

2023 Consumer Confidence Report Data — Carlsbad Desalination Plant Source Water
Date: January 1, 2023 to December 31, 2023

Parameter	Units	State or Federal MCL	PHG (MCLG)	State DLR	Range Average	Source Water (a)	Major Sources in Drinking Water
						<i>Agua Hedionda Lagoon</i> Carlsbad Desalination Plant	
OTHER PARAMETERS							
MICROBIOLOGICAL							
Total Coliform	MPN/ 100 ml	NA	NA	NA	Highest positive count per month	31	Naturally present in the environment
Bacteria	MPN/ 100 ml	NA	NA	NA	Total annual positive count	246	Human and animal fecal waste
E. coli	oocysts/200L	TT	(0)	NA	Range	ND	Human and animal fecal waste
					Average	ND	
Cryptosporidium	cysts/200L	TT	(0)	NA	Range	0-1	Human and animal fecal waste
					Average	0.17	

ABBREVIATIONS AND FOOTNOTES

Abbreviations

AL	Action Level	NL	Notification Level
CDPH	California Department of Public Health	NTU	Nephelometric Turbidity Units
CFU	Colony-Forming Units	pCi/L	picocurie per liter
DLR	Detection Limits for Purposes of Reporting	PHG	Public Health Goal
MBAS	Methylene Blue Active Substances	ppb	parts per billion or micrograms per liter (µg/L)
MCL	Maximum Contaminant Level	ppm	parts per million or milligrams per liter (mg/L)
MCLG	Maximum Contaminant Level Goal	ppq	parts per quadrillion or nanograms per liter (ng/L)
MFL	Million Fibers per Liter	ppt	parts of the paramter per trillion parts of the solution
NA	Not Applicable	TT	Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water
NC	Not Collected		
ND	Not Detected	µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)

Footnotes

(a) A source water assessment (Watershed Sanitary Survey) was completed in August 2005 and is available by contacting your local water utility. A number of potential contaminant sources evaluated in the Watershed Sanitary Survey are not likely to impact the water quality at the desalination plant intake.

(b)

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2021. These revisions add the requirements of the federal Revised Total Coliform Rule, effective since April 1, 2016, to the existing state Total Coliform Rule. The revised rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system. The state Revised Total Coliform Rule became effective July 1, 2021.

2023 Consumer Confidence Report Data — Carlsbad Desalination Plant Influent
Date: January 1, 2023 to December 31, 2023

Parameter	Units	State or Federal MCL	PHG (MCLG)	State DLR	Range Average	Treatment Plant Influent	Major Sources in Drinking Water
						Carlsbad Desalination Plant	
PRIMARY STANDARDS—Mandatory Health-Related Standards							
ORGANIC CHEMICALS							
Pesticides/PCBs							
Alachlor	ppb	NA	NA	1	Range Average	ND ND	Runoff from herbicide used on row crops
Atrazine	ppb	NA	NA	0.5	Range Average	ND ND	Runoff from herbicide used on row crops and along highways
Bentazon	ppb	NA	NA	2	Range Average	ND ND	Runoff/leaching from herbicide used on rice, alfalfa, and grapes
Carbofuran	ppb	NA	NA	5	Range Average	ND ND	Leaching of soil fumigant used on rice, alfalfa, and grapes
Chlordane	ppt	NA	NA	100	Range Average	ND ND	Residue of banned insecticide
2,4-D	ppb	NA	NA	10	Range Average	ND ND	Runoff from herbicide used on row crops, rangeland, lawns, and aquatic weeds
Dalapon	ppb	NA	NA	10	Range Average	ND ND	Runoff from herbicide used on rights-of-way, crops, and landscapes
Dibromochloropropane (DBCP)	ppt	NA	NA	10	Range Average	ND ND	Banned nematocide that may still be present in soils
Dinoseb	ppb	NA	NA	2	Range Average	ND ND	Runoff from herbicide used on soybeans, vegetables, and fruits
Diquat	ppb	NA	NA	4	Range Average	ND ND	Runoff from herbicide used for terrestrial and aquatic weeds
Endothall	ppb	NA	NA	45	Range Average	ND ND	Runoff from herbicide used for terrestrial and aquatic weeds
Endrin	ppb	NA	NA	0.1	Range Average	ND ND	Residue of banned insecticide and rodenticide
Ethylene Dibromide (EDB)	ppt	NA	NA	20	Range Average	ND ND	Petroleum refinery discharges; underground gas tank leaks
Glyphosate	ppb	NA	NA	25	Range Average	ND ND	Runoff from herbicide use
Heptachlor	ppt	NA	NA	10	Range Average	ND ND	Residue of banned insecticide
Heptachlor Epoxide	ppt	NA	NA	10	Range Average	ND ND	Breakdown product of heptachlor
Lindane	ppt	NA	NA	200	Range Average	ND ND	Runoff/leaching from insecticide used on cattle, lumber, and gardens
Methoxychlor	ppb	NA	NA	10	Range Average	ND ND	Runoff/leaching from insecticide uses
Molinate (Ordram)	ppb	NA	NA	2	Range Average	ND ND	Runoff/leaching from herbicide used on rice
Oxamyl (Vydate)	ppb	NA	NA	20	Range Average	ND ND	Runoff/leaching from insecticide uses
Pentachlorophenol	ppb	NA	NA	0.2	Range Average	ND ND	Discharge from wood preserving factories other insecticidal and herbicidal uses
Picloram	ppb	NA	NA	1	Range Average	ND ND	Herbicide runoff
Polychlorinated Biphenyls (PCBs)	ppt	NA	NA	500	Range Average	ND ND	Runoff from landfills; discharge of waste chemicals
Simazine	ppb	NA	NA	1	Range Average	ND ND	Herbicide runoff
Thiobencarb	ppb	NA	NA	1	Range Average	ND ND	Runoff leaching from rice herbicide
2,4,5-TP (Silvex)	ppb	NA	NA	1	Range Average	ND ND	Residue of banned herbicide
Toxaphene	ppb	NA	NA	1	Range Average	ND ND	Runoff/leaching from insecticide used on cotton and cattle
Semi-Volatile Organic Compounds (a)							
Benzo(a)pyrene	ppt	NA	NA	100	Range Average	ND ND	Leaching from water storage tank linings and distribution lines
Di(2-ethylhexyl)adipate	ppb	NA	NA	5	Range Average	ND ND	Discharge from chemical factories
Di(2-ethylhexyl)phthalate	ppb	NA	NA	3	Range Average	ND ND	Chemical factory discharge; inert ingredient in pesticides
Hexachlorobenzene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from metal refineries & agricultural factories; wastewater chlorination reaction by-product
Hexachlorocyclopentadiene	ppb	NA	NA	1	Range Average	ND ND	Discharge from chemical factories
2,3,7,8-TCDD (Dioxin)	ppq	NA	NA	5	Range Average	ND ND	Waste incineration emissions; chemical factory discharge
Volatile Organic Compounds							
Benzene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills
Carbon Tetrachloride	ppt	NA	NA	500	Range Average	ND ND	Discharge from chemical plants and other industrial waste
1,2-Dichlorobenzene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from industrial chemical factories
1,4-Dichlorobenzene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from industrial chemical factories
1,1-Dichloroethane	ppb	NA	NA	0.5	Range Average	ND ND	Extraction and degreasing solvent; fumigant

1,2-Dichloroethane	ppt	NA	NA	500	Range Average	ND ND	Discharge from industrial chemical factories
1,1-Dichloroethylene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	ppb	NA	NA	0.5	Range Average	ND ND	Industrial chemical factory discharge; by-product of TCE and PCE biodegradation
trans-1,2-Dichloroethylene	ppb	NA	NA	0.5	Range Average	ND ND	Industrial chemical factory discharge; by-product of TCE and PCE biodegradation
Dichloromethane (Methylene Chloride)	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane	ppb	NA	NA	0.5	Range Average	ND ND	Industrial chemical factory discharge; primary component of some fumigants
1,3-Dichloropropene	ppt	NA	NA	500	Range Average	ND ND	Runoff/leaching from nematocide used on croplands
Ethylbenzene	ppb	NA	NA	0.5	Range Average	ND ND	Petroleum refinery discharges; industrial chemical factories
Methyl-tert-butyl ether (MTBE)	ppb	NA	NA	3	Range Average	ND ND	Gasoline discharge from watercraft engines
Monochlorobenzene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from industrial, agricultural, and chemical factories, and dry cleaners
Styrene	ppb	NA	NA	0.5	Range Average	ND ND	Rubber and plastics factories discharges; landfill leaching
1,1,2,2-Tetrachloroethane	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from industrial, agricultural, and chemical factories; solvent uses
Tetrachloroethylene (PCE)	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from factories, dry cleaners, and auto shops
Toluene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from petroleum and chemical refineries
1,2,4-Trichlorobenzene	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from textile-finishing factories
1,1,1-Trichloroethane	ppb	NA	NA	0.5	Range Average	ND ND	Metal degreasing site discharge; manufacture of food wrappings
1,1,2-Trichloroethane	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from industrial chemical factories
Trichloroethylene (TCE)	ppb	NA	NA	0.5	Range Average	ND ND	Discharge from metal degreasing sites and other factories
Trichlorofluoromethane (Freon-11)	ppb	NA	NA	5	Range Average	ND ND	Industrial factory discharge; degreasing solvent; propellant
1,1,2-Trichloro-1,2,2- trifluoroethane (Freon-113)	ppm	NA	NA	0.01	Range Average	ND ND	Discharge from metal degreasing sites and other factories; dry cleaning solvent; refrigerant
Vinyl Chloride	ppt	NA	NA	500	Range Average	ND ND	Leaching from PVC piping; plastic factory discharge; by-product of TCE and PCE biodegradation
Xylenes	ppm	NA	NA	0.0005	Range Average	ND ND	Discharge from petroleum and chemical refineries; fuel solvent
INORGANIC CHEMICALS							
Antimony	ppb	NA	NA	6	Range Average	ND ND	Petroleum refinery discharges; fire retardants; solder; electronics
Arsenic	ppb	NA	NA	2	Range Average	ND ND	Natural deposits erosion, glass and electronics production wastes
Barium	ppb	NA	NA	100	Range Average	ND ND	Oil and metal refineries discharges; natural deposits erosion
Beryllium	ppb	NA	NA	1	Range Average	ND ND	Discharge from metal refineries, aerospace, and defense industries
Cadmium	ppb	NA	NA	1	Range Average	ND ND	Internal corrosion of galvanized pipes; natural deposits erosion
Chromium	ppb	NA	NA	10	Range Average	ND ND	Discharge from steel and pulp mills; natural deposits erosion
Chromium VI	ppb	NA	NA	1	Range Average	ND ND	Runoff/leaching from natural deposits; discharge from industrial waste factories
Cyanide	ppb	NA	NA	100	Range Average	ND ND	Discharge from steel/metal, plastic, and fertilizer factories
Fluoride (naturally-occurring)	ppm	NA	NA	0.1	Range Average	0.81-0.86 0.84	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	ppb	NA	NA	5	Range Average	ND ND	House pipes internal corrosion; erosion of natural deposits
Mercury	ppb	NA	NA	1	Range Average	ND ND	Erosion of natural deposits; factory discharge; landfill runoff
Nickel	ppb	NA	NA	10	Range Average	ND ND	Erosion of natural deposits; discharge from metal factories
Nitrate (as Nitrogen)	ppm	NA	NA	0.4	Range Average	ND ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
Nitrite (as Nitrogen)	ppm	NA	NA	0.4	Range Average	ND ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
Perchlorate	ppb	NA	NA	4	Range Average	ND ND	Industrial waste discharge
Selenium	ppb	NA	NA	5	Range Average	ND ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
Thallium	ppb	NA	NA	1	Range Average	ND ND	Leaching from ore processing; electronics factory discharge
RADIOLOGICALS							
Gross Alpha Particle Activity	pCi/L	NA	NA	3	Range Average	ND-33.4 ND	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	NA	NA	4	Range Average	123-235 183.20	Decay of natural and man-made deposits
Radium-226	pCi/L	NA	NA	1	Range Average	ND ND	Erosion of natural deposits
Radium-228	pCi/L	NA	NA	1	Range Average	ND ND	Erosion of natural deposits

Combined Radium-226 + 228	pCi/L	NA	NA	NA	Range Average	-0.406-0.541 0.057	Erosion of natural deposits
Strontium-90	pCi/L	NA	NA	2	Range Average	ND ND	Decay of natural and man-made deposits
Tritium	pCi/L	NA	NA	1,000	Range Average	ND ND	Decay of natural and man-made deposits
Uranium	pCi/L	NA	NA	1	Range Average	3.20-3.61 3.36	Erosion of natural deposits
SECONDARY STANDARDS—Aesthetic Standards							
Aluminum	ppb	NA	NA	50	Range Average	ND ND	Residue from water treatment process; natural deposits erosion
Chloride	ppm	NA	NA	NA	Range Average	17000-19000 18250	Runoff/leaching from natural deposits; seawater influence
Color	Color Units	NA	NA	NA	Range Average	ND ND	Naturally-occurring organic materials
Copper	ppm	NA	NA	0.05	Range Average	ND ND	Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching
Foaming Agents (MBAS)	ppb	NA	NA	NA	Range Average	ND ND	Municipal and industrial waste discharges
Iron	ppb	NA	NA	100	Range Average	ND ND	Leaching from natural deposits; industrial wastes
Manganese	ppb	NA	NA	20	Range Average	ND ND	Leaching from natural deposits
MTBE	ppb	NA	NA	3	Range Average	ND ND	Gasoline discharge from watercraft engines
Odor Threshold	TON	NA	NA	1	Range Average	ND ND	Naturally-occurring organic materials
Silver	ppb	NA	NA	10	Range Average	ND ND	Industrial discharges
Specific Conductance	µS/cm	NA	NA	NA	Range Average	31.59-51.21 49.60	Source water is the pacific ocean, conductivity will vary widely from surface and groundwater
Sulfate	ppm	NA	NA	0.5	Range Average	NA NA	Runoff/leaching from natural deposits; industrial wastes
Thiobencarb	ppb	NA	NA	1	Range Average	ND ND	Runoff/leaching from rice herbicide
Total Dissolved Solids (TDS)	ppm	NA	NA	NA	Range Average	18200-38360 33699	Runoff/leaching from natural deposits; seawater influence
Turbidity	NTU	NA	NA	0.1	Range Average	0.19-17.81 1.00	Soil runoff
Zinc	ppm	NA	NA	0.05	Range Average	ND ND	Runoff/leaching from natural deposits; industrial wastes
OTHER PARAMETERS							
CHEMICAL							
Alkalinity	ppm	NA	NA	NA	Range Average	101-120 111.1	
Boron	ppm	NA	NA	NA	Range Average	3.3-95 6.5	Runoff/leaching from natural deposits; industrial wastes
Calcium	ppm	NA	NA	NA	Range Average	384-448 424	
Hardness	ppm	NA	NA	NA	Range Average	800-1510 1067	
Magnesium	ppm	NA	NA	NA	Range Average	1300-1400 1300	
pH	pH Units	NA	NA	NA	Range Average	6.00-8.83 8.10	
Potassium 40	ppm	NA	NA	NA	Range Average	171.34-427.24 305.44	
Radon	pCi/L	NA	NA	100	Range Average	NA NA	
Sodium	ppm	NA	NA	NA	Range Average	9700-12000 10425	
Chloride	ppm	NA	NA	NA	Range Average	17000-19000 18250	
Total Organic Carbon (TOC)	ppm	NA	NA	NA	Range Average	1.02-4.06 1.62	Various natural and man-made sources
Vanadium	ppb	NL = 50	NA	3	Range Average	NA NA	Naturally-occurring; industrial waste discharge
Dichlorodifluoromethane (Freon 12)	ppb	NL = 1,000	NA	0.5	Range Average	NA NA	Industrial waste discharge
Ethyl-tert-butyl ether (ETBE)	ppb	NA	NA	3	Range Average	NA NA	Used as gasoline additive
tert-Amyl-methyl ether (TAME)	ppb	NA	NA	3	Range Average	NA NA	Used as gasoline additive
tert-Butyl alcohol (TBA)	ppb	NL = 12	NA	2	Range Average	NA NA	MTBE breakdown product; used as gasoline additive

ABBREVIATIONS AND FOOTNOTES

Abbreviations

AL	Action Level	NTU	Nephelometric Turbidity Units
CFU	Colony-Forming Units	PHG	Public Health Goal
DLR	Detection Limits for Purposes of Reporting	ppb	parts per billion or micrograms per liter (µg/L)
MCL	Maximum Contaminant Level	ppm	parts per million or milligrams per liter (mg/L)
MCLG	Maximum Contaminant Level Goal	RAA	Running Annual Average; highest RAA is the highest of all Running Annual Averages calculated as average of the all samples collected within a 12-month period
NA	Not Applicable	TT	Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water
NC	Not Collected		
ND	Not Detected		
NL	Notification Level	µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)

2023 Consumer Confidence Report Data - Carlsbad Desalination Plant					Data Date: January 1, 2023 to Decemehr 31, 2023		
Contaminant / Parameter	Units	Treatment Plant Effluent			Carlsbad Desalination Plant	Major Sources in Drinking Water	
		State or Federal MCL [MRDL]	PHG (MCLG) [MRDL G]	State DLR			Range Average
REGULATED CONTAMINANTS WITH PRIMARY STANDARDS							
CLARITY							
Combined Filter	NTU	TT = 0.1 (a)			Highest	0.08	
Effluent Turbidity	%	TT (a)	NA	NA	% ≤ 0.1	100% Soil Runoff	
MICROBIOLOGICAL							
Total Coliform Bacteria (b)	(c)	5	(0)	NA	Highest positive count	0	
E. coli	(c)	(0)	(0)	NA	Total annual positive count	0	
Heterotrophic Plate Count (HPC) (d)	CFU/ml	TT	NA	NA	Range	NA	
					Average	NA	
SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES							
Acrylamide	NA	TT	(0)	NA	Range	NA	
					Average	NA	
Alachlor	ppb	2	4	1	Range	ND	
					Average	ND	
Atrazine	ppb	1	0.15	0.5	Range	ND	
					Average	ND	
Bentazon	ppb	18	200	2	Range	ND	
					Average	ND	
Benzo(a)pyrene [PAH]	ppt	200	7	100	Range	ND	
					Average	ND	
Carbofuran	ppb	18	0.7	5	Range	ND	
					Average	ND	
Chlordane	ppt	100	30	100	Range	ND	
					Average	ND	
2,4-D	ppb	70	20	10	Range	ND	
					Average	ND	
Dalapon	ppb	200	790	10	Range	ND	
					Average	ND	
Di(2-ethylhexyl)adipate	ppb	400	200	5	Range	ND	
					Average	ND	
Di(2-ethylhexyl)phthalate	ppb	4	12	3	Range	ND	
					Average	ND	
Dibromochloropropane [DBCP]	ppt	200	3	10	Range	ND	
					Average	ND	
Dinoseb	ppb	7	14	2	Range	ND	
					Average	ND	
Dioxin [2,3,7,8-TCDD]	ppq	30	0.05	5	Range	ND	
					Average	ND	
Diquat	ppb	20	6	4	Range	ND	
					Average	ND	
Endothall	ppb	100	94	45	Range	ND	
					Average	ND	
Endrin	ppt	2	0.3	0.1	Range	ND	
					Average	ND	
Epichlorohydrin	NA	TT	(0)	NA	Range	NA	
					Average	NA	
Ethylene Dibromide [EDB]	ppt	50	10	20	Range	ND	
					Average	ND	
Glyphosate	ppb	700	900	25	Range	ND	
					Average	ND	
Heptachlor	ppt	10	8	10	Range	ND	
					Average	ND	
Heptachlor Epoxide	ppt	10	6	10	Range	ND	
					Average	ND	
Hexachlorobenzene	ppb	1	0.03	0.5	Range	ND	
					Average	ND	
Hexachlorocyclopentadiene	ppb	50	2	1	Range	ND	
					Average	ND	
Lindane	ppt	200	32	200	Range	ND	
					Average	ND	
Methoxychlor	ppb	30	0.04	10	Range	ND	
					Average	ND	

					Average	ND	alfalfa, and livestock
					Range	ND	Runoff/leaching from herbicide used on rice
Molinate (Ordram)	ppb	20	1	2	Average	ND	
					Range	ND	Runoff/leaching from insecticide used on field crops, fruits and ornamentals, especially apples, potatoes, and tomatoes
Oxamyl (Vydate)	ppb	50	26	20	Average	ND	
					Range	ND	Discharge from wood preserving factories, cotton and other insecticidal/herbicidal uses
Pentachlorophenol	ppb	1	0.3	0.2	Average	ND	
					Range	ND	Herbicide runoff
Picloram	ppb	500	166	1	Average	ND	
					Range	ND	Runoff from landfills; discharge of waste chemicals
PCBs (Polychlorinated Biphenyls)	ppt	500	90	500	Average	ND	
					Range	ND	Herbicide runoff
Simazine	ppb	4	4	1	Average	ND	
					Range	ND	Runoff/leaching from herbicide used on rice
Thiobencarb	ppb	70	42	1	Average	ND	
					Range	ND	Residue of banned herbicide
2,4,5-TP (Silvex)	ppb	50	3	1	Average	ND	
					Range	ND	Runoff/leaching from insecticide used on cotton and cattle
Toxaphene	ppb	3	0.3	1	Average	ND	
					Range	ND	
VOLATILE ORGANIC COMPOUNDS							
					Range	ND	Discharge from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills
Benzene	ppb	1	0.15	0.5	Average	ND	
					Range	ND	Discharge from chemical plants and other industrial activities
Carbon Tetrachloride	ppt	500	100	500	Average	ND	
					Range	ND	Discharge from industrial chemical factories
1,2-Dichlorobenzene	ppb	600	600	0.5	Average	ND	
					Range	ND	Discharge from industrial chemical factories
1,4-Dichlorobenzene	ppb	5	6	0.5	Average	ND	
					Range	ND	Extraction and degreasing solvent; used in manufacture of pharmaceuticals, stone, clay and glass products; fumigant
1,1-Dichloroethane	ppb	5	3	0.5	Average	ND	
					Range	ND	Discharge from industrial chemical factories
1,2-Dichloroethane	ppt	500	400	500	Average	ND	
					Range	ND	Discharge from industrial chemical factories
1,1-Dichloroethylene	ppb	6	10	0.5	Average	ND	
					Range	ND	Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater
cis-1,2-Dichloroethylene	ppb	6	13	0.5	Average	ND	
					Range	ND	Discharge from industrial chemical factories; minor biodegradation byproduct of TCE and PCE groundwater
trans-1,2-Dichloroethylene	ppb	10	50	0.5	Average	ND	
					Range	ND	Discharge from pharmaceutical and chemical factories; insecticide
Dichloromethane	ppb	5	4	0.5	Average	ND	
					Range	ND	Discharge from industrial chemical factories; primary component of some fumigants
1,2-Dichloropropane	ppb	5	0.5	0.5	Average	ND	
					Range	ND	Runoff/leaching from nematocide used on croplands
1,3-Dichloropropene	ppt	500	200	500	Average	ND	
					Range	ND	Discharge from petroleum refineries; industrial chemical factories
Ethylbenzene	ppb	300	300	0.5	Average	ND	
					Range	ND	Leaking underground storage tanks; discharge from petroleum and chemical factories
Methyl-tert-butyl- ether	ppb	13	13	3	Average	ND	
					Range	ND	Discharge from industrial and agricultural chemical factories and dry cleaning facilities
Monochlorobenzene	ppb	70	70	0.5	Average	ND	
					Range	ND	Discharge from rubber and plastic factories; leaching from landfills
Styrene	ppb	100	0.5	0.5	Average	ND	
					Range	ND	Discharge from industrial and agricultural chemical factories; solvent used in production of TCE, pesticides, varnish and
1,1,2,2-Tetrachloroethane	ppb	1	0.1	0.5	Average	ND	
					Range	ND	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Tetrachloroethylene	ppb	5	0.06	0.5	Average	ND	
					Range	ND	Discharge from petroleum and chemical factories; underground gas tank leaks
Toluene	ppb	150	150	0.5	Average	ND	
					Range	ND	Discharge from textile-finishing factories
1,2,4-Trichlorobenzene	ppb	5	5	0.5	Average	ND	
					Range	ND	Discharge from metal degreasing sites and other factories; manufacture of food wrappings
1,1,1-Trichloroethane	ppb	200	1000	0.5	Average	ND	
					Range	ND	Discharge from industrial chemical factories
1,1,2-Trichloroethane	ppb	5	0.3	0.5	Average	ND	
					Range	ND	Discharge from metal degreasing sites and other factories
Trichloroethylene (TCE)	ppb	5	1.7	0.5	Average	ND	
					Range	ND	Discharge from industrial factories; degreasing solvent; propellant and refrigerant
Trichlorofluoromethane	ppb	150	1300	5	Average	ND	
					Range	ND	

1,1,2-Trichloro-1,2,2-trifluoroethane	ppm	1.2	4	0.01	Range	ND	Discharge from metal degreasing sites and other factories; dry-cleaning solvent; refrigerant
					Average	ND	
Vinyl Chloride	ppt	500	50	500	Range	ND	Leaching from PVC piping; discharge from plastics factories; biodegradation byproduct of TCE and PCE groundwater
					Average	ND	
Xylenes	ppm	1.75	1.8	0.0005	Range	ND	Discharge from petroleum and chemical factories; fuel solvent
					Average	ND	

INORGANIC CHEMICALS

Aluminum	ppm	1	0.6	0.05	Range	ND	Erosion of natural deposits; residue from some surface water treatment processes
					Average	ND	
Antimony	ppb	6	1	6	Range	ND	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
					Average	ND	
Arsenic	ppb	10	0.004	2	Range	ND	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
					Average	ND	
Asbestos (f)	MFL	7	7	0.2	Range	ND	Internal corrosion of asbestos cement water mains; erosion of natural deposits
					Average	ND	
Barium	ppb	1	2	100	Range	ND	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
					Average	ND	
Beryllium	ppb	4	1	1	Range	ND	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries
					Average	ND	
Cadmium	ppb	5	0.04	1	Range	ND	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical
					Average	ND	
Chromium	ppb	50	(100)	10	Range	ND	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
					Average	ND	
Chromium VI	ppb	10	0.02	1	Range	ND	Runoff/leaching from natural deposits; discharge from industrial waste factories
					Average	ND	
Copper	ppm	AL=1.3	0.3	0.05	Range	ND	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
					Average	ND	
Cyanide	ppb	150	150	100	Range	ND	Discharge from steel/metal, plastic and fertilizer factories
					Average	ND	
Fluoride	ppm	2.0	1	0.1	Range	0.6-0.799	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
					Average	0.696	
Lead	ppb	AL=15	0.2	5	Range	ND	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural
					Average	ND	
Mercury	ppb	2	1.2	1	Range	ND	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
					Average	ND	
Nickel	ppb	100	12	10	Range	ND	Erosion of natural deposits; discharge from metal factories
					Average	ND	
Nitrate	ppm	10 (as N)	10 (as N)	0.4	Range	ND	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
					Average	ND	
Nitrite	ppm	1 (as N)	1 (as N)	0.4	Range	ND	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
					Average	ND	
Perchlorate	ppb	6	1	2	Range	ND	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of
					Average	ND	
Selenium	ppb	50	30	5	Range	ND	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical
					Average	ND	
Thallium	ppb	2	0.1	1	Range	ND	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
					Average	ND	

RADIOLOGICALS

Gross Alpha Particle Activity	pCi/L	15	(0)	3	Range	ND	Erosion of natural deposits
					Average	ND	
Gross Beta Particle Activity	pCi/L	50	(0)	4	Range	ND	Decay of natural and man-made deposits
					Average	ND	
Radium-226	pCi/L	NA	0.05	1	Range	ND	Erosion of natural deposits
					Average	ND	
Radium-228	pCi/L	NA	0.019	1	Range	ND	Erosion of natural deposits
					Average	ND	
Combined Radium	pCi/L	5	(0)	NA	Range	0.094-0.715	Erosion of natural deposits
					Average	0.48	
Strontium-90	pCi/L	8	0.35	2	Range	ND	Decay of natural and man-made deposits
					Average	ND	
Tritium	pCi/L	20,000	400	1,000	Range	ND	Decay of natural and man-made deposits
					Average	ND	
Uranium	pCi/L	20	0.43	1	Range	ND	Erosion of natural deposits
					Average	ND	

DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS

TTHMs [Total Trihalomethanes]	ppb	80	N/A	1.0	Range	ND	Byproduct of drinking water disinfection
					Average	ND	
HAAs [Sum of 5 Haloacetic Acids]	ppb	60	N/A	1.0	Range	ND	Byproduct of drinking water disinfection

Parameter	Unit	Standard	Observed	Limit	Notes	
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	Average	ND
					Range	2.93-3.38
					Average	3.18
Bromate	ppb	10	0.1	1.0	Range	NA
					Average	NA
Control of DBP Precursors (TOC)	ppm	TT	N/A	0.3	Range	NA
					Average	NA

REGULATED CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARDS (See Footnote j)						
Aluminum	ppm	200	N/A	0.05	Range	ND
					Average	ND
Chloride	ppm	500	N/A	NA	Range	35-98
					Average	75
Color	Units	15	N/A	NA	Range	ND
					Average	ND
Copper	ppm	1	N/A	0.05	Range	ND
					Average	ND
Foaming Agent [MBAS]	ppm	500	N/A	NA	Range	ND
					Average	ND
Iron	ppm	300	N/A	0.1	Range	ND
					Average	ND
Manganese	ppm	50	N/A	20	Range	ND
					Average	ND
Methyl-tert-butyl ether (MTBE)	ppb	5	N/A	3	Range	ND
					Average	ND
Odor Threshold	TON	3	N/A	1	Range	ND
					Average	ND
Silver	ppb	100	N/A	10	Range	ND
					Average	ND
Specific Conductance	µS/cm	1600	N/A	NA	Range	225.5-506.4
					Average	405.4
Sulfate	ppm	500	N/A	0.5	Range	13-15
					Average	13.5
Thriobencarb	ppb	1	N/A	1	Range	ND
					Average	ND
Total Dissolved Solids [TDS]	ppm	1,000	N/A	NA	Range	122-318
					Average	216
Turbidity	NTU	5	N/A	0.1	Range	ND-0.25
					Average	0.09
Zinc	ppm	5	N/A	0.05	Range	ND
					Average	ND

OTHER PARAMETERS

MICROBIOLOGICAL						
HPC	CFU/ml	TT	NA	NA	Range	NA
					Median	NA
CHEMICAL						
Alkalinity	ppm	NA	NA	NA	Range	46-87
					Average	63
Boron (g)	ppm	NA	NA	NA	Range	0.39-0.90
					Average	0.62
Calcium	ppm	NA	NA	NA	Range	17.48-55.2
					Average	22.55
Chlorate	ppb	NL=800	NA	20	Range	NA
					Average	NA
Corrosivity (as Aggressiveness Index)	AI	NA	NA	NA	Range	10.3-11.2
					Average	10.58
Corrosivity (as Saturation Index)	SI	NA	NA	NA	Range	0.04-0.62
					Average	0.28
Total Hardness	ppm	NA	NA	NA	Range	43.7-79.6
					Average	56.12
Magnesium	ppm	NA	NA	NA	Range	0.9-1.1
					Average	1.1
pH	pH Units	NA	NA	NA	Range	8.16-8.87
					Average	8.5
Potassium 40	ppm	NA	NA	NA	Range	0.000-389
					Average	44.976
Radon	pCi/l	NA	NA	100	Range	NA
					Average	NA

Contaminant	Unit	NA	NA	NA	Average	NA	
Sodium	ppm	NA	NA	NA	Range	40.1-61	
					Average	55.35	
TOC	ppm	TT	NA	0.3	Range	NA	Various natural and man-made sources; TOC as medium for the formation of disinfection byproducts
					Average	NA	
Vanadium	ppb	NL=50	NA	3	Range	NA	Naturally-occurring; industrial waste discharge
					Average	NA	
N-Nitrosodimethylamine (NDMA)	ppt	NL=10	3	2	Range	NA	Byproduct of drinking water chloramination; industrial processes
					Average	NA	
Dichlorodifluoromethane (Freon 12)	ppb	NL=1,000	NA	0.5	Range	NA	Industrial waste discharge
					Average	NA	
Ethyl-tert-butyl- ether (ETBE)	ppb	NA	NA	3	Range	NA	Used as gasoline additive
					Average	NA	
tert-Amyl-methyl ether (TAME)	ppb	NA	NA	3	Range	NA	Used as gasoline additive
					Average	NA	
tert-Butyl alcohol (TBA)	ppb	NL=12	NA	2	Range	NA	MTBE breakdown product; used as gasoline additive
					Average	NA	

ABBREVIATIONS AND FOOTNOTES

Abbreviations

AI	Aggressiveness Index	MFL	Million Fibers per Liter
AL	Action Level	MRDL	Maximum Residual Disinfectant Level
CDPH	California Department of Public Health	MRDLG	Maximum Residual Disinfectant Level Goal
CFU	Colony-Forming Units	NA	Not Applicable
DBP	Disinfection Byproducts	ND	Not Detected
DLR	Detection Limits for Purposes of Reporting	NL	Notification Level
LRAA	Locational Running Annual Average; highest	NTU	Nephelometric Turbidity Units
	LRAA is the highest of all Locational Running Annual Averages calculated as average of all samples collected within a 12-month period	pCi/L	picoCuries per Liter
		PHG	Public Health Goal
		ppb	parts per billion or micrograms per liter (µg/L)
MBAS	Methylene Blue Active Substances	ppm	parts per million or milligrams per liter (mg/L)
MCL	Maximum Contaminant Level	ppq	parts per quadrillion or picograms per liter (pg/L)
MCLG	Maximum Contaminant Level Goal	ppt	parts per trillion or nanograms per liter (ng/L)

Footnotes

- (a) The reverse osmosis filter effluent turbidity must be equal to or less than 0.1 NTU in 95% of the measurements taken each month, shall not exceed 0.5 NTU in more than two (2) consecutive 15-minute samples and shall not exceed 1.0 NTU at any time. Turbidity is an indicator of the effectiveness of the filters.
- (b) Total coliform MCL: No more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on the combined distribution system sampling from all the treatment plants.
- (c) E. coli MCL: The occurrence of two consecutive total coliform-positive samples, one of which contains E. coli, constitutes an acute MCL violation. The MCL was not violated.
- (d) All product water tank effluent samples collected had detectable total chlorine residuals and no HPC was required. HPC reporting level is 1 CFU/ml. Values are based on monthly median per State guidelines and recommendations.
- (e) Fluoride samples that were below target ranges were blended with other water supply sources to maintain compliance in water distributed to consumers.
- (f) Not used
- (g) Boron analysis is included as seawater is a natural source for this constituent.
- (h) This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2023, including the requirements of the federal Revised Total Coliform Rule, effective since April 1, 2016, to the existing state Total Coliform Rule. The revised rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system. The state Revised Total Coliform Rule became effective July 1, 2021.
- (i) Regulated Contaminants with Secondary Drinking Water Standards do not have PHGs, MCLGs, or mandatory standard health effects language because secondary MCLs are set on the basis of aesthetic concerns.