



Staff Report

File #: 22-0626

**REQUEST FOR CITY COUNCIL AND
CORONA UTILITY AUTHORITY ACTION**

DATE: 08/03/2022

TO: Honorable Mayor and City Council Members
Honorable President and Board Members

FROM: Utilities Department

SUBJECT:
Public Hearing for a report on Water Quality relative to Public Health Goals for Calendar Years 2019 through 2021.

EXECUTIVE SUMMARY:

California public water systems must prepare a report that gives information to the Public on the detection of any contaminants above the Public Health Goals (PHG). A PHG is the level of a chemical contaminant in drinking water that does not pose a significant risk to health. PHGs are not regulatory standards and are not enforceable or required to be met by the Public Water System. However, State law requires the State Water Resources Control Board to set drinking water standards for chemical contaminants as close to the corresponding PHG as is economically and technologically feasible. The drinking water quality for the City of Corona meets all drinking water standards set to protect public health.

RECOMMENDED ACTIONS:

That the:

- a. City Council hold a public hearing regarding the Report on Water Quality relative to Public Health Goals for 2019 through 2021.
- b. City Council approve the Report on Water Quality relative to Public Health Goals for 2019 through 2021.
- c. Corona Utility Authority review, ratify and to the extent necessary direct that the City Council

take the above actions.

BACKGROUND & HISTORY:

Provisions under the California Health and Safety Code specify that water utilities must prepare a report on water quality relative to Public Health Goals (PHG) by July 1, 2022. This applies to water systems with more than 10,000 service connections where the water quality has exceeded any of the established PHGs. PHGs are set by the California Office of Environmental Health Hazard Assessment (OEHHA) which is part of the California Environmental Protection Agency.

There are currently no regulations that outline requirements for the preparation of PHG Reports. However, the Association of California Water Agencies' (ACWA) Water Quality Committee prepared suggested guidelines for water utilities to use. The guidelines suggested by the ACWA Water Quality Committee were utilized in the preparation of this report.

ANALYSIS:

The PHG Report must contain information on the contaminants that exceeded the PHG in drinking water, including an estimate of the cost associated with the removal of such contaminants to reduce the level below the PHG using the best available technology and the health risk associated with each of the contaminants. The California Division of Drinking Water (DDW) specifies that a public hearing should be held sometime after July 1, 2022, for the purpose to accept and respond to public comment. At the same time, approval of the report from the governing council should be requested.

The City of Corona has over 43,000 drinking water connections. Sampling results presented exceedances above the PHG for Arsenic, Gross Alpha Particles, Coliform Bacteria, Hexavalent Chromium, Perchlorate, and Uranium. For these reasons, we are required to present this triennial report that covers the calendar years 2019, 2020, and 2021.

CONTAMINANTS FOUND IN DRINKING WATER ABOVE THE PHG

Arsenic: It is a chemical naturally occurring in groundwater due to erosion; runoff from orchards; glass and electronics production wastes. The PHG for arsenic is 0.004 parts per billion (ppb) and the Maximum Contaminant Level (MCL) is 10 ppb. Arsenic was detected above the PHG in the local groundwater: Wells 7A, 8A, 9A, 11A, 12A, 14, 15, 17A, 19, 22, 25, 26, 28, 31, and 33. Average Arsenic detected in groundwater was 1.86 ppb. The calculated average after treatment and blending was 0.08 ppb.

Gross Alpha Particle Activity (gross alpha): It is a measure of the total amount of radioactivity in a water sample attributable to the radioactive decay of alpha-emitting elements. It naturally occurs in groundwater due to erosion. The Maximum Contaminant Level Goal (MCLG) is zero and the MCL is 15 picocuries per liter (pCi/L). Gross alpha was detected in the local groundwater: Wells 7A, 8A, 17A, 19, 22, 25, 26, 27, 31, and 33. Average gross alpha detected in groundwater was 11.6 pCi/L. The calculated average after treatment and blending was 0.140 pCi/L.

Coliform Bacteria: It includes a large group of many types of bacteria that occur throughout the environment and in the feces of all warm-blooded animals and humans. Most types of coliform

bacteria are harmless to humans, but some can cause mild illnesses, and a few can lead to serious waterborne diseases. Coliform bacteria are often referred to as “indicator organisms” because they indicate the potential presence of disease-causing bacteria in water. The MCLG is zero and the MCL is 5% of the samples collected monthly. The City collects between 120 and 150 routine coliform bacteria samples every month. During 2019, no more than 1% of these samples were positive in a month. During 2020, no more than 0% of these samples were positive in a month. During 2021, no more than 0% of these samples were positive in a month.

Hexavalent Chromium: Hexavalent chromium is a toxic form of the element chromium. Hexavalent chromium compounds are man-made and widely used in many different industries. The PHG for Hexavalent chromium is 0.02 ppb, there is currently no MCL set. Hexavalent Chromium was detected above the PHG in the local groundwater: Wells 7A, 8A, 9A, 11A, 12A, 14, 15, 17A, 19, 22, 25, 26, 27, 28, 31, and 33. Average hexavalent chromium detected in groundwater was 0.75 ppb. The calculated average after treatment and blending was 0.074 ppb.

Perchlorate: Perchlorate is a chemical that can occur naturally in the environment and also may be released by fireworks, improper handling or disposal of rocket fuel, and various industrial processes. The PHG for Perchlorate is 1 ppb, the MCL is 6 ppb. Perchlorate was detected above the PHG in the local groundwater: Wells 7A, 8A, 9A, 11A, 12A, 14, 17A, 19, 22, 25, 27, 28, 31, 33. Average Perchlorate detected in groundwater was 5.5 ppb. The calculated average after treatment and blending was 0.80 ppb.

Uranium: Uranium is a radioactive compound that naturally occurs in varying amounts in the earth’s crust. The PHG for Uranium is 0.43pCi/L, the CA MCL is 20 pCi/L. Uranium was detected above the PHG in the local groundwater: Wells 7A, 8A, 12A, 15, 17A, 19, 22, 25, 26, 27, 28, 31, 29, and 33. Average Uranium detected in groundwater was 9.7 pCi/L. The calculated average after treatment and blending was 0.2921 pCi/L.

BEST AVAILABLE TECHNOLOGY AND COSTS

The Best Available Technology (BAT) to lower the level of arsenic, gross alpha, hexavalent chromium, and uranium below the PHG is reverse osmosis (RO). Cost estimating guides from ACWA’s guidance report were used in determining the estimated cost to implement additional RO. Please note cost estimates are theoretical. According to the cost estimates provided by ACWA, installing and operating an RO system would cost between \$2.25 to \$4.75 per 1,000 gallons of water treated. The estimated annualized capital, operation, and maintenance costs for the City to install, run, and maintain would range from \$23.7 million per year to \$50 million per year. The cost per customer connection would range from \$542 to \$1,144 per year.

The BAT to lower the level of Perchlorate below the PHG is Ion Exchange (IE). Cost estimating guides from the ACWA guidance report were used in determining the estimated cost to implement additional IE. Please note that cost estimates are theoretical. According to the cost estimates provided by ACWA, to install and operate an IE system would cost between \$0.73 to \$0.97 per 1,000 gallons of water treated. The estimated annualized capital, operation, and maintenance costs for the City to install, run, and maintain would range from \$7.7 million per year to \$10.2 million per year.

The cost per customer connection would range from \$176 to \$234 per year.

The BAT for inactivating coliform bacteria in drinking water as determined by the State is the protection of wells from coliform contamination, maintenance of a disinfectant residual throughout the distribution system, proper maintenance and flushing of the distribution system, and filtration and/or disinfection of surface and groundwater. The City currently disinfects all water served to the Public through the addition of chloramines and costs associated with this action are included in the annual budget. The City maintains a chloramine residual in the distribution system which is used to deliver drinking water to ensure the water is microbiologically safe. The chloramine residual levels are carefully controlled to provide the best health protection without causing the water to have an undesirable taste and odor or increasing the Disinfection By-Product (DBPs) levels. Other equally important measures that have been implemented include an effective cross-connection control program, an effective monitoring program, a successful tank cycling program, routine dead-end flushing program and maintaining positive pressure in our distribution system.

In summary, the City's water system complies with all the health-based drinking water standards and maximum contaminant levels required by the California Division of Drinking Water and the United States Environmental Protection Agency. Therefore, no actions to address any of the contaminants contained within the attached report are proposed at this time. Staff is recommending the approval of the Report on Water Quality relative to Public Health Goals for the monitoring period of January 1, 2019, thru December 31, 2021.

FINANCIAL IMPACT:

There is no fiscal impact associated with the recommended actions.

ENVIRONMENTAL ANALYSIS:

This action is exempt pursuant to Section 15061(b)(3) of the Guidelines for the California Environmental Quality Act (CEQA), which states that a project is exempt from CEQA if the activity is covered by the commonsense exemption that CEQA applies only to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. This action involves the approval of the Report on Water Quality relative to Public Health Goals for the monitoring period of January 1, 2019, thru December 31, 2021. There is no possibility that the recommended action will have a significant effect on the environment. Therefore, no environmental analysis is required.

PREPARED BY: KRISTIAN ALFELOR, OPERATIONS MANAGER

REVIEWED BY: TOM MOODY, DIRECTOR OF UTILITIES

Attachment:

1. Exhibit 1 - Report on Water Quality relative to Public Health Goals