

PUBLIC HEARING

# 2022 PUBLIC HEALTH GOALS REPORT

Board of Water Commissioners

September 1, 2022



# Background

- Long Beach tap water meets all EPA and California drinking water standards
- Annually, we conduct 60,000-70,000 water quality tests to monitor the presence of contaminants
- WQ results reporting to customers
  - Consumer Confidence Report (CCR) - annually  
<https://lbwater.org/water-quality/annual-water-quality-report/>
  - Public Health Goal (PHG) report - every 3 years
    - California Health and Safety Code Section 116470 (b)
    - Utilities with > 10,000 service connections

# PHG Reporting

- Constituents with a primary drinking water standard (MCL) and detected above PHGs or MCLGs (non-regulatory)
- Each constituent's risk to public health
- Best available technology (BAT) to possibly reduce constituents and cost estimate

	Definition	Example, Arsenic
Maximum Contaminant Level (MCL)	The highest level of a contaminant that is allowed in drinking water - regulatory and enforceable	10 µg/L
Public Health Goal (PHG)	The level of a contaminant below which there is no known or expected health risk. Set by OEHHA - non-enforceable	0.004 µg/L
Maximum Contaminant Level (MCLG)	The level of a contaminant below which there is no known or expected health risk. Set by EPA - non-enforceable	0



# Water Quality Data

## Detected Constituents 2019-2021

Constituent	Max Detected	MCL	PHG/ (MCLG)	DLR	BATs
Arsenic (µg/L)	2.5	10	0.004 / (0)	2	IX, Blending, RO, CF, GFO
Bromate (µg/L)	3.1	10	0.1 / (0)	1	RCF
Gross Alpha (pCi/L)	3.8	15	(0)	3	RO
Gross Beta (pCi/L)	6.5	4mrem/yr*	(0)	4	RO
Uranium (pCi/L)	2.9	20	0.43 / (0)	1	RO

\* Equivalent to 50 pCi/L

- DLR: Detection limit for purpose of reporting, the level at which a contaminant can be detected for compliance determination
- BATs: IX-Ion Exchange, RCF-Reduction Coagulation Filtration, RO-Reverse Osmosis, GFO-Granulated Ferric Oxide



# Arsenic

- A naturally occurring element in earth's crust
- If above MCL over many years: potentially increased skin, circulatory system problems or cancer risk
- Standards
  - MCL - 10 µg/L
  - PHG - 0.004 µg/L
  - MCLG - 0
- Sample Results
  - 278 Samples collected during 2019-2021
  - Non-detect to 2.5 µg/L
- Best available technology (BAT)
  - LBWD Treatment Plant uses BATs for Arsenic-Blending and Coagulation/Filtration



# Bromate

- A disinfection by-product of ozonation (MWD purchased water)
- If above MCL over many years: potentially increased cancer risk
- Standards
  - MCL - 10 µg/L
  - PHG - 0.01 µg/L
  - MCLG - None
- Sample Results
  - 278 Samples collected during 2019-2021
  - Non-detect to 3.1 µg/L



# Radiological - Gross Alpha, Gross Beta, and Uranium

- Decay or erosion of natural and man-made deposits
- If above MCL over many years: potentially increased cancer risk
- Standards and sample results (18 samples collected)

Constituent	MCL	PHG /(MCLG)	Max Detected
Gross Alpha (pCi/L)	15	(0)	3.8
Gross Beta (pCi/L)	4mrem/yr*	(0)	6.5
Uranium (pCi/L)	20	0.43 / (0)	2.9

\*equivalent to 50 pico curies per liter

- Best available technology (BAT)
  - Reverse Osmosis

# Best Available Technology (BAT)-Reverse Osmosis

- Advantages
  - Remove multiple contaminants simultaneously
- Disadvantages
  - Additional treatment needed to avoid corrosion issue
  - Significant waste stream
  - Up to 70% water loss
  - Impractical for LBWD since detection is primarily in purchased MWD water
- Cost estimate (annually)
  - \$23.4 to \$85.7M
  - Additional \$265 to \$968 per service connection





# Recommendations

- LBWD's drinking water meets or betters all USEPA and California drinking water standards
- Installing treatment to attempt reduction of very low levels of constituents may adversely affect other aspects of water quality
- The health protection benefits of these further hypothetical reductions are not clear and may not be quantifiable
- No further action is proposed at this time

