes

TABLE 6 - DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Notification Level	Health Effects Language
Vanadium (ppb)	12/6/04	4.6	50	The babies of some pregnant women who drink water containing vanadium in excess of the action level may have an increased risk of developmental effects, based on studies in laboratory animals

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