

2018 Annual Drinking Water Quality Report

Noble

PWSID# OK2001411

We are very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is groundwater drawn from local aquifers.

In addition to the Annual Water Quality Report, we were required to adopt a Source Water Assessment & Protection (SWAP) plan. The purpose of this plan is to help identify any threats to our water systems. The SWAP outlines any possible threats & what steps we intend to take in order to keep the water system safe and operational for our valued customers. A copy of this plan is available for viewing by calling Mike Blanton at (405) 872-9251 and setting up an appointment.

If you have any questions about this report or concerning your water utility, please contact Mike Blanton at (405) 872-9251. We want our valued customers to be informed about their water utility.

Noble routinely monitors for constituents in your drinking water according to Federal and State laws. The table below shows the results of our monitoring for the period of January 1st to December 31st, 2017. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. (Some of our data may be more than one year old because the state allows us to monitor for some contaminants less often than once a year.)

WATER QUALITY DATA TABLE

The table below lists all of the drinking water contaminants we detected for the calendar year of this report and any from previous years that were test for in previous years. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these table are from testing done in the calendar year of the report.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Level 1 Assessment: A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

NA: not applicable.

NR: Monitoring not required, but recommended

Parts per million (ppm) or Milligrams per liter (mg/l)

Parts per billion (ppb) or Micrograms per liter (ug/l)

Parts per trillion (ppt) or Nanograms per liter (nanograms/l)

Parts per quadrillion (ppq) or Picograms per liter (picograms/l)

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Action Level Goal (ALG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - The MCL 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 - The MCLG 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.

TEST RESULTS

| Microbiological Contaminants | | | | | | |
|------------------------------|---------------|----------------------------|----------------------------|--------------------------|--|---------------------------------------|
| Contaminant | Violation Y/N | Max Contaminate Level Goal | Highest Number of Positive | Total Number of + E.Coli | | Likely Source of Contamination |
| Total Coliform Bacteria | N | 0 | 0 | 0 | | Naturally present in the environment. |

Disinfectants and Disinfection By Products

| Contaminant | Violation Y/N | Level Detected | Range Detected | MCL | MCLG | Likely Source of Contamination |
|---|---------------|----------------|-----------------|------------|-----------|---|
| Total Trihalomethanes (ppb) (TTHM) (2017 sample) | No | 17 ppb | 16.5 – 16.5 ppb | 80 | N/A | Byproduct of drinking water disinfection. |
| Total Haloacetic Acids (ppb) (2017 sample) (HAA5) | No | 1 | 1.3 - 1.3 | 60 | N/A | Byproduct of drinking water disinfection. |
| Chlorine (2016) (ppm) | No | 1 | 1 - 1 | MRDLG 4 | MRDL 4 | Water additive used to control microbes. |

Inorganic Contaminants

| | | | | | | |
|---|----|---------------------|---------------------|-----|-----|--|
| Arsenic (ppb) (2013 sample) | No | Less than indicator | Less than indicator | 10 | 0 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| Barium (ppb) (2015 Sample) | No | 0.36 ppm | .306 - .36 ppm | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. |
| Nitrate (ppm) (as Nitrogen) (2017 Sample) | No | 2.00 ppm | 0.27 – 2.01 ppm | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |
| Chromium (ppb) (2015 Sample) | No | 17.1 ppb | 12.4-17.1 ppb | 100 | 100 | Discharge from steel and pulp mills; erosion of natural deposits. |
| Fluoride (ppb) (2014 Sample) | No | 0.22 ppb | 0 – 0.22 ppb | 4 | 4 | Erosion of natural deposits: Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Selenium (ppb) (2014 Sample) | No | Less than indicator | Less than indicator | 50 | 50 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines. |

Lead & Copper Contaminants

| | | | | | | |
|-----------------------------|----|-----------|-----|---------|-----|---|
| Copper (ppm) (2016 Samples) | No | 0.151 ppm | N/A | AL=1.30 | 1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |
|-----------------------------|----|-----------|-----|---------|-----|---|

Radioactive Contaminants

| | | | | | | |
|---|----|------------|-------------------|----------|---|---|
| Beta/photon emitters (5/14/2014 Sample) | No | 4.05 pCi/L | 3.22 – 4.05 pCi/L | 50 pCi/L | 0 | Erosion of natural and man-made deposits. |
| Combined Radium (226/228) (5/14/2014 Sample) | No | 1.41 pCi/L | 0– 1.41 pCi/L | 5 | 0 | Erosion of natural deposits. |
| Gross alpha excluding Radium and Uranium (5/14/2014 Sample) | No | 9.33 pCi/L | 4.23– 9.33 pCi/L | 15 | 0 | Erosion of natural deposits. |
| Uranium (5/14/2014 Sample) | No | 5.2 ug/l | 3 – 5.2 ug/l | 30 | 0 | Erosion of natural deposits. |

Health effects for:

- Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially- harmful, bacteria may be present. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants and the young. If the limit for E-Coli or Fecal coliform are exceeded, the water supplier must notify the public through the use of newspaper, television or radio.
- 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.
- 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.

Violations:

The table below shows that our water system had a **no violation** of the Total Coliform Rule this year. The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply, which includes testing all the city water wells that produced water the day the sample was taken and a site within 5 houses upstream and downstream. If this limit is exceeded, the water supplier must notify the public through the use of newspaper, television or radio.

Sources of Drinking Water:

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 before we treat 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

**Pesticides and herbicides*, which may come from a variety of sources such as agriculture and residential uses.

**Radioactive contaminants*, which are naturally occurring or be the result of oil and gas production and mining activities.

**Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

The sources of 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 EPA's Safe Drinking Water Hotline (800-426-4791).

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Some people may be more vulnerable to contaminants in drinking water than the general population.

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 from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. We 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a significant increased risk of having the described health effect.

This is the Annual Water Quality Report for the period of January 1 to December 31, 2018. This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

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SOURCES WATER INFORMATION

| Source Water Name | Type of Water | Report Status | Location |
|------------------------------|---------------|---------------|------------------------|
| Fisher Well 1, 2, 3, 4 and 5 | Ground Water | A (active) | Canadian River Terrace |
| Well 14 | Ground Water | A (active) | Central Oklahoma |
| Well 15 | Ground Water | A (active) | Central Oklahoma |
| Well 16 | Ground Water | A (active) | Central Oklahoma |
| Well 17 | Ground Water | A (active) | Central Oklahoma |

This notice is being sent to you by City of Noble, PWSID No.OK2001411

For further information contact:

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