



**MesaWater**  
DISTRICT®

# **2019 Water Quality Report**

DATA FOR 2018

# More than **55** Years of Providing **Clean, Safe, and Reliable Drinking Water**

**Mesa Water District** (Mesa Water®) is an independent special district that provides water service to 110,000 customers in an 18-square-mile area. Dedicated to satisfying our community's water needs, Mesa Water® serves most of Costa Mesa, parts of Newport Beach, and some unincorporated areas of Orange County, including John Wayne Airport.

Mesa Water was formed in 1960 when four local water providers merged. The agency's combined resources, along with an independent board of directors focused on providing a reliable supply of drinking water to its service area, allowed the District to build and improve its water delivery infrastructure for its customers.

When the District was formed, nearly all of the water

provided to its service area was imported from the Colorado River by Metropolitan Water District of Southern California. As the price of imported water started to rise in the 1970s, the District

turned to its own local groundwater supplies. In 1978, the District became Mesa Consolidated Water District as a tribute to its history. In 2013, the Board updated its name to Mesa Water District, or Mesa Water for short.



## Over a Half-Century of Transparent, Financially Responsible Leadership

Mesa Water is one of the most efficient water agencies in Orange County, according to a recent study of nearby water districts. The report compared annual expenditures per capita, that is, the operational costs needed to bring water to each of the District's 110,000 customers. Among 10 Orange County water districts, Mesa Water was determined the most efficient water provider.

Groundwater supplies are Mesa Water's primary source of drinking water. Water is pumped from the clear-water basin and supplemented with water from the deep, amber-tinted water basin that is pumped and treated at the Mesa Water Reliability Facility (MWRF). From 2000 to 2010, the MWRF produced water through an ozone treatment process. To increase its treatment capacity, the facility underwent the MWRF Improvements Project, installed nanofiltration technology, and reopened in 2013 as the Mesa Water Reliability Facility. The MWRF has the capacity to treat more water, making it possible for Mesa Water to provide 100 percent of its supplies from local, reliable sources.

Mesa Water is financially stable and responsible, with a AAA rating from both Fitch and Standard & Poor's. The District has been a California Special Districts Association *District of Distinction* since the program's inaugural year in 2007. This accreditation recognizes agencies that provide essential public service in a fiscally-responsible manner.

Governed by a publicly-elected, five-member Board of Directors, Mesa Water enjoys strong leadership and high customer satisfaction. Mesa Water's Directors are visionary leaders, advocating for customers and constituents, and furthering the District's long term viability through its perpetual agency management style. According to a recent survey, more than 90 percent of Mesa Water's customers are satisfied with their water quality and customer service. Mesa Water has provided clean, safe, and reliable drinking water to its service area since 1960 with no reportable water quality issues.

**MesaWater.org**

# The Quality of Your Water is Our Primary Concern

## Water Supply Sources

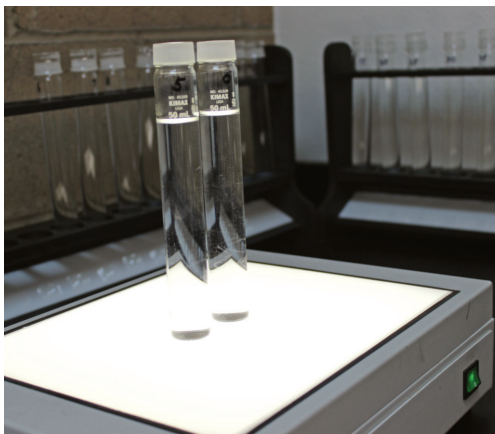
Mesa Water provides tap water that is a blend of local groundwater sources. Groundwater, or well water, is pumped from Orange County's natural underground reservoir, or groundwater basin, via Mesa Water's seven wells.

The groundwater basin is layered with sand and gravel, and was formed over thousands of years by the Santa Ana River flowing from the San Bernardino Mountains to the Pacific Ocean. It underlies north-central Orange County, from the Los Angeles County border south to Irvine, and from Yorba Linda in the east to Huntington Beach in the west.

The groundwater basin works as a natural filter and is replenished by water from both the Santa Ana River and imported water purchased from the Metropolitan Water District of Southern California (Metropolitan). Mesa Water's groundwater is disinfected with chloramines — a combination of chlorine and ammonia — before it enters the distribution system.

Mesa Water supplements its groundwater with water from the Mesa Water Reliability Facility (MWRF). Source water for the MWRF is pulled from deep below ground. This water, which is safe to drink prior to treatment, has an amber tint from ancient redwoods in the groundwater basin. Mesa Water uses nanofiltration technology to remove the tint and adds this clear, purified water to its water supply.

Mesa Water's emergency backup supply, should it be needed, would be provided by imported water from the Municipal Water District of Orange County (MWDOC). MWDOC delivers water supplies imported by Metropolitan from the State Water Project and the Colorado River. This imported water is filtered at Metropolitan's Diemer and Weymouth Filtration Plants, which also use chloramines for disinfection.



## Basic Information About Drinking Water Contaminants

Sources of drinking water (for both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land, or through the layers of the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and 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 storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and 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 gasoline stations, urban stormwater runoff, agricultural application, and septic systems; and/or,
- ◆ **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production or mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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.

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.



# Important Information the EPA Would Like You to Know

## Issues in Water Quality that Could Affect Your Health

### Drinking Water Fluoridation



Mesa Water provides drinking water that contains naturally-occurring fluoride. Mesa Water does not add fluoride to the water it provides. Mesa Water occasionally supplements its local groundwater supply with water purchased from Metropolitan. In November 2007, Metropolitan began adding fluoride to drinking water. Fluoride levels in drinking water are limited under California state regulations to a maximum

dosage of 2 parts per million. Metropolitan adjusts the fluoride level to 0.6 to 1.2 parts per million to achieve an optimal fluoride level of 0.7 parts per million.

For more information about Metropolitan's fluoridation program, please contact:

#### Metropolitan Water District (Water Quality)

800.354.4420

Additional information about the fluoridation of drinking water is available from:

#### U.S. Centers for Disease Control and Prevention

800.232.4636 • [cdc.gov/fluoridation](https://cdc.gov/fluoridation)

#### American Water Works Association

[awwa.org](https://awwa.org)

### Cryptosporidium

*Cryptosporidium* is a microscopic organism that, when ingested, can cause diarrhea, fever, and other gastrointestinal symptoms. The organism comes from animal and/or human wastes and may be in surface water.

Metropolitan tested their source water and treated surface water for *Cryptosporidium* in 2018 but did not detect it. If it ever is detected, *Cryptosporidium* is eliminated by an effective treatment combination including sedimentation, filtration, and disinfection.

The U.S. EPA and Centers for Disease Control guidelines on the appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from U.S. EPA's Safe Drinking Water Hotline at 800.426.4791 weekdays between 10 a.m. and 4 p.m. Eastern Time (7 a.m. to 1 p.m. in California).

### 1,4-dioxane

1,4-dioxane is a chemical contaminant primarily used as an industrial stabilizer to enhance performance of solvents in many manufacturing processes. It is found in foods (shrimp, chicken, tomatoes, etc.) and food additives and ordinary household products (cosmetics, deodorants, and shampoos). The U.S. EPA has classified 1,4-dioxane as a probable human carcinogen. Due to limited data on health effects, there is no federal or state drinking water standard or maximum contaminant level (MCL). The State Board established a Notification Level of 1 part per billion (1 ppb) for 1,4-dioxane. The State Board does not recommend treatment or removal from service at the levels detected in Mesa Water's groundwater.

Mesa Water believes that the 1,4-dioxane found in the groundwater originated from the seawater injection barrier. An industrial discharger was identified as the principal source in the recycled water. This source was eliminated and an additional advanced oxidation treatment step was added to reduce 1,4-dioxane from future injection water.

For more information on 1,4 dioxane or other contaminants go to [waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/14-Dioxane.shtml](https://waterboards.ca.gov/drinking_water/certlic/drinkingwater/14-Dioxane.shtml).

### About Lead in Tap 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. Mesa Water is 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 [epa.gov/lead](https://epa.gov/lead).



# Additional Information of Interest about Water Quality

## Chloramines

Mesa Water's supply, like Metropolitan's, is treated with chloramines, a combination of chlorine and ammonia, as the drinking water disinfectant. Chloramines are effective in controlling the growth of bacteria and other microorganisms that may cause disease. Chloramines form fewer disinfection byproducts.

People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment.

Customers who maintain fish ponds, tanks, or aquaria should also make necessary adjustments in water quality treatment, as these disinfectants are toxic to fish.

For further information or if you have any questions about chloramines, please call Kay Lee, Mesa Water's Water Quality & Compliance Supervisor at 949.207.5491.

## Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people – such as those with cancer who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants – can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

## Unregulated Contaminants

Mesa Water conducted sampling under the Third Unregulated Contaminants Monitoring Rule (UCMR 3) in 2013-2014. Sampling for the Fourth Unregulated Contaminants Monitoring Rule (UCMR 4) started in 2018. The most recent results for the detected contaminants are listed at the bottoms of Tables 1, 2 and 3. To obtain additional information on this testing, please contact Kay Lee at 949.207.5491.

### Questions About Your Water?

For more information please contact  
Kay Lee, Water Quality & Compliance  
Supervisor, at 949.207.5491.

Should you need the report translated, please  
contact Public Affairs at 949.631.1201.

Mesa Water's Board of Directors meets on the  
second Thursday of each month at 6:00 p.m.  
at 1965 Placentia Avenue in Costa Mesa.

For more information, visit  
[MesaWater.org](http://MesaWater.org).

## Source Water Assessments

### Imported (Metropolitan) Water Assessment

Every five years, Metropolitan is required by the State Board to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

The most recent watershed sanitary surveys of its source water supplies from the Colorado River was updated in 2015 and the State Water Project was updated in 2016.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/storm-water runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater.

U.S. EPA also requires Metropolitan to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. Metropolitan completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps

determine whether more protective measures are needed.

A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling Metropolitan at 800.225.5693.

### Groundwater Assessment

An assessment of the drinking water sources for Mesa Water was completed in December 2002 and was updated in 2016. The sources are considered most vulnerable to the following activities: dry cleaners, gas stations, known contaminant plumes, metal plating/finishing/fabricating and plastics/synthetics producers.

A copy of the complete assessment is available at the State Water Resources Control Board, Division of Drinking Water, Santa Ana District, 2 MacArthur Place, Suite 150, Santa Ana, California 92707. You may request a summary of the assessment by contacting Kay Lee, Water Quality & Compliance Supervisor, at 949.207.5491.

**Table 1: 2018 Metropolitan Water District of Southern California Treated Surface Water**

| Constituent                                   | MCL           | PHG, or (MCLG) | Diemer Average | Weymouth Average | Range of Detections | MCL Violation? | Typical Source in Drinking Water                |
|-----------------------------------------------|---------------|----------------|----------------|------------------|---------------------|----------------|-------------------------------------------------|
| <b>Inorganic Chemicals – Tested in 2018</b>   |               |                |                |                  |                     |                |                                                 |
| Aluminum (ppm)                                | 1             | 0.6            | 0.124          | 0.105            | ND – 0.31           | No             | Treatment Process Residue, Natural Deposits     |
| Barium (ppm)                                  | 1             | 2              | 0.117          | 0.118            | 0.117 – 0.118       | No             | Refinery Discharge, Erosion of Natural Deposits |
| Bromate (ppb)                                 | 10            | 0.1            | 2              | 5                | ND – 10             | No             | Byproduct of Drinking Water Disinfection        |
| Fluoride (ppm) treatment-related              | 2             | 1              | 0.7            | 0.7              | 0.6 – 0.9           | No             | Water Additive for Dental Health                |
| <b>Secondary Standards* – Tested in 2018</b>  |               |                |                |                  |                     |                |                                                 |
| Aluminum (ppb)                                | 200*          | 600            | 124            | 105              | ND – 310            | No             | Treatment Process Residue, Natural Deposits     |
| Chloride (ppm)                                | 500*          | n/a            | 94             | 96               | 92 – 97             | No             | Runoff or Leaching from Natural Deposits        |
| Color (color units)                           | 15*           | n/a            | ND             | ND               | ND – 1              | No             | Naturally-occurring Organic Materials           |
| Odor (threshold odor number)                  | 3*            | n/a            | 2              | 3                | 1 – 4               | No             | Naturally-occurring Organic Materials           |
| Specific Conductance (µmho/cm)                | 1,600*        | n/a            | 906            | 954              | 825 – 1,010         | No             | Substances that Form Ions in Water              |
| Sulfate (ppm)                                 | 500*          | n/a            | 199            | 213              | 178 – 236           | No             | Runoff or Leaching from Natural Deposits        |
| Total Dissolved Solids (ppm)                  | 1,000*        | n/a            | 565            | 596              | 523 – 639           | No             | Runoff or Leaching from Natural Deposits        |
| <b>Unregulated Chemicals – Tested in 2018</b> |               |                |                |                  |                     |                |                                                 |
| Alkalinity, total as CaCO <sub>3</sub> (ppm)  | Not Regulated | n/a            | 106            | 112              | 99 – 117            | n/a            | Runoff or Leaching from Natural Deposits        |
| Boron (ppm)                                   | Not Regulated | n/a            | 0.13           | 0.13             | 0.13                | n/a            | Runoff or Leaching from Natural Deposits        |
| Calcium (ppm)                                 | Not Regulated | n/a            | 58             | 63               | 52 – 69             | n/a            | Runoff or Leaching from Natural Deposits        |
| Hardness, total as CaCO <sub>3</sub> (ppm)    | Not Regulated | n/a            | 240            | 254              | 219 – 274           | n/a            | Runoff or Leaching from Natural Deposits        |
| Hardness, total (grains/gallon)               | Not Regulated | n/a            | 14             | 15               | 13 – 16             | n/a            | Runoff or Leaching from Natural Deposits        |
| Magnesium (ppm)                               | Not Regulated | n/a            | 23             | 24               | 21 – 26             | n/a            | Runoff or Leaching from Natural Deposits        |
| pH (pH units)                                 | Not Regulated | n/a            | 8.1            | 8.1              | 8.1 – 8.2           | n/a            | Hydrogen Ion Concentration                      |
| Potassium (ppm)                               | Not Regulated | n/a            | 4.4            | 4.7              | 4.0 – 5.0           | n/a            | Runoff or Leaching from Natural Deposits        |
| Sodium (ppm)                                  | Not Regulated | n/a            | 92             | 98               | 86 – 103            | n/a            | Runoff or Leaching from Natural Deposits        |
| Total Organic Carbon (ppm)                    | Not Regulated | n/a            | 2.4            | 2.4              | 2.1 – 2.8           | n/a            | Various Natural and Man-made Sources            |

ppb = parts per billion; ppm = parts per million; µmho/cm = micromhos per centimeter; ND = not detected; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; n/a = not applicable  
 \*Chemical is regulated by a secondary standard.

| Turbidity – combined filter effluent<br>Diemer and Weymouth Filtration Plants | Treatment Technique | Turbidity Measurements |          | TT Violation? | Typical Source in Drinking Water |
|-------------------------------------------------------------------------------|---------------------|------------------------|----------|---------------|----------------------------------|
|                                                                               |                     | Diemer                 | Weymouth |               |                                  |
| 1) Highest single turbidity measurement (NTU)                                 | 0.3                 | 0.07                   | 0.06     | No            | Soil Runoff                      |
| 2) Percentage of samples less than 0.3 NTU                                    | 95%                 | 100%                   | 100%     | No            | Soil Runoff                      |

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of constituents in drinking water that is difficult and sometimes impossible to measure directly.  
 NTU = nephelometric turbidity units

## Metropolitan Water District of Southern California Unregulated Constituents Requiring Monitoring\*\*

| Constituent        | Notification Level | PHG | Average Amount | Range of Detections | Most Recent Sampling Dates |
|--------------------|--------------------|-----|----------------|---------------------|----------------------------|
| Germanium (ppb)    | n/a                | n/a | 0.1            | ND – 0.4            | 2018                       |
| Manganese (ppb)*** | SMCL = 50          | n/a | 1.7            | 0.8 – 2.5           | 2018                       |

SMCL = Secondary MCL

\*\*Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) sampling completed in 2018.

\*\*\*Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated constituents requiring monitoring.

## Table Legend

### Types of Water Quality Standards:

- ◆ **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.
- ◆ **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.
- ◆ **Secondary MCLs:** Set to protect the odor, taste, and appearance of drinking water.
- ◆ **Primary Drinking Water Standard:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- ◆ **Regulatory Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

### Types of Water Quality Goals:

In addition to mandatory water quality standards, U.S. EPA and the State Board have set voluntary water quality goals for some contaminants. Water quality goals are often set at

such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes three types of water quality goals:

- ◆ **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 U.S. EPA.
- ◆ **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.
- ◆ **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.

### Water Quality Measurements:

Water is sampled and tested throughout the year. Contaminants are measured in:

- ◆ parts per million (ppm) or milligrams per liter (mg/L)
- ◆ parts per billion (ppb) or micrograms per liter (µg/L)
- ◆ parts per trillion (ppt) or nanograms per liter (ng/L)

## Total Coliform Rule

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Effective April 1, 2016, all water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

## Want Additional Information?

There's a wealth of information on the internet about drinking water quality and water issues in general. A good place to begin your own research is the Mesa Water District website: [MesaWater.org](http://MesaWater.org)

**Table 2: 2018 Mesa Water District Groundwater Quality**

| Constituent                                   | MCL           | PHG (MCLG) | Avg. Amount | Range of Detections | MCL Violation? | Most Recent Sampling | Typical Source in Drinking Water      |
|-----------------------------------------------|---------------|------------|-------------|---------------------|----------------|----------------------|---------------------------------------|
| <b>Radiologicals</b>                          |               |            |             |                     |                |                      |                                       |
| Uranium (pCi/L)                               | 20            | 0.43       | ND          | ND – 2.29           | No             | 2017                 | Erosion of Natural Deposits           |
| <b>Inorganic Constituents</b>                 |               |            |             |                     |                |                      |                                       |
| Arsenic (ppb)                                 | 10            | 0.004      | ND          | ND – 2              | No             | 2018                 | Erosion of Natural Deposits           |
| Fluoride (ppm)                                | 2             | 1          | 0.46        | 0.2 – 0.71          | No             | 2018                 | Erosion of Natural Deposits           |
| Nitrate (ppm as N)                            | 10            | 10         | 0.52        | ND – 1.63           | No             | 2018                 | Fertilizers, Septic Tanks             |
| Nitrate+Nitrite (ppm as N)                    | 10            | 10         | 0.52        | ND – 1.63           | No             | 2018                 | Fertilizers, Septic Tanks             |
| <b>Secondary Standards*</b>                   |               |            |             |                     |                |                      |                                       |
| Color (color units)                           | 15*           | n/a        | ND          | ND – 8              | No             | 2018                 | Erosion of Natural Deposits           |
| Chloride (ppm)                                | 500*          | n/a        | 58.2        | 16.2 – 122          | No             | 2018                 | Erosion of Natural Deposits           |
| Odor (threshold odor number)                  | 3*            | n/a        | ND          | ND – 2              | No             | 2018                 | Naturally-occurring Organic Materials |
| Specific Conductance (µmho/cm)                | 1,600*        | n/a        | 576         | 301 – 914           | No             | 2018                 | Erosion of Natural Deposits           |
| Sulfate (ppm)                                 | 500*          | n/a        | 51          | 1.4 – 172           | No             | 2018                 | Erosion of Natural Deposits           |
| Total Dissolved Solids (ppm)                  | 1,000*        | n/a        | 348         | 174 – 590           | No             | 2018                 | Erosion of Natural Deposits           |
| Turbidity (NTU)                               | 5*            | n/a        | 0.25        | ND – 1              | No             | 2018                 | Erosion of Natural Deposits           |
| <b>Unregulated Constituents</b>               |               |            |             |                     |                |                      |                                       |
| Alkalinity, total (ppm as CaCO <sub>3</sub> ) | Not Regulated | n/a        | 146         | 98.1 – 190          | n/a            | 2018                 | Erosion of Natural Deposits           |
| Bicarbonate (ppm as HCO <sub>3</sub> )        | Not Regulated | n/a        | 174         | 120 – 219           | n/a            | 2018                 | Erosion of Natural Deposits           |
| Boron (ppm)                                   | Not Regulated | n/a        | 0.19        | ND – 0.44           | n/a            | 2018                 | Erosion of Natural Deposits           |
| Calcium (ppm)                                 | Not Regulated | n/a        | 36.4        | 6.9 – 94.8          | n/a            | 2018                 | Erosion of Natural Deposits           |
| 1,4-Dioxane (ppb)                             | Not Regulated | n/a        | 1.4         | ND – 3.7            | n/a            | 2018                 | Treated Wastewater                    |
| Hardness, total (ppm as CaCO <sub>3</sub> )   | Not Regulated | n/a        | 120         | 19.7 – 327          | n/a            | 2018                 | Erosion of Natural Deposits           |
| Hardness, total (grains/gal)                  | Not Regulated | n/a        | 7           | 1.2 – 19            | n/a            | 2018                 | Erosion of Natural Deposits           |
| Magnesium (ppm)                               | Not Regulated | n/a        | 7.23        | 0.6 – 21.9          | n/a            | 2018                 | Erosion of Natural Deposits           |
| N-Nitrosodimethylamine (NDMA) (ppt)           | Not Regulated | 3          | ND          | ND                  | n/a            | 2018                 | Treated Wastewater                    |
| pH (units)                                    | Not Regulated | n/a        | 8.1         | 7.7 – 8.6           | n/a            | 2018                 | Acidity, hydrogen ions                |
| Potassium (ppm)                               | Not Regulated | n/a        | 1.6         | 0.9 – 2.5           | n/a            | 2018                 | Erosion of Natural Deposits           |
| Sodium (ppm)                                  | Not Regulated | n/a        | 72.1        | 36.1 – 150          | n/a            | 2018                 | Erosion of Natural Deposits           |
| Vanadium (ppb)                                | Not Regulated | n/a        | 5.3         | 3.3 – 8.1           | n/a            | 2018                 | Erosion of Natural Deposits           |

ppb = parts-per-billion; ppm = parts-per-million; ppt = parts-per-trillion; pCi/L = picoCuries per liter; NTU = nephelometric turbidity units; ND = not detected; n/a = not applicable; µmho/cm = micromho per centimeter  
MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal \*Constituent is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

**Mesa Water District Groundwater Unregulated Constituents Requiring Monitoring\*\*\***

| Chemical                               | Notification Level | PHG        | Average Amount | Range of Detections | Most Recent Sampling Dates |
|----------------------------------------|--------------------|------------|----------------|---------------------|----------------------------|
| 1,4-Dioxane (ppb)                      | 1                  | n/a        | 2.19           | ND – 5.42           | 2014                       |
| Bromide (ppm)                          | n/a                | n/a        | 0.34           | 0.038 – 0.814       | 2018                       |
| Chlorate (ppb)                         | 800                | n/a        | 132            | 61.6 – 328          | 2014                       |
| Chromium, Hexavalent (ppb)             | n/a                | 0.02       | 0.29           | ND – 0.68           | 2014                       |
| Chromium, Total (ppb)                  | MCL = 50           | MCLG = 100 | 0.2            | ND – 0.5            | 2014                       |
| Germanium (ppb)                        | n/a                | n/a        | 0.32           | ND – 1.2            | 2018                       |
| Manganese (ppb)**                      | SMCL = 50          | n/a        | 3.4            | ND – 6.9            | 2018                       |
| Molybdenum, Total (ppb)                | n/a                | n/a        | 4.8            | 3.3 – 7.2           | 2014                       |
| Strontium, Total (ppb)                 | n/a                | n/a        | 428            | 120 – 775           | 2014                       |
| Total Orgnic Carbon (Unfiltered) (ppm) | n/a                | n/a        | 2              | 0.14 – 5.58         | 2018                       |
| Vanadium, Total (ppb)                  | 50                 | n/a        | 3.7            | 0.4 – 5.8           | 2014                       |

SMCL = Secondary MCL

\*\*Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated constituents requiring monitoring.

\*\*\*Third Unregulated Contaminant Monitoring Rule (UCMR 3) sampling completed in 2014; Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) sampling completed in 2018.

**Table 3: 2018 Mesa Water District Distribution System Water Quality**

| Disinfection Byproducts      | MCL (MRDL/MRDLG) | Average Amount | Range of Detections | MCL Violation? | Typical Source in Drinking Water    |
|------------------------------|------------------|----------------|---------------------|----------------|-------------------------------------|
| Total Trihalomethanes (ppb)  | 80               | 27             | 1.7 – 34            | No             | Byproducts of Chlorine Disinfection |
| Haloacetic Acids (ppb)       | 60               | 6              | ND – 7              | No             | Byproducts of Chlorine Disinfection |
| Chlorine Residual (ppm)      | (4 / 4)          | 1.94           | 0.35 – 2.90         | No             | Disinfectant Added for Treatment    |
| <b>Aesthetic Quality</b>     |                  |                |                     |                |                                     |
| Color (color units)          | 15*              | ND             | ND – 3              | No             | Erosion of Natural Deposits         |
| Odor (threshold odor number) | 3*               | 1              | ND – 2              | No             | Erosion of Natural Deposits         |
| Turbidity (NTU)              | 5*               | ND             | ND – 0.28           | No             | Erosion of Natural Deposits         |

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; 25 locations are tested monthly for color, odor and turbidity. MRDL = Maximum Residual Disinfectant Level; ND = not detected; MRDLG = Maximum Residual Disinfectant Level Goal; NTU = nephelometric turbidity units; < = detected but less than the reporting limit; PHG = Public Health Goal; \*Contaminant is regulated by a secondary standard to maintain aesthetic qualities.

| Bacterial Quality       | MCL  | MCLG | Highest Monthly Percent Positives | MCL Violation? | Typical Source of Contaminant        |
|-------------------------|------|------|-----------------------------------|----------------|--------------------------------------|
| Total Coliform Bacteria | 5.0% | 0    | 0.78%                             | No             | Naturally Present in the Environment |

No more than 5.0% of the monthly samples may be positive for total coliform bacteria. The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/*E. coli*, constitutes an acute MCL violation.

**Lead and Copper Action Levels at Residential Taps**

| Action Level (AL) | PHG | 90 <sup>th</sup> Percentile Value | Sites Exceeding AL / # of Sites | AL Violation? | Typical Source in Drinking Water |
|-------------------|-----|-----------------------------------|---------------------------------|---------------|----------------------------------|
| Copper (ppm)      | 1.3 | 0.05                              | 0 / 51                          | No            | Corrosion of Household Plumbing  |
| Lead (ppb)        | 15  | ND                                | 0 / 51                          | No            | Corrosion of Household Plumbing  |

Every three years, at least 50 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2017. Lead was detected in one (1) sample. Copper was detected in six (6) samples. None of the lead and copper detections exceeded the action level. A regulatory action level is the concentration of a constituent which, if exceeded, triggers treatment or other requirements that a water system must follow. In 2018, 20 schools (one school district) submitted a request to be sampled for lead.

**Mesa Water District Distribution System Unregulated Constituents Requiring Monitoring\*\***

| Constituent                    | Notification Level | PHG        | Average Amount | Range of Detections | Most Recent Sampling Dates |
|--------------------------------|--------------------|------------|----------------|---------------------|----------------------------|
| Bromochloroacetic Acid (ppb)   | n/a                | n/a        | 1.6            | ND – 2.5            | 2018                       |
| Bromodichloroacetic Acid (ppb) | n/a                | n/a        | 0.51           | ND – 1              | 2018                       |
| Chlorate (ppb)                 | 800                | n/a        | 106            | 88.1 – 134          | 2014                       |
| Chlorodibromoacetic Acid (ppb) | n/a                | n/a        | 0.46           | ND – 1.2            | 2018                       |
| Chromium, Hexavalent (ppb)     | n/a                | 0.02       | 0.27           | 0.19 – 0.34         | 2014                       |
| Chromium, Total (ppb)          | MCL = 50           | MCLG = 100 | 0.15           | ND – 0.3            | 2014                       |
| Dibromoacetic Acid (ppb)       | n/a                | n/a        | 1.9            | ND – 5.2            | 2018                       |
| Dichloroacetic Acid (ppb)      | n/a                | MCLG = 0   | 1.4            | ND – 3.4            | 2018                       |
| Molybdenum, Total (ppb)        | n/a                | n/a        | 4.7            | 3.5 – 6.0           | 2014                       |
| Strontium, Total (ppb)         | n/a                | n/a        | 501            | 372 – 614           | 2014                       |
| Tribromoacetic Acid (ppb)      | n/a                | n/a        | 0.39           | ND – 3.7            | 2018                       |
| Trichloroacetic Acid (ppb)     | n/a                | MCLG = 20  | 0.39           | ND – 1.1            | 2018                       |
| Vanadium, Total (ppb)          | 50                 | n/a        | 3.8            | 3.7 – 4.0           | 2014                       |

\*\*Third Unregulated Contaminant Monitoring Rule (UCMR 3) sampling completed in 2014; Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) sampling completed in 2018.

# Tips for Being Waterwise

The recent five-year drought required customers to reduce water use and improve efficiencies. During the statewide drought emergency, our customers reduced their water use more than 20 percent by adjusting their sprinkler settings, converting thirsty lawns to drought-tolerant plants, and completely transforming their landscapes with mulch, bioswales, drip irrigation, and waterwise plants. Many have committed to taking shorter showers, running full loads of dishes and laundry, and checking household plumbing for leaks.

Though the emergency conservation period is over, some rules remain in effect to prevent water waste



and encourage long-term water use efficiency practices, such as:

- ◆ Water landscapes only before 8 a.m. or after 5 p.m.
- ◆ No watering sidewalks or driveways
- ◆ No watering during or 48 hours after rainfall
- ◆ Use a hose with a shut-off nozzle when washing your vehicle
- ◆ No excess runoff from watering landscapes
- ◆ Detect and repair leaky plumbing devices

For a year-round, recommended watering schedule, and other waterwise tips, please visit:

[MesaWater.org/save-water](https://MesaWater.org/save-water)

## How to Find a Leak with Your Residential Water Meter

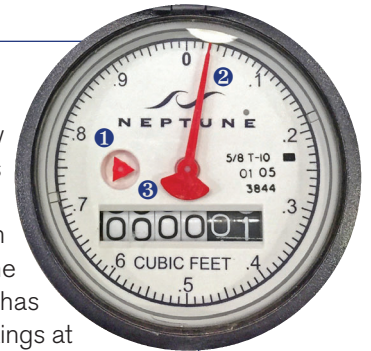
Your water meter is usually located between the sidewalk and curb under a cement cover. Remove the cover by inserting a screwdriver in the hole in the lid and then carefully lift the cover. The meter reads straight across, like the odometer on your car. Read only the white numbers (0000).

If you are trying to determine if you have a leak, turn off all the water in your home, both indoor and outdoor faucets, and then check the dial for any movement of the low-flow indicator. If there is movement, that indicates a possible leak between the meter and your plumbing system.

For additional water saving tips, visit:

[MesaWater.org/save-water](https://MesaWater.org/save-water)

- 1 **Low-Flow Indicator** — The low flow indicator will spin if any water is flowing through the meter.
- 2 **Sweep Hand** — Each full revolution of the sweep hand indicates that one cubic foot of water (7.48 gallons) has passed through the meter. The markings at the outer edge of the dial indicate tenths and hundredths of one cubic foot.
- 3 **Meter Register** — The meter register is a lot like the odometer on your car. The numbers keep a running total of all the water that has passed through the meter. The register will indicate the cubic feet of water has passed through the meter.



This report contains important information about your drinking water.

Translate it, or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Spanish

“هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب). ترجم التقرير، أو تكلم مع شخص يستطيع أن يفهم التقرير.”

Arabic

이 안내는 매우 중요합니다. 본인을 위해 번역인을 사용하십시오.

Korean

Chi tiết này thật quan trọng. Xin nhờ người dịch cho quý vị.

Vietnamese

此份有关你的食水报告，内有重要资料和信息，请找他人替你翻译及解释清楚。

Chinese

この報告書には上水道に関する重要な情報が記されております。翻訳を御依頼なされるか、内容をご理解なさっておられる方にお尋ね下さい。

Japanese

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