



GOLDEN STATE WATER COMPANY SAN DIMAS

2025 Public Health Goal Report

**Pursuant to Section 116355
of the California Health and Safety Code**

JUNE 2025



**Main San Gabriel Basin
WATERMASTER**

2025 Public Health Goal (PHG) Report

Golden State Water Company-San Dimas System

1.0 Introduction

Under the Calderon-Sher Safe Drinking Water Act of 1996 public water systems in California serving greater than 10,000 service connections must prepare a report containing information on 1) detection of any contaminant in drinking water at a level exceeding a Public Health Goal (PHG), 2) estimate of costs to remove detected contaminants to below the PHG using Best Available Technology (BAT), and 3) health risks for each contaminant exceeding a PHG. This report must be made available to the public every three years. The initial PHGs Report was due on July 1, 1998, and subsequent reports are due every three years thereafter.

The 2025 PHGs 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 or, if certain analyses were not performed during those years, the most recent data is used. The 2025 PHGs Report has been designed to be as informative as possible, without unnecessary duplication of information contained in the Consumer Confidence Report (also known as Water Quality Report), which is provided to customers by July 1 of each year.

There are no regulations explaining requirements for the preparation of PHGs 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 PHGs reports. The ACWA guidelines were used in the preparation of this 2025 PHGs 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.

2.0 California Drinking Water Regulatory Process

California Health and Safety Code Section 116365 requires the State to develop a PHG for every contaminant with a primary drinking water standard or for any contaminant the State is proposing to regulate with a primary drinking water standard. A PHG is the level of a contaminant in drinking water that poses no significant health risk if consumed for a lifetime. The process of establishing a PHG is a risk assessment based strictly on human health considerations. PHGs are recommended targets and are not required to be met by any public water system.

The State office designated to develop PHGs is the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA). The PHG is then forwarded to the State Water Resources Control Board, Division of Drinking Water (DDW) for use in revising or developing a Maximum Contaminant Level (MCL) in drinking water. The MCL is the highest level of a contaminant that is allowed in drinking water. State MCLs cannot

be less stringent than federal MCLs and must be as close as is technically and economically feasible to the PHGs. DDW is required to take treatment technologies and cost of compliance into account when setting an MCL. Each MCL is reviewed at least once every five years.

Two radiological contaminants (gross alpha particle activity and gross beta particle activity) have MCLs but do not yet have designated PHGs. For these contaminants, the Maximum Contaminant Level Goal (MCLG), the federal U.S. Environmental Protection Agency (USEPA) equivalent of PHGs, is used in the 2025 PHGs Report.

3.0 Identification of Contaminants

Section 116470(b)(1) of the Health and Safety Code requires public water systems serving more than 10,000 service connections to identify each contaminant detected in drinking water that exceeded the applicable PHG. Section 116470(f) requires the MCLG to be used for comparison if there is no applicable PHG.

Golden State Water Company (Golden State Water) - San Dimas System has approximately 16,168 service connections. From 2022 to 2024, Golden State Water's water supplies included local groundwater, treated surface water purchased from Covina Irrigating Company (CIC), and purchased water from Three Valleys Municipal Water District (TVMWD) which includes surface water treated by TVMWD and Metropolitan Water District of Southern California (MWDSC). The following constituents were detected at one or more locations within the drinking water system at levels that exceeded the applicable PHGs or MCLGs.

- Arsenic is naturally occurring in treated water purchased from CIC and TVMWD.
- Bromate is formed when naturally occurring bromide reacts with ozone during the disinfection process in treated water purchased from TVMWD.
- E. coli is naturally occurring in the environment but can also be an indicator of the presence of other pathogenic organisms originating from sewage, livestock or other wildlife.
- Gross Alpha Particle Activity (gross alpha) is naturally occurring in local groundwater and treated water purchased from CIC.
- Gross Beta Particle Activity (gross beta) is naturally occurring in treated water purchased from TVMWD.
- Hexavalent Chromium is naturally occurring in local groundwater, and treated water purchased from CIC and TVMWD.
- Perchlorate is industrial contamination in local groundwater.
- Perfluorooctanesulfonic acid (PFOS) is industrial contamination in local groundwater and treated water purchased from TVMWD.

- Perfluorooctanoic acid (PFOA) is industrial contamination in local groundwater and treated water purchased from TVMWD.
- Radium, Combined, is the sum of Radium-226 and Radium-228 and is naturally occurring in treated water purchased from TVMWD.
- Uranium is naturally occurring in local groundwater, and treated water purchased from the CIC and TVMWD.

Table 1 shows the applicable PHG or MCLG and MCL for each contaminant identified above. Table 1 includes the maximum, minimum, and average concentrations of each contaminant which exceeds a PHG or MCLG in drinking water supplied by Golden State Water in calendar years 2022 to 2024.

4.0 Numerical Public Health Risks

Section 116470(b)(2) of the Health and Safety Code requires disclosure of the numerical public health risk, determined by OEHHA, associated with the MCLs, PHGs and MCLGs. Available numerical health risks developed by OEHHA for the contaminants identified above are shown on Table 1. Only numerical risks associated with cancer-causing chemicals have been quantified by OEHHA.

Arsenic - OEHHA has determined the health risk associated with the PHG is 1 excess case of cancer in a million people and the risk associated with the MCL is 2.5 excess cases of cancer in 1,000 people exposed over a 70-year lifetime.

Bromate - OEHHA has determined the health risk associated with the PHG is 1 excess case of cancer in a million people and the risk associated with the MCL is 1 excess case of cancer in 10,000 people exposed over a 70-year lifetime.

E. coli - OEHHA has not established a PHG. USEPA has established an MCLG of 0.

Gross Alpha - OEHHA has not established a PHG. USEPA has established an MCLG of 0. USEPA has determined the risk associated with the MCL is 1 excess case of cancer in 1,000 people exposed over a 70-year lifetime for the most potent alpha emitter.

Gross Beta - OEHHA has not established a PHG. USEPA has established an MCLG of 0. USEPA has determined the risk associated with the MCL is 2 excess cases of cancer in 1,000 people exposed over a 70-year lifetime for the most potent beta emitter.

Hexavalent Chromium - OEHHA has determined the health risk associated with the PHG is 1 excess case of cancer in a million people and the risk associated with the MCL is 5 excess cases of cancer in 10,000 people exposed over a 70-year lifetime.

Perchlorate - OEHHA has not established a numerical health risk for perchlorate because PHGs for non-carcinogenic chemicals in drinking water are set at a concentration at which no known or anticipated adverse health risks will occur, with an adequate margin of safety.

PFOS - OEHHA has determined the health risk associated with the PHG is 1 excess case of cancer in a million people. There is no California MCL for PFOS; therefore, the risk information associated with the MCL is not available/applicable.

PFOA - OEHHA has determined the health risk associated with the PHG is 1 excess case of cancer in a million people. There is no California MCL for PFOA; therefore, the risk information associated with the MCL is not available/applicable.

Radium, Combined - OEHHA has determined that the health risk associated with the PHG is 1 excess case of cancer in one million people over a 70-year lifetime exposure; and the risk associated with the MCL is 1 excess case of cancer in 10,000 people for radium-226 and 3 excess cases of cancer in 10,000 people for radium-228 over a 70-year lifetime exposure.

Uranium - OEHHA has determined the health risk associated with the PHG is 1 excess case of cancer in a million people and the risk associated with the MCL is 5 excess cases of cancer in 100,000 people exposed over a 70-year lifetime.

5.0 Identification of Risk Categories

Section 116470(b)(3) of the Health and Safety Code requires identification of the category of risk to public health associated with exposure to the contaminant in drinking water, including a brief, plainly worded description of those terms. The risk categories and definitions for the contaminants identified above are shown on Table 1.

6.0 Description of Best Available Technology

Section 116470(b)(4) of the Health and Safety Code requires a description of the BAT, if any is available on a commercial basis, to remove or reduce the concentrations of the contaminants identified above. The BATs are shown on Table 1.

7.0 Costs of Using Best Available Technologies and Intended Actions

Section 116470(b)(5) of the Health and Safety Code requires an estimate of the aggregate cost and cost per customer of utilizing the BATs identified to reduce the concentration of a contaminant to a level at or below the PHG or MCLG. In addition, Section 116470(b)(6) requires a brief description of any actions the water purveyor intends to take to reduce the concentration of the contaminant and the basis for that decision.

Arsenic - The BATs for removal of arsenic in water for large water systems are: activated alumina, coagulation/filtration, lime softening, ion exchange, and reverse osmosis. Arsenic was detected above the PHG in treated water purchased from CIC and TVMWD. All drinking water supplies comply with the MCL for arsenic. The estimated cost to reduce arsenic levels to below

the PHG of 0.004 microgram per liter ($\mu\text{g/l}$) using ion exchange was calculated. Because the Detection Limit for purposes of Reporting (DLR) for arsenic is 2 $\mu\text{g/l}$, treating arsenic to below the PHG level means treating arsenic to below the DLR of 2 $\mu\text{g/l}$. There are numerous factors influencing the actual cost of reducing arsenic levels to the PHG. Achieving the water quality goal for arsenic could cost approximately \$1,160,000 per year, or \$72 per service connection per year.

Bromate - The BATs for removal of bromate in water for large water systems are: coagulation/filtration optimization, granular activated carbon, and reverse osmosis. Bromate was detected above the PHG in the treated water purchased from TVMWD. All drinking water supplies comply with the MCL for bromate. The estimated cost to reduce bromate levels in TVMWD water to below the PHG of 0.1 $\mu\text{g/l}$ using reverse osmosis was calculated. Because the DLR for bromate is 1 $\mu\text{g/l}$, treating bromate to below the PHG level means treating bromate to below the DLR of 1 $\mu\text{g/l}$. There are numerous factors that may influence the actual cost of reducing bromate levels to the PHG. Achieving the water quality goal for bromate could range from approximately \$2,230,000 to \$19,100,000 per year, or between \$138 and \$1,180 per service connection per year.

E. coli – The BAT for removal of E. coli in drinking water has been determined by USEPA to be disinfection. Golden State Water already disinfects all water served to the public. Chlorine is used to disinfect the water because it is an effective disinfectant and residual concentrations can be maintained to guard against biological contamination in the water distribution system.

E. coli bacteria are indicator organisms that are ubiquitous in nature. They are a useful tool because of the ease in monitoring and analysis. Golden State Water collects weekly samples for total coliforms, which include E. coli, at various locations in the distribution. If E. coli bacteria are detected in the drinking water sample, it indicates a potential problem that needs to be investigated and followed up with additional sampling. It is not unusual for a system to have an occasional positive sample. Although USEPA set the MCLG for E. coli at 0 detection, there is no commercially available technology that will guarantee 0 detection every single month; therefore, the cost of achieving the PHG cannot be estimated.

Golden State Water will continue several programs that are in place to prevent contamination of the water supply with microorganisms. These include:

- Disinfection using chlorine and maintenance of a chlorine residual at every point in the distribution system.
- Monitoring throughout the distribution system to verify the absence of total coliforms and E. coli and the presence of a protective chlorine residual.
- Flushing program in which water pipelines known to have little use are flushed to remove stagnant water and bring in fresh water with residual disinfectant.
- Cross-connection control program that prevents the accidental entry of non-disinfected water into the drinking water system.

Hexavalent Chromium - The BATs for removal of hexavalent chromium in water for large water systems are: ion exchange, reduction/coagulation/filtration, and reverse osmosis.

Hexavalent chromium was detected above the PHG at all groundwater wells, and treated surface water purchased from CIC and TVMWD. All drinking water supplies comply with the MCL for hexavalent chromium. The estimated cost to reduce hexavalent chromium levels in the groundwater and treated surface water to below the PHG of 0.02 µg/l using reduction/coagulation/filtration was calculated. Because the DLR for hexavalent chromium is 0.1 µg/l, treating hexavalent chromium to below the PHG level means treating hexavalent chromium to below the DLR of 0.1 µg/l. There are numerous factors that may influence the actual cost of reducing hexavalent chromium levels to the PHG. Achieving the water quality goal for hexavalent chromium could be approximately \$1,690,000 to \$10,500,000 per year, or between \$104 and \$652 per service connection per year.

Perchlorate - The BATs for removal of perchlorate in water for large water systems are ion exchange and biological fluidized bed reactor. Perchlorate was detected above the PHG at two groundwater wells. All drinking water supplies comply with the MCL for perchlorate. The estimated cost to reduce perchlorate levels in the groundwater to below the PHG of 1 µg/l using ion exchange was calculated. Because the DLR for perchlorate is 1 µg/l, treating perchlorate to below the PHG level means treating perchlorate to below the DLR of 1 µg/l. There are numerous factors that may influence the actual cost of reducing perchlorate levels to the PHG. Achieving the water quality goal for perchlorate could be approximately \$180,000 to \$394,000 per year, or between \$11 and \$24 per service connection per year.

PFOS and PFOA - The BATs for removal of PFOS and PFOA in water for large water systems are: granular activated carbon, ion exchange, and reverse osmosis. PFOS and PFOA were detected above their respective PHGs at two groundwater wells and PFOA in treated water purchased from TVMWD. All drinking water supplies comply with the State requirements for PFOS and PFOA. The estimated cost to reduce PFOS and PFOA levels in the water to below their respective PHGs of 1 nanogram per liter (ng/l) and 0.007 ng/l using ion exchange was calculated. Because the DDW Consumer Confidence Report Detection Level (CCRD) for PFOS and PFOA is 4 ng/l, treating PFOS and PFOA to below their respective PHG levels means treating PFOS and PFOA to below the CCRDL of 4 ng/l. There are numerous factors that may influence the actual cost of reducing PFOS and PFOA levels to their respective PHGs. Achieving the water quality goal for PFOS and PFOA could be approximately \$271,000 to \$3,700,000 per year, or between \$17 and \$229 per service connection per year.

Gross Alpha, Gross Beta, Combined Radium, and Uranium - The only BAT for the removal of gross alpha in water for large water systems is reverse osmosis, which can also remove gross beta, combined radium, and uranium, if detected. Gross alpha was detected above the MCLG at two groundwater wells and in treated water purchased from CIC. Gross beta was also detected above the MCLG in treated water purchased from TVMWD. Combined radium was detected above the MCLG in treated water purchased from TVMWD. Uranium was detected above the PHG at all groundwater wells, and treated water purchased from CIC and TVMWD. The cost of providing treatment using reverse osmosis to reduce gross alpha levels in groundwater and in treated water to the MCLG (and consequently gross beta, combined radium, and uranium below their respective MCLG and PHG) was calculated. Because the DLR for gross alpha is 3 pCi/liter (pCi/l), treating gross alpha to 0 pCi/l means treating it to below the DLR of 3 pCi/l. Achieving the water quality goal for gross alpha, gross beta, combined radium, and

uranium could range from \$3,210,000 to \$27,500,000 per year, or between \$198 and \$1,700 per service connection per year.

All Contaminants - In addition, a cost estimate to treat all water produced or purchased by Golden State Water using ion exchange and reverse osmosis to remove all the contaminants detected above the PHGs or MCLGs was calculated. All contaminants listed in Table 1 may be removed to non-detectable levels by ion exchange and reverse osmosis. As shown on Table 1, achieving the water quality goals for all contaminant using ion exchange and reverse osmosis could range from \$3,390,000 to \$27,800,000 per year, or between \$209 and \$1,720 per service connection per year.

For additional information, please contact Mr. George Zakhari, Water Quality Engineer at (909) 592-4271, or write to Golden State Water Company, 401 S. San Dimas Canyon Road, San Dimas, CA 91773.

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**2025 PUBLIC HEALTH GOALS REPORT
GOLDEN STATE WATER COMPANY - SAN DIMAS SYSTEM**

PARAMETER	UNITS OF MEASUREMENT	PHG OR (MCLG)*	MCL	DLR OR (CCRD L)	CONCENTRATION		CATEGORY OF RISK	CANCER RISK AT PHG OR MCLG	CANCER RISK AT MCL	BEST AVAILABLE TECHNOLOGIES	AGGREGATE COST PER YEAR	COST PER SERVICE CONNECTION PER YEAR
					AVERAGE	RANGE						
MICROBIOLOGICAL												
E. Coli	Highest number of detections	(0)	(a)	NA	0	0 - 1 (b)	NA	NA	NA	D	(c)	(c)
INORGANIC CHEMICALS												
Arsenic	µg/l	0.004	10	2	ND	ND - 3.5	C	1 x 10 ⁻⁶	2.5 x 10 ⁻³	AA,C/F,E,IE,LS,O/F,RO	\$1,160,000 (d)	\$72 (d)
Bromate	µg/l	0.1	10	1	1.5	ND - 12	C	1 x 10 ⁻⁶	1 x 10 ⁻⁴	C/F, GAC, RO	\$2,230,000 - \$19,100,000 (e)	\$138 - \$1,180 (e)
Hexavalent Chromium	µg/l	0.02	10	0.1	0.38	ND - 0.92	C	1 x 10 ⁻⁶	5 x 10 ⁻⁴	IE, R/C/F, RO	\$1,690,000 - \$10,500,000 (f)	\$104 - \$652 (f)
Perchlorate	µg/l	1	6	1	ND	ND - 3.1	E	NA	NA	IE, BFBR	\$180,000 - \$394,000 (g)	\$11 - \$24 (g)
ORGANIC CHEMICALS												
Perfluorooctanesulfonic Acid (PFOS)	ng/l	1	4 **	(4)	ND	ND - 7.8 ***	C	1 x 10 ⁻⁶	(h)	GAC, IE, RO	\$271,000 - \$3,700,000 (i)	\$17 - \$229 (i)
Perfluorooctanoic Acid (PFOA)	ng/l	0.007	4 **	(4)	ND	ND - 4.3 ***	C	1 x 10 ⁻⁶	(h)	GAC, IE, RO	--	--
RADIOLOGICAL												
Gross Alpha Particle Activity	pCi/l	(0)	15	3	ND	ND - 5.1	C	0	1 x 10 ⁻³	RO	\$3,210,000 - \$27,500,000 (j)	\$198 - \$1,700 (j)
Gross Beta Particle Activity	pCi/l	(0)	50	4	ND	ND - 7	C	0	2 x 10 ⁻³	IE, RO	--	--
Radium, Combined (k)	pCi/l	(0)	5	1 (k)	ND	ND - 2.6	C	1 x 10 ⁻⁶	3 x 10 ⁻⁴	IE, LS, RO	--	--
Uranium	pCi/l	0.43	20	1	2.2	ND - 4.1	C	1 x 10 ⁻⁶	5 x 10 ⁻⁵	IE, RO, LS,C/F	--	--
ALL CONTAMINANTS	--	--	--	--	--	--	--	--	--	IE and RO	\$3,390,000 - \$27,800,000 (l)	\$209 - \$1,720 (l)

* MCLGs are shown in parentheses. MCLGs are provided only when no applicable PHG exists.

** Federal MCL

*** Range of detections reported before the effective Federal MCL compliance date of April 26, 2029.

RISK CATEGORIES

C (Carcinogen) = A substance that is capable of producing cancer.

E (Endocrine Toxicity and Developmental Toxicity) = A substance that can affect the thyroid or cause neurodevelopmental deficits.

NOTES

CCRD L = Consumer Confidence Report Detection Level

DLR = Detection Limit for Purposes of Reporting

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

µg/l = micrograms per liter or parts per billion

NA = Not Applicable

ND = Not Detected

ng/l = nanograms per liter or parts per trillion

pCi/l = picoCuries per liter

PHG = Public Health Goal

TREATMENT TECHNOLOGIES

AA = Activated Aluminum

BFBR = Biological fluidized Bed Reactor

C/F = Coagulation/Filtration

D = Disinfection

E = Electrodialysis

GAC = Granular Activated Carbon

IE = Ion Exchange

LS = Lime Softening

O/F = Oxidation/Filtration

R/C/F = Reduction/Coagulation/Filtration

RO = Reverse Osmosis

(a) Routine and repeat samples are total coliform-positive and either is *E. coli* positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

(b) Samples collected in the distribution system.

(c) Cost could not be estimated.

(d) Estimated cost to remove arsenic using IE.

(e) Estimated cost to remove bromate using RO.

(f) Estimated cost to remove hexavalent chromium using R/C/F.

(g) Estimated cost to remove perchlorate using IE.

(h) Not applicable. Cancer risk cannot be calculated.

(i) Estimated cost to remove PFOS and PFOA using IE.

(j) Estimated cost to remove gross alpha particle activity using RO, which also removes combined radium, gross beta particle activity, and uranium.

(k) As the sum of radium-226 and radium-228. DLRs for radium-226 and radium-228 is 1 pCi/L and 1 pCi/L, respectively.

(l) Assuming treating the entire production by IE and RO, which can remove all contaminants listed in the above table, except *E. coli*, to below the detectable levels.