# City of Newport Beach

# 2025 Drinking Water Quality Report

# on Public Health Goals

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Prepared By:

City of Newport Beach Utilities Department

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## About the Newport Beach Utilities Department

The City of Newport Beach Utilities Department manages the City's water sources. Our water is a blend of about 80 percent groundwater and 20 percent imported surface water, serving approximately 66,000 residents through 26,000 connections. Newport's groundwater comes from four wells located in the City of Fountain Valley and is pumped to a reservoir in Newport Beach. Groundwater comes from a natural underground aquifer layered with sand and gravel that works as a natural water filter. The water is replenished from the Santa Ana River, local rainfall, recycled/replenished water and imported water. The imported surface water is primarily from the Colorado Aqueduct and sometimes from Northern California's State Water Project.

The City of Newport Beach's drinking water is constantly monitored from source to tap for regulated and unregulated chemicals. Our drinking water quality testing programs are carried out by professional and certified laboratories. Testing is performed in our reservoirs and throughout our distribution system, at our groundwater wells and in the basin, from our imported water connections, and at the water treatment plants.

Some areas in the City of Newport Beach receive drinking water from an outside water agency, including Mesa Water District and Irvine Ranch Water District. Please check your water bill to confirm which water agency provides your drinking water and refer to its water quality report. You may also contact the City of Newport Beach Utilities Department for clarification on whether this water quality report pertains to the drinking water provided to your home or business.

Newport Beach's water is in full compliance with all state and federal drinking water regulations, which are designated to protect public health. In addition, every June, the Department mails a detailed drinking water quality report to all water users. That annual report is also available on the City's website.

<u>Important Acronyms:</u>

CalEPA – California Environmental Protection Agency
DDW – Division of Drinking Water (California)
MCLG - Maximum Contaminant Level Goals (Federal)
MCL - Maximum Contaminant Levels
OEHHA - Office of Environmental Health Hazard Assessment (California)
PHG - Public Health Goals (California)
SWRCB - State Water Resources Control Board (California)
USEPA - United States Environmental Protection Agency

## Background

Provisions of the California Health and Safety Code Section 116470 (b) specify public water systems serving more than 10,000 service connections must prepare a report every three years (July 2025) if their water quality measurements have exceeded any Public Health Goals (PHGs). PHGs are theoretical non-enforceable goals established by the California-Environmental Protection Agency's (CalEPA's) and Office of Environmental Health Hazard Assessment (OEHHA) and are based solely on public health risk considerations. The law also requires that where OEHHA has not adopted a PHG for a constituent, the water suppliers are to use the Maximum Contaminant Level Goals (MCLG's) adopted by United States Environmental Protection Agency (USEPA). Only constituents which have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed.

If a constituent was detected in the City's water supply between 2022 and 2024 at a level exceeding an applicable PHG or MCLG, this report provides the information required by the law. Included is the numerical public health risk associated with the PHG or MCLG, the Maximum Contaminant Level (MCL), the category or type of risk to health that could be associated with each constituent, the best treatment technology available that could be used to reduce the constituent level, and an estimate of the cost to install that treatment if it is appropriate and feasible.

## What are PHGs?

102 PHGs are set by the OEHHA, which is part of Cal-EPA, and are based solely on public health risk considerations. PHGs also do not consider practical risk-management factors such as analytical detection capability, available treatment technologies, benefits and costs. The PHGs are not enforceable and are not required to be met by any public water system. MCLGs are the federal equivalent to PHGs.

## Water Quality Data Considered

All of the water quality data collected throughout our water system between 2022 and 2024 for the purpose of determining compliance with drinking water standards was considered. This 2025 PHG Report has been prepared to address the requirements set forth in Section 116470 of the California Health and Safety Code. It is based on water quality analyses during calendar years 2022, 2023, and 2024. This 2025 PHG Report has been designed to be as informative as possible, without unnecessary duplication of information contained in the Consumer Confidence Report (also known as the Water Quality Report), which is mailed to customers by July 1st of each year.

## Guidelines Followed

There are no regulations explaining requirements for the preparation of PHG reports. A workgroup of the Association of California Water Agencies (ACWA) Water Quality

Committee has prepared suggested guidelines for water utilities to use in preparing PHG reports. The ACWA guidelines were used in the preparation of this 2025 PHG Report. These guidelines include tables of cost estimates for BAT. The State of California (State) provides ACWA with numerical health risks and category of health risk information for contaminants with PHGs. This health risk information is appended to the ACWA guidelines.

## Best Available Treatment Technology and Cost Estimates

Both the USEPA and DDW adopt what are known as best available technologies, or BATs, which are the best-known methods of reducing contaminant levels to the MCL. Since PHGs and MCLGs are typically set much lower than the MCL, determining the type of treatment that is needed to further reduce a contaminant to the PHG or MCLG is not always possible or feasible. For example, if the PHG or MCLG are below the existing detection limit for the purpose of reporting (DLR), which is the statutory level at which a constituent can be measured for a drinking water. Estimating costs to further reduce a constituent below an unknown level is difficult, if not impossible, because it is not possible to verify this reduction by analytical means. Installing treatment technologies to further reduce low levels of one constituent may in some cases have adverse effects on other aspects of water quality. As such, the cost estimates used in this report do not account for these unintended consequence and are highly speculative and theoretical.

## Summary of Constituents Detected That Exceed a PHG or a MCLG

(ppb = parts per billion, ND = no detection, pCi/L = picocuries per liter)

| Constituent | Goal | Detections | Detection Average | Legal Max | Lowest Testing Capability |
|---|---|---|---|---|---|
| Arsenic | 0.004 ppb | ND – 4.5ppb | 2.1 ppb | 10.0 ppb | 1.0 ppb |
| Hexavalent Chromium | 0.02 ppb | ND – 0.32 ppb | 0.2 ppb | 10.0 ppb | 0.1 ppb |
| Perchlorate | 1.0 ppb | ND – 1.4 ppb | ND | 6.0 ppb | 1.0 ppb |
| Gross Alpha | 0 ppb | ND – 5 pCi/L | ND | 15 pCi/L | 1.0 pCi/L |
| Gross Beta | 0 ppb | ND – 5 pCi/L | 4.0 pCi/L | 50 pCi/L | 4.0 pCi/L |
| Uranium | 0.43 pCi/l | ND -12.9 pCi/L | 2.5 pCi/L | 20 pCi/L | 0.67 pCi/L |

The following is a discussion of constituents that were detected in one or more of our drinking water sources at levels above the PHG, or if there is no PHG, above the MCLG.

### *Arsenic*

Arsenic is a naturally occurring element present in rocks and sediments. It can enter drinking water through natural deposits or as a result of industrial activities. The health risk category for MCL arsenic is carcinogenicity, meaning it is a substance capable of causing cancer.

The PHG for arsenic is 0.004 ppb, which is significantly below the current and lowest detection limits of 1.0 ppb. Arsenic was measured above the PHG at Newport's groundwater wells ranging from non-detect (ND) to 4.5 ppb. These values are well below the MCL of 10 ppb. The City's water source has been in full compliance with Federal and State drinking water standards for the MCL for arsenic.

The recommended BAT treatment for the removal of Arsenic in large water systems below PHG's Reverse osmosis (RO). The estimated cost to reduce arsenic below the PHG using RO was calculated based on cost estimates provided in the Association of California Water Agencies (ACWA) guidelines. Achieving the water quality goal for arsenic using RO could cost approximately $47.6 million per year, or $1779 per service connection per year in addition to the City's current water rates. A RO system is not considered feasible and no local water agencies are using RO for system wide treatment of these constituents.

*Hexavalent Chromium:*

Hexavalent Chromium is found naturally occurring throughout the environment. It is also a heavy metal that has been used in industrial applications. In rocks, plants, soil and animals and may enter the groundwater by the weathering of rocks or from industrial contamination. Exposure to high levels of this chemical may have adverse health effects. According to OEHHA, the PHG for Hexavalent Chromium is based on a theoretical model of drinking water containing hexavalent chromium in excess of the MCL over many years have an increased cancer risk level.

The PHG for hexavalent chromium is 0.02 ppb, which is significantly below the current and lowest detection limits of 0.1 ppb. Hexavalent chromium was measured above the PHG at Newport's groundwater wells. The concentration of arsenic from all wells ranged from non-detect (ND) to 0.32 ppb. These values are well below the MCL of 10 ppb. The City's water source has been in full compliance with Federal and State drinking water standards for the MCL for hexavalent chromium.

The recommended BAT treatment for the removal of Hexavalent Chromium in large water systems below PHG's and MCLG'S is Reverse osmosis (RO). The estimated cost to reduce this below the PHG using RO was calculated based on cost estimates provided in the Association of California Water Agencies (ACWA) guidelines. Achieving the water quality goal for arsenic using RO could cost approximately $47.6 million per year, or $1779 per service connection per year in addition to the City's current water rates. A RO system is not considered feasible and no local water agencies are using RO for system wide treatment of these constituents.

*Perchlorate:*

Perchlorate is a chemical that can occur naturally in the environment and also may be released by fireworks, improper handling fuel, and various industrial processes.

Perchlorate is known to block the thyroid's ability to take in and process iodide, which is a nutrient essential to brain development, growth, heart function, and other systems.

The PHG for perchlorate is 1.0 ppb, which is significantly below the lowest detection limits of 1.0 ppb. Perchlorate was measured above the PHG at Newport's groundwater wells ranging from non-detect (ND) to 1.4 ppb. These values are well below the MCL of 6 ppb. The City's water source has been in full compliance with Federal and State drinking water standards for the MCL for perchlorate.

The recommended BAT treatment for the removal of perchlorate in large water systems below PHG's and MCLG'S is Reverse osmosis (RO). The estimated cost to reduce this below the PHG using RO was calculated based on cost estimates provided in the Association of California Water Agencies (ACWA) guidelines. Achieving the water quality goal for arsenic using RO could cost approximately $47.6 million per year, or $1779 per service connection per year in addition to the City's current water rates. A RO system is not considered feasible and no local water agencies are using RO for system wide treatment of these constituents.

*Gross Alpha, Gross Beta, and Uranium:*

Gross alpha, gross beta and uranium are naturally occurring radionuclide and radioactivity found through the erosion of natural deposits and can be naturally occurring in groundwater and surface water.

OEHHA has examined the practicality of proposing a PHG for gross alpha and gross beta but concluded that it would not be practical to develop because the results are used as a screening tool to categorize alpha and beta emitters. The MCLGs for all radionuclides are set at 0 picocuries per liter (pCi/L). Gross alpha and gross beta radioactivity are classified as carcinogenic. The MCL for gross alpha activity (including radium 226, but excluding radon and uranium) is 15 pCi/L. The MCL for gross beta particle activity is 50 pCi/L. Gross alpha was measured above the PHG at Newport's groundwater wells ranging from non-detect (ND) to 5 pCi/L. These values are well below the MCL of 15 pCi/L. The concentration of gross beta from treated surface water purchased from Metropolitan ranged from non-detect (ND) to 5 pCi/L. These values are well below the MCL of 50 pCi/L.

The health risk category for uranium is carcinogenicity. The theoretical health risk associated with the PHG is 1 excess theoretical case of cancer in 1,000,000 (1×10-6). Uranium was measured above the PHG at Newport's groundwater wells and surface water ranging from non-detect (ND) to 12.9 pCi/L. These values are well below the MCL of 20 pCi/L. The City's water source has been in full compliance with Federal and State drinking water standards for the MCL for gross alpha, gross beta and uranium.

The recommended BAT treatment for the removal of Uranium, Gross Alpha or Beta, in large water systems below PHG's and MCLG'S is Reverse osmosis (RO). The estimated cost to reduce these below the PHG using RO was calculated based on cost estimates provided in the Association of California Water Agencies (ACWA) guidelines. Achieving the water quality goal for arsenic using RO could cost approximately $47.6 million per

year, or $1779 per service connection per year in addition to the City's current water rates. A RO system is not considered feasible and no local water agencies are using RO for system wide treatment of these constituents.

## Recommendations for Further Action

Drinking water delivered by City of Newport Beach is safe and meets or exceeds all state and federal drinking water standards set to protect public health. The City conducts over 20,000 water quality annually to ensure our water meets rigorous drinking water standards.

To further reduce the levels of the constituents identified in this report, all of which are well below the health-based MCL, additional costly treatment processes would be required. The effectiveness of the identified best-available treatment processes to provide any significant reductions in constituent levels at these already low values is uncertain and may not realistically be possible. The health protection benefits of these hypothetical reductions are unclear and may not be quantifiable. Therefore, no further action is proposed.

For additional information, please contact the Utilities Department at (949)644-3011.