Suburban Water Systems
A SouthWest Water Company

SUBURBAN WATER SYSTEMS

San Jose Hills System

2025 Public Health Goal Report

Pursuant to Section 116355 of the California Health and Safety Code

JUNE 2025

STETSON ENGINEERS INC.

MainSanGabrielBasin WATERMASTER

2025 Public Health Goal (PHG) Report

Suburban Water Systems
San Jose Hills System

1.0 Introduction

Under the Calderon-Sher Safe Drinking Water Act of 1996 public water systems in California serving greater than 10,000 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 PHG report was due on July 1, 1998, and subsequent reports are due every three years thereafter.

The 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 or, if certain analyses were not performed during those years, the most recent data available. The 2025 PHG Report has been designed to be as informative as possible, without unnecessary duplication of information contained in the Consumer Confidence Report, which is posted to the Suburban Water Systems (SWS) website by July 1 of each year.

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 the 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.

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 that poses no known or anticipated adverse health effects with an adequate margin of safety or poses no significant risk to human health. 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). OEHHA submits the PHG 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 the PHG, is used in the 2025 PHG 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 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.

The Suburban Water Systems (SWS) San Jose Hills System has approximately 40,233 service connections. From 2022 to 2024, SWS San Jose Hills system's potable water supplies included:

1. Main San Gabriel Basin (MSGB) groundwater produced from SWS wells;
2. Treated MSGB groundwater transferred from La Puente Valley County Water District (LPVCWD) and Valley County Water District (VCWD) utilizing SWS pumping rights;
3. Treated local groundwater and surface water purchased from Covina Irrigating Company (CIC); and
4. Treated imported surface water purchased from 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** – naturally occurring in treated groundwater and surface water purchased from CIC.
- **Coliform Bacteria** (total coliform) - naturally occurring in the environment but can also be an indicator of the presence of other microorganisms originating from sewage, livestock or other wildlife.
- **Gross Alpha Particle Activity** (gross alpha) – naturally occurring in local groundwater, treated groundwater transferred from LPVCWD and VCWD, and treated groundwater and surface water purchased from CIC.
- **Gross Beta Particle Activity** (gross beta) – naturally occurring in treated imported surface water purchased from MWDSC.
- **Hexavalent Chromium** – naturally occurring in local groundwater, treated groundwater transferred from LPVCWD and VCWD, and treated surface water purchased from CIC.
- **Perchlorate** – industrial contamination in local groundwater and treated groundwater purchased from CIC.
- **Trichloroethylene (TCE)** – industrial contamination in local groundwater.
- **Radium, Combined**, is the sum of Radium-226 and Radium-228 – naturally occurring in treated imported surface water purchased from MWDSC.
- **Uranium** – naturally occurring in local groundwater, treated groundwater transferred from LPVCWD and VCWD, treated groundwater and surface water purchased from CIC, and treated imported surface water purchased from MWDSC.

The accompanying table shows the applicable PHG (or MCLG) and MCL for each contaminant identified above. The table includes the maximum, minimum, and average concentrations of each contaminant which exceeds a PHG or MCLG in drinking water supplied by SWS 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 the accompanying table. 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 one 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 over a 70-year lifetime exposure.

Coliform Bacteria, Total – 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 one excess case of cancer in 1,000 people over a 70-year lifetime exposure.

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 over a 70-year lifetime exposure.

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.

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.

TCE – OEHHA has determined the health risk associated with the PHG is one excess case of cancer in a million people and the risk associated with the MCL is 3 excess cases of cancer in a million people over a 70-year lifetime exposure.

Uranium – OEHHA has determined the health risk associated with the PHG is one 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 over a 70-year lifetime exposure.

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 the accompanying table.

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 are available on a commercial basis, to remove or reduce the concentrations of the contaminants identified above. The BATs are shown on the accompanying table.

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 groundwater and surface water purchased from CIC. SWS is in compliance with the MCL for arsenic. The PHG for arsenic established by OEHHA is 0.004 microgram per liter (µg/l). Treating arsenic to below the PHG level means treating arsenic to below the Detection Limit for purposes Reporting (DLR) of 2 µg/l. There are numerous factors that may influence the actual cost of reducing arsenic levels to the PHG. The estimated cost to reduce arsenic levels in drinking water below the PHG level using ion exchange was calculated. Achieving the water quality goal for arsenic could cost approximately $3,140,000 per year, or $78 per service connection per year**.**

Coliform Bacteria, Total – The BAT for removal of coliform bacteria in drinking water has been determined by USEPA to be disinfection. The SWS 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.

Coliform bacteria are indicator organisms that are ubiquitous in nature. They are a useful tool because of the ease in monitoring and analysis. The SWS collects weekly samples for total coliforms at various locations in the distribution. If coliform 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 total coliforms at 0 percent positive, there is no commercially available technology that will guarantee 0 percent positive every single month; therefore, the cost of achieving the PHG cannot be estimated.

The SWS 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 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.

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 in local groundwater, treated groundwater transferred from LPVCWD and VCWD, and treated groundwater and surface water purchased from CIC. Gross beta was detected above the MCLG in treated imported surface water purchased from MWDSC. Combined radium was detected above the MCLG in treated imported surface water purchased from MWDSC. Uranium was detected above the PHG in local groundwater, treated groundwater transferred from LPVCWD and VCWD, treated groundwater and surface water purchased from CIC, and treated imported surface water purchased from MWDSC. The cost of providing treatment using reverse osmosis to reduce gross alpha to the MCLG of 0 (and consequently gross beta and combined radium below their MCLGs, and uranium below the PHG) was calculated. Achieving the water quality goal for radionuclides could range from $12,500,000 to $107,000,000 per year, or between $311 and $2,670 per service connection per year.

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 in local groundwater, treated groundwater transferred from LPVCWD and VCWD, and treated surface water purchased from CIC. SWS is in compliance with the MCL for hexavalent chromium. The estimated cost to reduce hexavalent chromium levels in the 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 $11,400,000 to $71,500,000 per year, or between $284 and $1,780 per service connection per year.

Perchlorate – The BATs for removal of perchlorate in water are: ion exchange and biological fluidized bed reactor. Perchlorate was detected above the PHG in local groundwater and treated groundwater purchased from CIC. SWS is in compliance with the MCL for perchlorate. 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. The estimated cost to reduce perchlorate levels in drinking water below the DLR using ion exchange was calculated. Achieving the water quality goal for perchlorate could range from $1,750,000 to $3,840,000 per year, or between $43 and $95 per service connection per year.

TCE – The BATs for removing TCE are granular activated carbon (GAC) and packed tower aeration (PTA). TCE was detected above the PHG in SWS groundwater from Well 151W-2. The cost of providing GAC and PTA to remove TCE in the water to the PHG was calculated. It should be pointed out that these are theoretical calculations and rough cost estimates. Achieving the PHG for TCE using a GAC system could range from $210,000 to $1,770,000 per year, or between $5 and $44 per service connection per year. Achieving the PHG for TCE using PTA could range from $222,000 to $828,000 per year, or between $6 and $21 per service connection per year.

All Contaminants – In addition, a cost estimate to treat all water produced or purchased by SWS using ion exchange, PTA, and reverse osmosis to remove all the contaminants detected above the PHGs or MCLGs was calculated. All contaminants listed in the accompanying table may be removed to non-detectable levels. As shown on the accompanying table, achieving the water quality goals for all contaminants using ion exchange, PTA, and reverse osmosis could range from $14,500,000 to $112,000,000 per year, or between $360 and $2,780 per service connection per year.

For additional information, please contact Ms. Nina Wester, Water Quality Manager, at (626) 543-2640, or write to Suburban Water Systems, 1325 North Grand Avenue, Suite 100 Covina, California 91724.

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2025 PUBLIC HEALTH GOAL REPORT
SUBURBAN WATER SYSTEMS - SAN JOSE HILLS SYSTEM

PARAMETER	UNITS OF MEASUREMENT	PHG OR (MCLG)*	MCL	DLR	CONCENTRATION GROUNDWATER AVERAGE	CONCENTRATION GROUNDWATER RANGE	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
MICROBIOLOGICAL												
Total Coliform Bacteria	% samples positive	(0)	TT	NA	0.86 (a)	0.6 - 1.3 (a)	NA	NA	NA	D	(b)	(b)
INORGANIC CHEMICALS												
Arsenic	µg/l	0.004	10	2	ND	ND - 5	C	1×10^{-6}	2.5×10^{-3}	AA,C/F,E,IE,LS,O/F,RO	$3,140,000 (c)	$78 (c)
Hexavalent Chromium	µg/l	0.02	10	0.1	2.5	ND - 8.9	C	1×10^{-6}	5×10^{-4}	IE, R/C/F, RO	$11,400,000 - $71,500,000 (d)	$284 - $1,780 (d)
Perchlorate	µg/l	1	6	1	ND	ND - 5.9	E	NA	NA	IE, BFBR	$1,750,000 - $3,840,000 (e)	$43 - $95 (e)
ORGANIC CHEMICALS												
Trichloroethylene (TCE)	µg/l	1.7	5	0.5	ND	ND - 3	C	1×10^{-6}	3×10^{-6}	GAC PTA	$210,000 - $1,770,000 (f) $222,000 - $828,000 (g)	$5 - $44 (f) $6 - $21 (g)
RADIOLOGICAL												
Gross Alpha Particle Activity	pCi/l	(0)	15	3	ND	ND - 4.9	C	0	1×10^{-3}	RO	$12,500,000 - $107,000,000 (h)	$311 - $2,670 (h)
Gross Beta Particle Activity	pCi/l	(0)	50	4	ND	ND - 6	C	0	2×10^{-3}	IE, RO	--	--
Radium, Combined (i)	pCi/l	(0)	5	1 (i)	ND	ND - 1	C	1×10^{-6}	3×10^{-4}	IE, LS, RO	--	--
Uranium	pCi/l	0.43	20	1	1.7	ND - 5.3	C	1×10^{-6}	5×10^{-5}	IE, RO, LS,C/F	--	--
All Contaminants	--	--	--	--	--	--	--	--	--	IE, PTA, RO	$14,500,000 - $112,000,000 (j)	$360 - $2,780 (j)

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

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

DLR = Detection Limit for Purposes of Reporting
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
NA = Not Appplicable or Available
ND = Not Detected
PHG = Public Health Goal
µg/l = micrograms per liter or parts per billion
pCi/l = picoCuries per liter
TT = Treatment Technique

TREATMENT TECHNOLOGIES

AA = Activated Alumina
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
PTA = Packed Tower Aeration
R/C/F = Reduction/Coagulation/Filtration
RO = Reverse Osmosis

(a) Samples collected in the distribution system.
(b) Cost could not be estimated.
(c) Estimated cost to remove arsenic using IE.
(d) Estimated cost to remove hexavalent chromium using R/C/F.
(e) Estimated cost to remove perchlorate using IE.
(f) Estimated cost to remove TCE using GAC.
(g) Estimated cost to remove TCE using PTA.
(h) Estimated cost to remove gross alpha particle activity using reverse osmosis, which also removes combined radium, gross beta particle activity, and uranium.
(i) 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.
(j) Assuming treating the entire production by IE, PTA, and RO, which can remove all contaminants, except total coliform, listed in the above table to below the detectable levels.