

# NTMWD Leonard Water Treatment Plant

## Monthly Water Quality Data for October 2023

### Coliform Bacteria

| Maximum Contaminant Level Goal | Total Coliform Maximum Contaminant Level | Highest No. of Positive | Fecal Coliform or E. Coli Maximum Contaminant Level | Total No. of Positive E. Coli or Fecal Coliform Samples | Violation | Likely Source of Contamination        |
|--------------------------------|--|-------------------------|---|---|-----------|---------------------------------------|
| 0                              | 1 positive monthly sample                | 0                       | 0   | 0   | No        | Naturally present in the environment. |

NOTE: Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

### Regulated Contaminants

| Disinfection By-Products | Collection Date | Highest Level Detected         | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination          |
|--------------------------|-----------------|--------------------------------|--------------------------|------|-----|-------|-----------|---|
| Bromate                  | Oct-23          | Levels lower than detect level | 0 - 0                    | 5    | 10  | ppb   | No        | By-product of drinking water ozonation. |

NOTE: For Bromate, compliance is based on the running annual average.

| Inorganic Contaminants         | Collection Date | Raw (Source Water)             | Treated (Finished Water)       | MCLG | MCL | Units | Violation | Likely Source of Contamination   |
|--------------------------------|-----------------|--------------------------------|--------------------------------|------|-----|-------|-----------|--|
| Arsenic                        | Oct-23          | 2.26 - 4.49                    | 0.696 - 1.04                   | 0    | 10  | ppb   | No        | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.                              |
| Barium                         | Oct-23          | 0.072 - 0.090                  | 0.040 - 0.060                  | 2    | 2   | ppm   | No        | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.  |
| Cadmium                        | Oct-23          | Levels lower than detect level | Levels lower than detect level | 5    | 5   | ppb   | No        | Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints. |
| Chromium                       | Oct-23          | Levels lower than detect level | Levels lower than detect level | 100  | 100 | ppb   | No        | Discharge from steel and pulp mills; erosion of natural deposits.  |
| Fluoride                       | Oct-23          | 0.203 - 0.217                  | 0.195 - 0.212                  | 4    | 4   | ppm   | No        | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.           |
| Mercury                        | Oct-23          | 0.415 - 0.415                  | Levels lower than detect level | 2    | 2   | ppb   | No        | Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.                   |
| Nitrate (measured as Nitrogen) | Oct-23          | 0.176 - 0.396                  | 0.089 - 0.215                  | 10   | 10  | ppm   | No        | Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.   |
| Selenium                       | Oct-23          | 1.11 - 1.54                    | Levels lower than detect level | 50   | 50  | ppb   | No        | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.                                    |

Nitrate Advisory: 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 you should ask advice from your health care provider.

### Turbidity

|   | Limit (Treatment Technique) | Level Detected | Violation | Likely Source of Contamination |
|---|-----------------------------|----------------|-----------|--------------------------------|
| Highest single measurement                  | 1 NTU                       | 0.08           | No        | Soil runoff.                   |
| Lowest monthly percentage (%) meeting limit | 0.3 NTU                     | 100%           | No        | Soil runoff.                   |

NOTE: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

### Maximum Residual Disinfectant Level

| Disinfectant Type               | Year   | Average Level | Range of Levels Detected | MRDL | MRDLG | Units | Violation | Source of Chemical                     |
|---------------------------------|--------|---------------|--------------------------|------|-------|-------|-----------|--|
| Chlorine Residual (Chloramines) | Oct-23 | 3.80          | 3.80 - 3.80              | 4.00 | <4.0  | ppm   | No        | Disinfectant used to control microbes. |
| Chlorine Dioxide                | Oct-23 | 0.00          | 0.00 - 0.04              | 0.80 | 0.80  | ppm   | No        | Disinfectant.                          |
| Chlorite                        | Oct-23 | 0.10          | 0.05 - 0.27              | 1.00 | N/A   | ppm   | No        | Disinfectant.                          |

NOTE: Water providers are required to maintain a minimum chlorine disinfection residual level of 0.5 parts per million (ppm) for systems disinfecting with chloramines and an annual average chlorine disinfection residual level of between 0.5 (ppm) and 4 parts per million (ppm).

### Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured through the month, and the system met all TOC removal requirements set.

### Cryptosporidium and Giardia

| Contaminants    | Collection Date | Raw (Source Water) | Treated (Finished Water) | Units        | Likely Source of Contamination                                      |
|-----------------|-----------------|--------------------|--------------------------|--------------|---|
| Cryptosporidium | Oct-23          | 0                  | 0                        | (Oo) Cysts/L | Human and animal fecal waste. Naturally present in the environment. |
| Giardia         | Oct-23          | 0                  | 0                        | (Oo) Cysts/L | Human and animal fecal waste. Naturally present in the environment. |

**NTMWD Leonard Water Treatment Plant**  
**Monthly Water Quality Data for October 2023 (Cont.)**

**Lead and Copper**

| Lead and Copper | Collection Date | Raw (Source Water) | Treated (Finished Water)       | Action Level | Units | Violation | Likely Source of Contamination  |
|-----------------|-----------------|--------------------|--------------------------------|--------------|-------|-----------|---|
| Lead            | Oct-23          | 0.984 - 0.984      | Levels lower than detect level | 15           | ppb   | No        | Corrosion of household plumbing systems; erosion of natural deposits.                                   |
| Copper          | Oct-23          | 0.0012 - 0.0029    | 0.0035 - 0.0054                | 1.3          | ppm   | No        | Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems. |

NOTE: Monthly independent lab testing results for lead and copper at the entry point to the NTMWD transmission system.

ADDITIONAL HEALTH INFORMATION FOR LEAD: 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. NTMWD 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 or at <http://www.epa.gov/safewater/lead>.

**Secondary and Other Constituents Not Regulated**

| Contaminants                          | Collection Date | Raw (Source Water) | Treated (Finished Water)       | Units | Secondary Standards     | Likely Source of Contamination  |
|---------------------------------------|-----------------|--------------------|--------------------------------|-------|-------------------------|---|
| Calcium                               | Oct-23          | 47.1 - 50.0        | 46.9 - 48.3                    | ppm   | No Standard Established | Abundant naturally occurring element.   |
| Chloride                              | Oct-23          | 5.70 - 5.80        | 11.3 - 14.4                    | ppm   | 300                     | Abundant naturally occurring element; used in water purification; by-product of oil field activity. |
| Corrosivity Index                     | Oct-23          | Not applicable     | 0.02 - 1.0                     | units | No Standard Established | Values greater than zero are scale forming, whereas, values less than zero are more corrosive.      |
| Iron                                  | Oct-23          | 0.351 - 0.576      | Levels lower than detect level | ppm   | 0.3                     | Erosion of natural deposits; iron or steel water delivery equipment or facilities.                  |
| Magnesium                             | Oct-23          | 2.87 - 3.63        | 2.77 - 3.47                    | ppm   | No Standard Established | Abundant naturally occurring element.   |
| Manganese                             | Oct-23          | 0.078 - 1.08       | 0.063 - 0.089                  | ppm   | 0.05                    | Abundant naturally occurring element.   |
| Nickel                                | Oct-23          | 0.0021 - 0.0039    | 0.0043 - 0.0066                | ppm   | No Standard Established | Erosion of natural deposits.  |
| pH                                    | Oct-23          | 7.5 - 8.7          | 7.6 - 8.6                      | units | >7                      | Measure of corrosivity of water.  |
| Potassium                             | Oct-23          | 4.28 - 5.66        | 3.93 - 4.86                    | ppm   | No Standard Established | Abundant naturally occurring element.   |
| Silver                                | Oct-23          | 0.524 - 0.524      | Levels lower than detect level | ppm   | 0.1                     | Erosion of natural deposits.  |
| Sodium                                | Oct-23          | 9.27 - 10.7        | 31.3 - 34.9                    | ppm   | No Standard Established | Erosion of natural deposits; by-product of oil field activity.                                      |
| Sulfate                               | Oct-23          | 6.82 - 8.85        | 65.1 - 81.1                    | ppm   | 300                     | Naturally occurring; common industrial by-product; by-product of oil field activity.                |
| Total Alkalinity as CaCO <sub>3</sub> | Oct-23          | 136 - 142          | 116 - 137                      | ppm   | No Standard Established | Naturally occurring soluble mineral salts.  |
| Total Dissolved Solids                | Oct-23          | 159 - 186          | 249 - 263                      | ppm   | 500 - 1000              | Total dissolved mineral constituents in water.  |
| Total Hardness as CaCO <sub>3</sub>   | Oct-23          | 120 - 168          | 118 - 124                      | ppm   | No Standard Established | Naturally occurring calcium.  |
| Zinc                                  | Oct-23          | 0.0031 - 0.0032    | 0.0028 - 0.0037                | ppm   | 5                       | Moderately abundant naturally occurring element used in the metal industry.                         |

**Taste and Odor Compounds**

| Analytes           | Collection Date | Raw (Source Water)<br>Range of Levels Detected | Treated (Finished Water)<br>Range of Levels Detected | Units | Secondary Standards     | Likely Source of Contamination  |
|--------------------|-----------------|--|--|-------|-------------------------|---|
| Geosmin            | Oct-23          | Levels lower than detect level                 | Levels lower than detect level                       | ppt   | No Standard Established | Compound naturally found in lakes. Causes earthy, dirt-like odor.     |
| 2-Methylisoborneol | Oct-23          | 2.7 - 2.7                                      | Levels lower than detect level                       | ppt   | No Standard Established | Compound naturally found in lakes. Causes musty, wet mulch like odor. |

Note: Geosmin and 2-Methylisoborneol, produced by cyanobacteria, filamentous bacteria and other organisms, are found in surface water sources and are the most commonly reported taste and odor compounds. They have earthy-musty odors which are difficult to remove by conventional water treatment processes. The human nose is extremely sensitive to these compounds. The threshold for detection for Geosmin is approximately 15 parts per trillion (ng/L) and for MIB is approximately 10 ppt. However, variations in human perception of taste and odor, means that some people may detect Geosmin in concentrations as low as 5 ppt and MIB in concentrations as low as 2 ppt - which is roughly equivalent to a teaspoon of Geosmin into 200 Olympic-sized swimming pools.