

Annual Drinking Water Quality Report For

2005

System Name: Meridian Service Metropolitan District PWSID # COO 121455

Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. Our water comes from: The Denver basin aquifers. We have four wells in the Arapahoe aquifer and five in the Laramie Fox Hills aquifer.

If you have any questions about this report or concerning your water utility, please contact RS Wells Corporation at (303) 779 – 4525.

We want our valued customers to be informed about their water utility. If you want to learn more, please call the above contact about the utility or any scheduled public meetings.

All public water systems are required to have a source water assessment completed by August 2003. To find out what our system has been doing, call the above contact.

Some people may be more vulnerable to contaminants in drinking water than the public in general.

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. 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.

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, 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** 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 byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The table contains many terms and abbreviations that may be unfamiliar. To help you better understand these terms we've provided the following definitions:

- **Action Level (AL):** The concentration of a contaminant, if exceeded, triggers treatment or other requirements a water system must follow.
- **High Solids (HS):** High Solids, alpha was not tested.
- **Maximum Contaminant Level (MCL):** The “maximum allowed” is 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 “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.
- **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 disinfectants to control microbial contaminants.
- **Maximum Residual Disinfectant Level (MRDL):** 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.
- **Million Fibers per Liter (MFL):** A measure of the presence of asbestos fibers in water longer than 10 micrometers.
- **Millirems per Year (mrem/year):** A measure of radiation absorbed by the body.
- **Nephelometric Turbidity Unit (NTU):** Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of five NTU is just noticeable to the average person.
- **Non-Detects (ND) or Below Detection Level (BDL):** Laboratory analysis indicates that the constituent is not present. (“<” Symbol for less than, the same as ND or BDL)
- **Not Tested (NT):** Not tested.
- **Parts per billion (ppb) or Micrograms per liter (µg/l):** One part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.
- **Parts per million (ppm) or Milligrams per liter (mg/l):** One part per million corresponds to one minute in two years or one penny in \$10,000.
- **Parts per quadrillion (ppq) or Picograms per liter (pg/l):** One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- **Parts per trillion (ppt) or Nanograms per liter (ng/l):** One part per trillion corresponds to one minute in 2,000,000 years, or one penny in \$10,000,000,000.
- **PicoCuries per Liter (pCi/l):** A measure of radioactivity in water.
- **Treatment Technique (TT):** A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Variances and Exemptions:** State permission not to meet an MCL or a treatment technique under certain conditions.

Contaminants that were tested for, but not detected, include:

Violations: There were no violations during this sampling period.

Additional Information

Nitrate in drinking water at levels above 10 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, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

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.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated lead levels in your home’s water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Table of Contaminants

The state 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, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, may be more than one year old.

This table shows the results of our monitoring for the period of January 1 to December 31, 2005 unless otherwise noted.

Microbiological Contaminants

| Contaminant | MCL | MCLG | CCR Unit | Level Detected | Violation Yes or No | Sample Date | Likely Source of Contamination |
|-------------------------|---|------|-------------------|----------------|---------------------|---------------------------------------|--------------------------------------|
| Total Coliform Bacteria | System collects >40 samples: 5% of monthly samples are positive System collects <40 samples: 1 positive monthly sample | 0 | Absent or Present | Absent | No | January – December 2005 (1 per month) | Naturally present in the environment |
| Total Organic Carbon | TT | N/A | ppm | NT | No | quarterly | Naturally present in the environment |

Radionuclides

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|-------------------------------------|-----|------|-----------|-----------------------|---------------------|-------------|--|
| Beta/photon emitters | 50 | 0 | PCi/l | BDL | No | Quarterly | Decay of natural and man-made deposits |
| Alpha emitters | 15 | 0 | pCi/l | BDL | No | Quarterly | Erosion of natural deposits |
| Combined radium | 5 | 0 | pCi/l | BDL | No | Quarterly | Erosion of natural deposits |
| Uranium *Effective December 2003 | 30 | 0 | µg/l | BDL | No | Quarterly | Erosion of natural deposits |

Lead and Copper

| Contaminant | MCL | MCLG | CCR Units | Level Detected/ Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|-------------|-----|------|-----------|-----------------------|---------------------|-------------|--|
| Copper | 1.3 | 1.3 | ppm | .195 | No | Quarterly | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead | 15 | 0 | ppb | .0041 | No | Quarterly | Corrosion of household plumbing systems, erosion of natural deposits |

Inorganic Contaminants

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|--|-----|------|-----------|-----------------------|---------------------|-------------|---|
| Antimony | 6 | 6 | ppb | BDL | No | quarterly | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder |
| Arsenic * Effective January 23, 2006 (Until then, the MCL is 0.05 mg/l (50 ppb) and there is no MCLG.) | 10 | 0 | ppb | BDL | No | quarterly | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| Asbestos | 7 | 7 | MFL | BDL | No | quarterly | Decay of asbestos cement water mains; erosion of natural deposits |
| Barium | 2 | 2 | ppm | BDL | No | quarterly | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Beryllium | 4 | 4 | ppb | BDL | No | quarterly | Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries |
| Cadmium | 5 | 5 | ppb | BDL | No | quarterly | Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints |

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|--------------------------|-----|------|-----------|-----------------------|---------------------|-------------|---|
| Chromium | 100 | 100 | ppb | BDL | No | Quarterly | Discharge from steel and pulp mills; erosion of natural deposits |
| Cyanide | 200 | 200 | ppb | BDL | No | Quarterly | Discharge from steel/metal factories; discharge from plastic and fertilizer factories |
| Fluoride | 4 | 4 | ppm | 1.3 | No | Jan - Dec | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Mercury (inorganic) | 2 | 2 | ppb | BDL | No | Quarterly | Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland |
| Combined Nitrate/Nitrite | 10 | 10 | ppm | NT | No | Quarterly | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Nitrate (as Nitrogen) | 10 | 10 | ppm | .059 | No | Quarterly | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Nitrite (as Nitrogen) | 1 | 1 | ppm | NT | No | Quarterly | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Selenium | 50 | 50 | ppb | BDL | No | Quarterly | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| Thallium | 2 | 0.5 | ppb | BDL | No | Quarterly | Leaching from ore-processing sites; discharge from electronics, glass, and drug factories |

• **Unregulated Inorganic Contaminants**

| Contaminant | MCL | MCLG | CCR Units | Level Detected/ Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|-------------|-----|------|-----------|-----------------------|---------------------|-------------|--------------------------------|
| | N/A | N/A | | | N/A | | |
| | N/A | N/A | | | N/A | | |
| | N/A | N/A | | | N/A | | |

• **Synthetic Organic Contaminants, including Pesticides and Herbicides**

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|-----------------------------|-----|------|-----------|-----------------------|---------------------|-------------|---|
| 2,4-D | 70 | 70 | ppb | BDL | No | Quarterly | Runoff from herbicide used on row crops |
| 2,4,5-TP (Silvex) | 50 | 50 | ppb | BDL | No | Quarterly | Residue of banned herbicide |
| Acrylamide | TT | 0 | | BDL | No | Quarterly | Added to water during sewage/wastewater treatment |
| Alachlor | 2 | 0 | ppb | BDL | No | Quarterly | Runoff from herbicide used on row crops |
| Atrazine | 3 | 3 | ppb | BDL | No | Quarterly | Runoff from herbicide used on row crops |
| Benzo (a) pyrene (PAH) | 200 | 0 | ppt | BDL | No | Quarterly | Leaching from linings of water storage tanks and distribution lines |
| Carbofuran | 40 | 40 | ppb | BDL | No | Quarterly | Leaching of soil fumigant used on rice and alfalfa |
| Chlordane | 2 | 0 | ppb | BDL | No | Quarterly | Residue of banned termiticide |
| Dalapon | 200 | 200 | ppb | BDL | No | Quarterly | Runoff from herbicide used on rights of way |
| Di (2-ethylhexyl) adipate | 400 | 400 | ppb | BDL | No | Quarterly | Discharge from chemical factories |
| Di (2-ethylhexyl) phthalate | 6 | 0 | ppb | BDL | No | Quarterly | Discharge from rubber and chemical factories |
| Dibromochloropropane | 200 | 0 | ppt | BDL | No | Quarterly | Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards |
| Dinoseb | 7 | 7 | ppb | BDL | No | Quarterly | Runoff from herbicide used on soybeans and vegetables |
| Diquat | 20 | 20 | ppb | BDL | NO | Quarterly | Runoff from herbicide use |
| Dioxin [2,3,7,8-TCDD] | 30 | 0 | ppq | BDL | No | Quarterly | Emissions from waste incineration and other combustion; discharge from chemical factories |
| Endothall | 100 | 100 | ppb | BDL | No | Quarterly | Runoff from herbicide use |

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|----------------------------------|-----|------|-----------|-----------------------|---------------------|-------------|---|
| Endrin | 2 | 2 | ppb | BDL | No | Quarterly | Residue of banned insecticide |
| Epichlorohydrin | TT | 0 | | BDL | No | Quarterly | Discharge from industrial chemical factories; an impurity of some water treatment chemicals |
| Ethylene dibromide | 50 | 0 | ppt | BDL | No | Quarterly | Discharge from petroleum refineries |
| Glyphosate | 700 | 700 | ppb | BDL | No | Quarterly | Runoff from herbicide use |
| Heptachlor | 400 | 0 | ppt | BDL | No | Quarterly | Residue of banned temiticide |
| Heptachlor epoxide | 200 | 0 | ppt | BDL | No | Quarterly | Breakdown of heptachlor |
| Hexachlorobenzene | 1 | 0 | ppb | BDL | No | Quarterly | Discharge from metal refineries and agricultural chemical factories |
| Hexachlorocyclopentadiene | 50 | 50 | ppb | BDL | No | Quarterly | Discharge from chemical factories |
| Lindane | 200 | 200 | ppt | BDL | No | Quarterly | Runoff/leaching from insecticide used on cattle, lumber, gardens |
| Methoxychlor | 40 | 40 | ppb | BDL | No | Quarterly | Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock |
| Oxamyl [Vydate] | 200 | 200 | ppb | BDL | No | Quarterly | Runoff/leaching from insecticide used on apples, potatoes and tomatoes |
| PCBs [Polychlorinated biphenyls] | 500 | 0 | ppt | BDL | No | Quarterly | Runoff from landfills; discharge of waste chemicals |
| Pentachlorophenol | 1 | 0 | ppb | BDL | No | Quarterly | Discharge from wood preserving factories |
| Picloram | 500 | 500 | ppb | BDL | No | Quarterly | Herbicide runoff |
| Simazine | 4 | 4 | ppb | BDL | No | Quarterly | Herbicide runoff |
| Toxaphene | 3 | 0 | ppb | BDL | No | Quarterly | Runoff/leaching from insecticide used on cotton and cattle |

• **Volatile Organic Contaminants**

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|--------------------------|------------|-------------|-----------|-----------------------|---------------------|-------------|---|
| Benzene | 5 | 0 | ppb | BDL | No | Quarterly | Discharge from factories; leaching from gas storage tanks and landfills |
| Bromate | 10 | 0 | ppb | BDL | No | Quarterly | By-product of drinking water chlorination |
| Carbon tetrachloride | 5 | 0 | ppb | BDL | No | Quarterly | Discharge from chemical plants and other industrial activities |
| Chloramines | MRDL = 4 | MRDLG = 4 | ppm | BDL | No | Quarterly | Water additive used to control microbes |
| Chlorine | MRDL = 4 | MRDLG = 4 | ppm | .527 | NO | Jan - Dec | Water additive used to control microbes |
| Chlorite | 1 | 0.8 | ppm | BDL | No | Quarterly | By-product of drinking water chlorination |
| Chloride dioxide | MRDL = 800 | MRDLG = 800 | ppb | BDL | No | Quarterly | Water additive used to control microbes |
| Chlorobenzene | 100 | 100 | ppb | BDL | No | Quarterly | Discharge from chemical and agricultural chemical factories |
| o-Dichlorobenzene | 600 | 600 | ppb | BDL | No | Quarterly | Discharge from industrial chemical factories |
| p-Dichlorobenzene | 75 | 75 | ppb | BDL | No | Quarterly | Discharge from industrial chemical factories |
| 1,2-Dichloroethane | 5 | 0 | ppb | BDL | No | Quarterly | Discharge from industrial chemical factories |
| 1,1-Dichloroethylene | 7 | 7 | ppb | BDL | No | quarterly | Discharge from industrial chemical factories |
| cis-1,2-Dichloroethylene | 70 | 70 | ppb | BDL | No | quarterly | Discharge from industrial chemical factories |

| Contaminant | MCL | MCLG | CCR Units | Level Detected /Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|---------------------------------|-----|------|-----------|-----------------------|---------------------|-------------|---|
| trans-1,2-Dichloroethylene | 100 | 100 | ppb | BDL | No | quarterly | Discharge from industrial chemical factories |
| Dichloromethane | 5 | 0 | ppb | BDL | No | quarterly | Discharge from pharmaceutical and chemical factories |
| 1,2-Dichloropropane | 5 | 0 | ppb | BDL | No | quarterly | Discharge from industrial chemical factories |
| Ethylbenzene | 700 | 700 | ppb | BDL | No | quarterly | Discharge from petroleum refineries |
| Haloacetic Acids (HAA) | 60 | N/A | ppb | BDL | No | quarterly | By-product of drinking water disinfection |
| Styrene | 100 | 100 | ppb | BDL | No | quarterly | Discharge from rubber and plastic factories; leaching from landfills |
| Tetrachloroethylene | 5 | 0 | ppb | BDL | No | quarterly | Discharge from factories and dry cleaners |
| 1,2,4-Trichlorobenzene | 70 | 70 | ppb | BDL | No | quarterly | Discharge from textile-finishing factories |
| 1,1,1-Trichloroethane | 200 | 200 | ppb | BDL | No | quarterly | Discharge from metal degreasing sites and other factories |
| 1,1,2-Trichloroethane | 5 | 3 | ppb | BDL | No | quarterly | Discharge from industrial chemical factories |
| Trichloroethylene | 5 | 0 | ppb | BDL | No | quarterly | Discharge from metal degreasing sites and other factories |
| TTHM [Total trihalomethanes] | 100 | 0 | ppb | BDL | No | quarterly | By-product of drinking water chlorination |
| Toluene | 1 | 1 | ppm | BDL | No | quarterly | Discharge from petroleum factories |
| Vinyl Chloride | 2 | 0 | ppb | BDL | No | quarterly | Leaching from PVC piping; discharge from chemical factories |
| Xylenes | 10 | 10 | ppm | BDL | No | quarterly | Discharge from petroleum factories; discharge from chemical factories |

• **Unregulated Organic Contaminants**

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Please contact us if you have any questions or concerns.