



# Clifton Water District Annual Water Quality Report 2005

We are pleased to have the opportunity to share with you this summary of our water quality that was delivered to you in 2005. All water utilities are required by the United States Environmental Protection Agency (USEPA) to publish an annual Water Quality Report. This report describes where your water comes from, what it contains and other information that can be useful to you as our customer.

In addition to the contents seen on the enclosed Water Quality Table, the Clifton Water District tested for over 100 other contaminants that were not detected. The Clifton Water District had an average effluent turbidity of 0.027 NTU for 2005.



*Construction of our new 16 million gallon per day, pre-treatment facility*

The Clifton Water District is dedicated to providing all of our customers with a high quality and safe water supply. If you have any questions about this report or any other concerns please feel free to contact Dale Tooker, Clifton Water District Manager, at 434-7328. or our Water Quality Laboratory at 434-7624. If you would like to attend our board meetings, they are held on the first Thursday, of every month, at 5:00 p.m., at the Water District Office located at 510 34 Rd, Clifton, Colorado.

## Safe Water?

Clifton Water District's drinking water meets or exceeds all Environmental Protection Agency and Colorado Department of Health and Environment regulations. However, all 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. 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at 1-800-426-4791



*Reverse osmosis membrane facility*

## What are drinking water contaminants?

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:



*Construction of our new pretreatment facility*

- 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, which can be naturally-occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

## Definitions:

- AL-** Action level, the concentration of a contaminant which, if exceeded, triggers treatment of the requirements which a water system must follow
- ppm** – one part per million or milligrams per liter corresponds to one minute in two years or a single penny in \$10,000.
- ppb** – one part per billion or micrograms per liter corresponds to one minute in 2,000 years or one penny in \$10,000,000.
- NTU** – nephelometric turbidity units is a measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable to the average person.

- TT** – treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- MCL** – maximum contaminant level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as are feasible using the best available treatment technology.
- MCLG** – maximum contaminant level goal is 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.
- RAA** – Running annual average.

# WATER QUALITY ANALYSIS 2005

## Organics and Inorganics

| Organics and Inorganic | Collection Date | Highest Value | Range  | Unit | MCL | MCLG | Typical Source  |
|------------------------|-----------------|---------------|--------|------|-----|------|---|
| Arsenic                | 8/19/05         | 0.34          | 0.34   | ppm  | 50  | 0    | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes                    |
| Barium                 | 8/19/05         | 0.0579        | 0.0579 | ppm  | 2   | 2    | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                |
| Fluoride               | 9/1/05          | 1.03          | 1.03   | ppm  | 40  | 4.0  | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate (as N)         | 8/30/05         | 0.206         | 0.206  | ppm  | 10  | 10   | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Nitrate-Nitrite (as N) | 8/30/05         | 0.849         | 0.849  | ppm  | 10  | 10   | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Nitrite (as N)         | 8/30/05         | 0.643         | 0.643  | ppm  | 1   | 1    | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Selenium               | 8/19/05         | 0.33          | 0.33   | ppb  | 50  | 50   | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines                          |

## Turbidity

| Turbidity | Sample Date | Level Found | TT Requirement  | Likely Source of Contamination |
|-----------|-------------|-------------|---|--------------------------------|
| Turbidity | 5-22-05     | 0.16 NTU    | Maximum 0.300NTU for any single measurement                           | Soil Runoff                    |
| Turbidity | Entire Year | 100%        | In any month, at least 95% of the samples must be less than 0.300 NTU | Soil Runoff                    |

## Disinfection By Products

| Disinfection By -Products     | Date | Average  | Range         | Highest RAA | Unit | MCL | MCLG | Typical Source                            |
|-------------------------------|------|----------|---------------|-------------|------|-----|------|---|
| Total Trihalomethanes (TTHM)  | 2005 | 30.80333 | 17.04 – 46.06 | 30          | ppb  | 80  | N/A  | By-product of drinking water chlorination |
| Total Haloacetic Acids (HAA5) | 2005 | 20.75667 | 5.27 – 34.2   | 20          | ppb  | 60  | N/A  | By product of drinking water chlorination |

## Total Organic Carbon

| TOC                  | Compliance Factor | Lowest RAA (compliance factor) | RAA Range for the Year (compliance factor) | Typical Source                       |
|----------------------|-------------------|--------------------------------|--|--------------------------------------|
| Total Organic Carbon | 1.0               | 3.1                            | 3.1 – 6.7                                  | Naturally present in the environment |

## Lead and Copper

| Lead and Copper | Collection Date | 90 <sup>th</sup> Percentile | Unit | AL  | Typical Source   |
|-----------------|-----------------|-----------------------------|------|-----|--|
| Copper          | 2005            | 0.078                       | ppm  | 1.3 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead            | 2005            | 2                           | ppb  | 15  | Corrosion of household plumbing systems; Erosion of natural deposits |

## Secondary Constituents

| Secondary Contaminants/Other Monitoring | Collection Date | Highest Value | Range | Unit | Secondary Standard |
|---|-----------------|---------------|-------|------|--------------------|
| Sodium                                  | 8/19/05         | 85.6          | 85.6  | mg/L | 10000              |

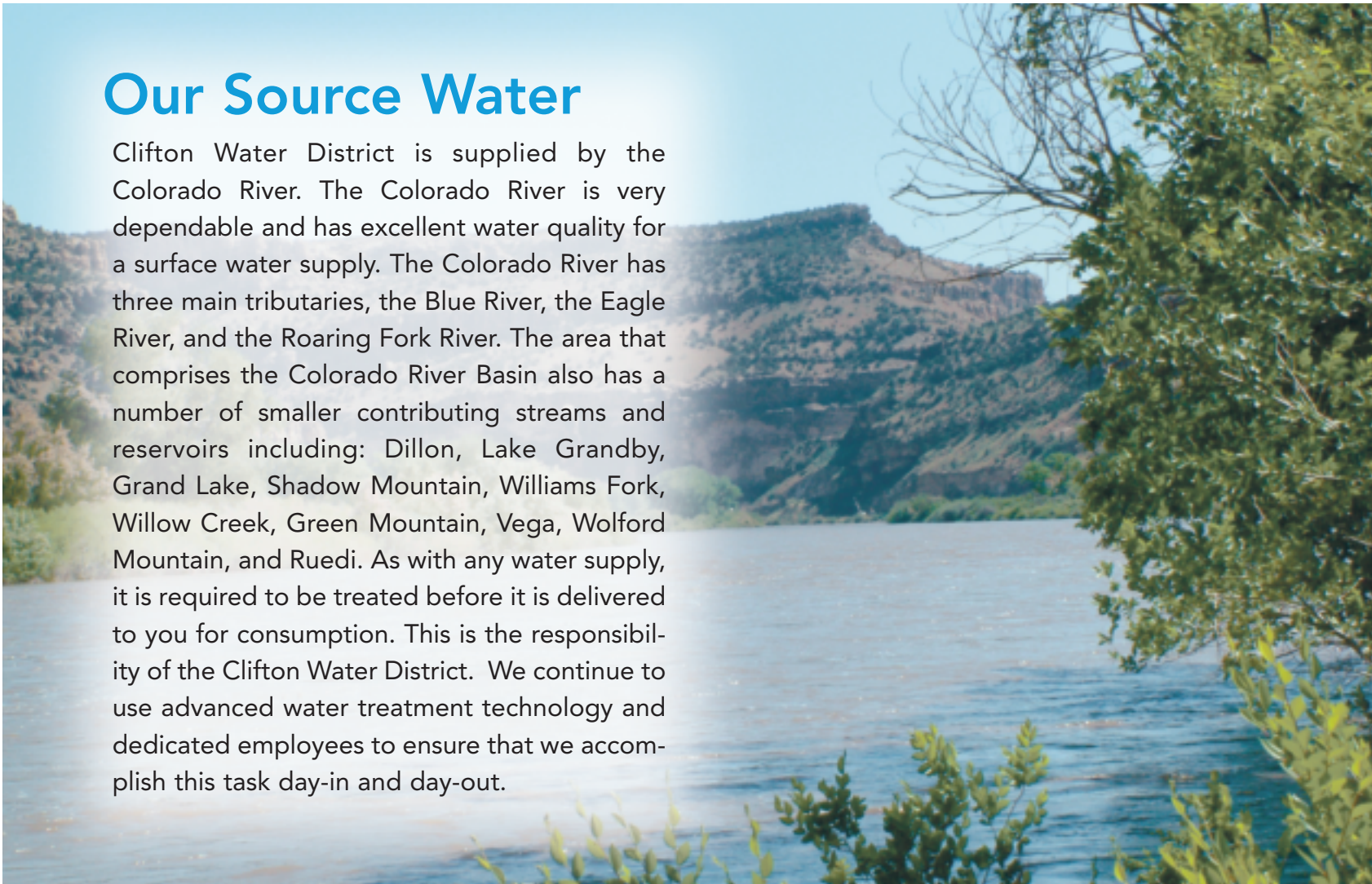
## Understanding the Water Quality Table

The Table above shows all of the EPA regulated substances that were detected in our water, even if it is only a minute concentration. The Table lists each of the contaminants, the sampling dates, whether or not the level is in violation, the amount detected, the unit of measurement, the maximum level allowed by law (MCL), the ideal goal (MCLG) and the sources of the contaminant. The most important areas of the Table are the Levels Detected and the definition of MCL and MCLG. The Maximum Contaminant Level (MCL) is the highest concentration of a contaminant that is allowed by law to be in the drinking water. The Maximum Contaminant Level Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected health risk.



# Our Source Water

Clifton Water District is supplied by the Colorado River. The Colorado River is very dependable and has excellent water quality for a surface water supply. The Colorado River has three main tributaries, the Blue River, the Eagle River, and the Roaring Fork River. The area that comprises the Colorado River Basin also has a number of smaller contributing streams and reservoirs including: Dillon, Lake Grandby, Grand Lake, Shadow Mountain, Williams Fork, Willow Creek, Green Mountain, Vega, Wolford Mountain, and Ruedi. As with any water supply, it is required to be treated before it is delivered to you for consumption. This is the responsibility of the Clifton Water District. We continue to use advanced water treatment technology and dedicated employees to ensure that we accomplish this task day-in and day-out.



2005 Annual Water Quality Report

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