



## 2020 WATER QUALITY REPORT FOR THE CITY OF CORNELIUS OR. PWSID#: 4100218

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water. We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you. For more information about this report, or for any questions relating to your drinking water, please call Rene Redelsperger, City of Cornelius Water Technician, at (503) 357-3011.



### Community Participation

You're invited to participate in City decisions that may affect water quality. City Council meetings are held at the Cornelius City Hall located at 1355 N. Barlow Street, the first Monday of each month, at 7:00 pm. Find meeting agenda information at [www.ci.cornelius.or.us](http://www.ci.cornelius.or.us).



Barney Reservoir

### Where Does My Water Come From?

All of the water provided by the City of Cornelius is treated surface water, which means it comes out of a river or reservoir. In 2019, the City of Cornelius purchased over 368 million gallons of water from the City of Hillsboro. Hillsboro's winter water source is the upper Tualatin River. In summer, the river level drops too low for municipal use, so Hillsboro relies upon water stored in Barney Reservoir and Hagg Lake to meet customer needs. Hillsboro's water is drawn out of the upper Tualatin River for filtration and treatment at the Joint Water Commission (JWC) Treatment Plant. The plant operates 24 hours per day, 365 days per year. After water is treated, it passes through a 72-inch transmission line that runs through Cornelius on its way to Hillsboro. Our water distribution system is connected to Hillsboro's transmission line in three different locations: 10th and Heather; 12th and Baseline; and 18th and Baseline, which feeds the recently constructed Aquifer Storage Reservoir (ASR) and the 1.5-million-gallon storage reservoir located at Water Park.

### Water Assessment Report

The Department of Environmental Quality (DEQ) and the Oregon Department of Human Services (DHS) completed a source water assessment that identified the surface areas supplying water to the Tualatin River intakes. They also inventoried the potential contaminant sources that may affect the water supply. A total of 306 potential contaminant sources were identified, and 295 of those sources are located in sensitive areas. Sensitive areas include places with high soil permeability, high soil erosion potential, high runoff potential, and areas within

1,000 feet of a river or stream. Potential sources of watershed contamination include the following: agricultural/forest management applications, commercial land uses, residential/municipal land uses, and landslide and clear-cut forest areas. These are the existing potential sources of contamination that could, if improperly managed or released, affect the water quality in the watershed. The JWC-Cherry Grove Source Water Assessment Report provides additional details on the methodology and results of this assessment. The full report is available for review at the Hillsboro Water Department, 150 East Main Street, Hillsboro, or call (503) 615-6702 for more information.

### Important Information

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)

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 for 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 microbial 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. The City of Cornelius 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 (800-426-4791)** or at: [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)

**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, radio-active 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, 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which 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, The EPA prescribes regulations which limit the amount of certain contaminants in water provided by public health systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

**Unregulated Contaminant Monitoring Rule**

The City of Cornelius has complied with the EPA’s unregulated contaminant monitoring rule (UCMR) and results are available upon request. No unregulated contaminants, tested for as part of this program, have been detected through the rigorous monitoring process. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. For more information, please call Rene Redelsperger at (503) 357-3011

**Sampling Results**

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

**DEFINITIONS**

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

**Level 1 Coliform Investigation:** 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.

**MCL (Maximum Contaminant Level):** The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG (Maximum Contaminant Level Goal):** 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.

**MRDL (Maximum Contaminant Level Goal):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity or turbidity, of water. Turbidity in excess of NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

**Regulated Substances**

All samples from JWC Water Treatment Plant except as noted

| SUBSTANCE<br>Unit of measure  | YEAR<br>SAMPLED | MCL<br>[MRDL]         | MCLG<br>[MRDLG] | AMOUNT<br>DETECTED | RANGE<br>LO-HI            | SOURCE  |
|---|-----------------|-----------------------|-----------------|--------------------|---------------------------|---|
| Chlorine (ppm)  | 2019            | 4                     | 4               | 1.31               | 0.08-1.31                 | Water additive used to control microbes                 |
| Nitrate<br>[as nitrogen]<br>(ppm)   | 2019            | 10                    | 10              | .32                | 0.04-0.32                 | Run-off from fertilizer;<br>Erosion of natural deposits |
| Barium (ppm)  | 2019            | 2                     | 2               | 0.005              | 0.0041-0.005              | Erosion of natural deposits                             |
| *Turbidity (NTU)  | 2019            | TT                    | NA              | 0.13               | 0.02-0.13                 | Soil run-off  |
| Turbidity (Lowest monthly percentage of samples meeting limit of 0.3 NTU) | 2019            | TT                    | NA              | 100%               | 100%                      | Soil run-off  |
| **Total Coliform Bacteria<br>(City of Cornelius)                          | 2019            | 1 pos. monthly sample | N/A             | 0                  | 3 positive annual samples | Naturally present in environment                        |

**Disinfection By-products (City of Cornelius)**

|   |      |    |    |                             |           |   |
|---|------|----|----|-----------------------------|-----------|---|
| <b>Halo Acetic Acids [HAA]</b><br>IDSE results (ppb)      | 2019 | 60 | NA | 24.4 Running annual average | 14.1-36.2 | By-product of drinking water disinfection |
| <b>Total Trihalomethanes [TTHM]</b><br>IDSE results (ppb) | 2019 | 80 | NA | 44 Running annual average   | 29.1-63.2 | By-product of drinking water disinfection |

**Lead and Copper (City of Cornelius)**

| SUBSTANCE<br>unit of measure | YEAR<br>SAMPLED | AL  | MC<br>LG | AMOUNT<br>DETECTED<br>(90 <sup>th</sup><br>%tile) | SITES<br>ABOVE<br>AL/TOTAL<br>SITES | SOURCE   |
|------------------------------|-----------------|-----|----------|---|-------------------------------------|--|
| Copper (ppm)                 | 2017            | 1.3 | 1.3      | .135  | 0/30                                | Corrosion of household plumbing; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb)                   | 2017            | 15  | 0        | 4   | 0/30                                | Corrosion of household plumbing; erosion of natural deposits                                   |

\*Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

\*\*Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct investigation(s) to identify problems and to correct any problems that were found during these investigation(s).

During the past year, we were required to conduct one level 1 coliform investigation. One level 1 coliform investigation was completed. In addition, we were required to take no corrective actions.