CITY OF LA HABRA
2025 PUBLIC HEALTH GOALS REPORT

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2025 Public Health Goals (PHGs) Report

City of La Habra

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.

The City of La Habra (City) water system has approximately 12,982 service connections. The following constituents were detected at one or more locations within the drinking water system at levels that exceeded the applicable PHGs or MCLGs:

- **Bromate** – formed when naturally-occurring bromide reacts with ozone during the disinfection process in treated surface water purchased from the Metropolitan Water District of Southern California (MWDSC).

- **Gross alpha particle activity** (gross alpha) – naturally-occurring in local groundwater, imported groundwater purchased from California Domestic Water Company (CDWC), and treated surface water purchased from MWDSC.
- **Gross beta particle activity** (gross beta) – naturally-occurring in treated surface water purchased from MWDSC; not required to be tested in groundwater.
- **Hexavalent Chromium** – naturally-occurring in imported groundwater purchased from CDWC.
- **Perchlorate** – industrial contamination in imported groundwater purchased from CDWC.
- **Perfluorooctanesulfonic acid (PFOS)** – industrial contamination in imported groundwater purchased from CDWC.
- **Radium, Combined**, is the sum of Radium-226 and Radium-228 – naturally-occurring in local groundwater and imported groundwater purchased from CDWC.
- **Tetrachloroethylene (PCE)** – industrial contamination in imported groundwater purchased from CDWC.
- **Trichloroethylene (TCE)** – industrial contamination in imported groundwater purchased from CDWC.
- **Uranium** – naturally-occurring in local groundwater, imported groundwater purchased from CDWC, and treated 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 in drinking water supplied by the City in calendar years 2022 through 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 accompany table. Only numerical risks associated with cancer-causing chemicals have been quantified by OEHHA.

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.

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.

PCE – 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 8 excess cases of cancer in 100,000 people exposed over a 70-year lifetime.

TCE – 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 3 excess cases of cancer in a million people exposed over a 70-year lifetime.

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 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 is 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.

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 surface water purchased from MWDSC. The City is in compliance with the MCL for bromate. The estimated cost to reduce bromate levels in MWDSC water to below the PHG of 0.1 microgram per liter (µg/l) using reverse osmosis was calculated. Because the DDW detection limit for purposes of reporting (DLR) for bromate is 1 µg/l, treating bromate to below the PHG level means treating bromate to below the DLR of 1 µg/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 $80,400 to $689,000 per year, or between $6 and $53 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 in the local groundwater, imported groundwater purchased from CDWC, and treated surface water purchased from MWDSC. Gross beta was detected above the MCLG in the treated surface water purchased from MWDSC. Combined radium was detected above the MCLG in the local groundwater and imported groundwater purchased from CDWC. Uranium was detected above the PHG in the local groundwater, imported groundwater purchased from CDWC, and treated surface water purchased from MWDSC. The cost of providing treatment using reverse osmosis to reduce gross alpha levels to the MCLG of 0 picoCurie per liter (pCi/l) (and consequently gross beta to below the MCLG of 0 pCi/l, combined radium to below the MCLG of 0 pCi/l, and uranium in to below the PHG of 0.43 pCi/l) was calculated. Because the DLR for gross alpha is 3 pCi/l, treating gross alpha to 0 pCi/l means treating it to below the DLR of 3 pCi/l (and treating gross beta, radium-226, radium-228, and uranium to below their respective DLRs of 4 pCi/l, 1 pCi/l, 1 pCi/l, and 1 pCi/l). Achieving the water quality goal for gross alpha could range from $2,630,000 to $22,500,000 per year, or between $202 and $1,730 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 the imported groundwater purchased from CDWC. The City is in compliance with the MCL for hexavalent chromium. The estimated cost to reduce hexavalent chromium levels in the groundwater 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 $4,040,000 to $25,300,000 per year, or between $312 and $1,950 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 in the imported groundwater purchased from CDWC. The City is in compliance 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 $1,270,000 to $2,780,000 per year, or between $98 and $214 per service connection per year.

PFOS – The BATs for removal of PFOS in water for large water systems are: granular activated carbon, ion exchange, and reverse osmosis. PFOS was detected above the PHG in the imported groundwater purchased from CDWC. The City is in compliance with the State requirements for PFOS. The estimated cost to reduce PFOS levels in the groundwater to below the PHG of 1 nanogram per liter (ng/l) using ion exchange was calculated. Because the DDW Consumer Confidence Report Detection Level (CCRDL) for PFOS is 4 ng/l, treating PFOS to below the PHG level means treating PFOS to below the CCRDL of 4 ng/l. There are numerous factors that may influence the actual cost of reducing PFOS levels to the PHG. Achieving the water quality goal for PFOS could be approximately $1,270,000 to $17,300,000 per year, or between $98 and $1,330 per service connection per year.

PCE and TCE – The BATs for removing PCE and TCE in water are granular activated carbon (GAC) and packed tower aeration (PTA). PCE and TCE were detected above their respective PHGs in the imported groundwater purchased from CDWC. The City is in compliance with the MCL for PCE and TCE. The estimated cost to treat PCE and TCE in the groundwater to below their respective PHGs of 0.06 µg/l and 1.7 µg/l using PTA was calculated. Because the DLR for PCE and TCE is 0.5 µg/l, treating PCE and TCE to below their respective PHGs means treating PCE and TCE to below the DLR of 0.5 µg/l. There are numerous factors that may influence the actual cost of treating PCE and TCE levels to their respective PHGs. Achieving the water quality goal for PCE and TCE using PTA could range from $718,000 to $2,680,000 per year, or between $55 and $207 per service connection per year.

All Contaminants – In addition, a cost estimate to treat all water produced by the City using ion exchange, PTA, and reverse osmosis to remove all the contaminants detected above the PHGs or MCLGs was calculated. All the contaminants listed in the accompanying table may be removed to non-detectable levels by ion exchange, PTA, and reverse osmosis. As shown on the accompanying table, achieving the water quality goals for all contaminants using ion exchange, PTA, and reverse osmosis could range from $4,610,000 to $28,000,000 per year, or between $355 and $2,150 per service connection per year.

For additional information, please contact Mr. Brian Jones, Water and Sewer Manager, at (562) 383-4170, or write to the City of La Habra, Water Division, 201 East La Habra Boulevard, La Habra, California 90633.

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2025 PUBLIC HEALTH GOALS REPORT
CITY OF LA HABRA

PARAMETER	UNITS OF MEASUREMENT	PHG OR (MCLG)*	MCL	DLR OR (CCRDL)	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						
INORGANIC CHEMICALS												
Bromate	µg/l	0.1	10	1	ND	ND - 6.3	C	1 x 10^{-6}	1 x 10^{-4}	C/F, GAC, RO	$80,400 - $689,000 (a)	$6 - 53 (a)
Hexavalent Chromium	µg/l	0.02	10	0.1	0.73	ND - 3.4	C	1 x 10^{-6}	5 x 10^{-4}	IE, R/C/F, RO	$4,040,000 - $25,300,000 (b)	$312 - $1,950 (b)
Perchlorate	µg/l	1	6	1	ND	ND - 3.5	E	NA	NA	IE, BFBR	$1,270,000 - $2,780,000 (c)	$98 - $214 (c)
ORGANIC CHEMICALS												
Tetrachloroethylene (PCE)	µg/l	0.06	5	0.5	ND	ND - 1.1	C	1 x 10^{-6}	8 x 10^{-5}	GAC, PTA	$718,000 - $2,680,000 (d)	$55 - $207 (d)
Trichloroethylene (TCE)	µg/l	1.7	5	0.5	ND	ND - 2.7	C	1 x 10^{-6}	3 x 10^{-6}	GAC, PTA	--	--
Perfluorooctanesulfonic Acid (PFOS)	ng/l	1	4 **	(4)	ND	ND - 8.2 ***	C	1 x 10^{-6}	(e)	GAC, IE, RO	$1,270,000 - $17,300,000 (f)	$98 - $1,330 (f)
RADIOLOGICAL												
Gross Alpha Particle Activity	pCi/l	(0)	15	3	ND	ND - 8	C	0	1 x 10^{-3}	RO	$2,630,000 - $22,500,000 (g)	$202 - $1,730 (g)
Gross Beta Particle Activity	pCi/l	(0)	50	4	ND	ND - 9	C	0	2 x 10^{-3}	IE, RO	--	--
Radium, Combined (h)	pCi/l	(0)	5	1 (h)	ND	ND - 1	C	1 x 10^{-6}	3 x 10^{-4}	IE, LS, RO	--	--
Uranium	pCi/l	0.43	20	1	1.9	ND - 6.8	C	1 x 10^{-6}	5 x 10^{-5}	IE, RO, LS,C/F	--	--
ALL CONTAMINANTS	--	--	--	--	--	--	--	--	--	IE, PTA, and RO	$4,610,000 - $28,000,000 (i)	$355 - $2,150 (i)

* 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
CCRDL = 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

(a) Estimated cost to remove bromate using RO.
(b) Estimated cost to remove hexavalent chromium using R/C/F.
(c) Estimated cost to remove perchlorate using IE.
(d) Estimated cost to remove PCE and TCE using PTA.
(e) Not applicable. Cancer risk cannot be calculated.
(f) Estimated cost to remove PFOS using IE.
(g) Estimated cost to remove gross alpha particle activity using RO, which also removes combined radium, gross beta particle activity, and uranium.
(h) 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.
(i) Assuming treating the entire production by IE, PTA, and RO, which can remove all contaminants listed in the above table to below the detectable levels.

TREATMENT TECHNOLOGIES

BFBR = Biological fluidized Bed Reactor
C/F = Coagulation/Filtration
GAC = Granular Activated Carbon
IE = Ion Exchange
LS = Lime Softening
PTA = Packed Tower Aeration
R/C/F = Reduction/Coagulation/Filtration
RO = Reverse Osmosis