Public Health Goals Report 2022-2024

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BACKGROUND

Provisions of the California Health and Safety Code 116470 (Exhibit A) specify that RWD, and other water utilities serving more than 10,000 service connections prepare a report by July 1, 2025, if their water quality measurements have exceeded any Public Health Goals (PHGs). PHGs are non-enforceable goals established by the California Environmental Protection Agency's (Cal-EPA) Office of Environmental Health Hazard Assessment (OEHHA). The law also requires that where OEHHA has not adopted a PHG for a constituent, the water suppliers are to use the Maximum Contaminant Level Goals (MCLGs) adopted by the United States Environmental Protection Agency (US EPA). Only constituents that have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed. Exhibit B provides a list of all regulated constituents with the MCLs and PHGs.

If a constituent was detected in the District's water supply between 2022 through 2024 at a level exceeding an applicable PHG or MCLG, this report provides the information required by law. Included is the numerical public health risk associated with the MCL and the PHG or MCLG, the category or type of risk to health that could be associated with each constituent, the best treatment technology available that could be used to reduce the constituent level, and an estimate of the cost to install that treatment if it is appropriate and feasible.

WHAT ARE PUBLIC HEALTH GOALS?

PHGs are set by OEHHA, which is part of Cal-EPA, and are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the USEPA or the State Water Resources Control Board, Division of Drinking Water (DDW) in setting drinking water standards (MCLs) are considered in setting the PHGs. These factors include analytical detection capability, treatment technology availability, costs and benefits. The PHGs are not enforceable and are not required to be met by any public water system. MCLGs are the federal equivalent to PHGs.

WATER QUALITY DATA CONSIDERED

The District receives its water supply from the Metropolitan Water District of Southern California (MWD), Three Valleys Municipal Water District (TVMWD) Miramar Plant, TVMWD Groundwater, and California Domestic Water Company (CDWC). All of the water quality data collected from the District's drinking water system between 2022 and 2024 for purposes of determining compliance with drinking water standards were considered. This data was all summarized in the District's 2022, 2023, and 2024 Annual Water Quality Reports, which are all accessible on the District's website (www.rwd.org/water-quality). Please see Exhibit C for the District's 2022, 2023, and 2024 Annual Water Quality Reports.

GUIDELINES FOLLOWED

The Association of California Water Agencies (ACWA) formed a workgroup that prepared guidelines for water utilities to use in preparing these required reports. The ACWA guidelines were used in the preparation of RWD's report. No guidance was available from state regulatory agencies.

BEST AVAILABLE TREATMENT TECHNOLOGY AND COST ESTIMATES

Both the USEPA and DDW adopt what are known as Best Available Technologies or BATs, which are the best known methods of reducing contaminant levels to the MCL. Costs can be estimated for such technologies. However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always possible or feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHG or MCLG, many of which are set at zero. Estimating the costs to reduce a constituent to zero is difficult, if not impossible, because it is not possible to verify by analytical means that the level has been lowered to zero. In some cases, installing treatment to try to further reduce very low levels of one constituent may have adverse effects on other aspects of water quality.

CONSTITUENTS DETECTED THAT EXCEED A PHG OR A MCLG:

The following is a discussion of constituents that were detected in one or more of our drinking water sources at levels above the PHG, or if no PHG, above the MCLG.

2022

- Bromate
- Gross Beta Particle Activity
- Perchlorate
- Radium-226
- Perfluorooctanesulfonic Acid (PFOS)
- Perfluorooctanoic Acid (PFOA)
- Tetrachloroethylene (PCE)
- Uranium

2023

- Arsenic
- Bromate
- Chromium VI
- Gross Beta Particle Activity
- N-Nitroso Dimethylamine
- Perchlorate
- Radium-226
- Radium-228
- Perfluorooctanesulfonic Acid (PFOS)
- Tetrachloroethylene (PCE)
- Uranium

2024

- Bromate
- Chromium VI
- Gross Alpha Particle Activity
- Gross Beta Particle Activity
- Perchlorate
- Radium-226
- Radium-228
- Perfluorooctanesulfonic Acid (PFOS)
- Perfluorooctanoic Acid (PFOA)
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Uranium

ARSENIC

Arsenic is a naturally-occurring mineral in soils. The PHG for arsenic is 0.004 parts per billion (ppb), and the MCL is 10 ppb. The category of health risk associated with arsenic is that people who drink water containing levels above the MCL throughout their lifetime could experience an increased risk of developing cancer. The numerical health risk for the PHG is one in a million, and the numerical health risk for the MCL is 2.5 per one thousand.

In 2023 Arsenic was detected in CDWC's water sources. The levels detected were below the MCL at all times. The BATs to lower the level of arsenic to below the PHG of 0.004 ppb are ion exchange, reverse osmosis, and

coagulation/filtration. The estimated cost of treatment with ion exchange is about $0.67 per 1,000 gallons, the total estimated annual treatment cost is approximately $224,448.

BROMATE

For Bromate, the PHG is 0.0001 ppb and the MCL is .010 ppb. Some people who drink water containing Bromate in excess of the MCL over many years could experience an increased risk of developing cancer. The numerical health risk for the PHG is one in a million, and the numerical health risk for the MCL is one per ten thousand.

Bromate was detected in the District's MWD imported water supply in 2022-2024. Bromate levels in the District's water were consistently below MCL; however, in 2022-2024, results were the above the PHG. The most common source of Bromate is as a byproduct of drinking water disinfection through ozonation. The BATs identified to lower Bromate levels to below the MCL are granular activated carbon (GAC), reverse osmosis, and ozone dosing. The estimated cost for these methods of treatment range from $0.17 to $9.00 per 1,000 gallons of treated water or an annual cost of $162,292 to $8,702,424 per year.

CHROMIUM VI

The source of hexavalent chromium in water supplies is mainly from the erosion of natural deposits; transformation of naturally occurring trivalent chromium to hexavalent chromium by natural processes and human activities such as discharges from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities. The PHG for hexavalent chromium is 0.02 mg/L and the MCL is 10 mg/L. The category of health risk associated with hexavalent chromium and the reason that a drinking water standard was adopted for it is that some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer. The numerical health risk for hexavalent chromium at the PHG of 0.02 mg/L is one excess cancer case per one million people over a lifetime of exposure. The numerical health risk at the MCL of 10 mg/L is five excess cancer cases per 10,000 people over a lifetime of exposure.

Hexavalent chromium has been detected at levels above the PHG in 2023 in CDWC and 2024 in TVMWD Groundwater and CDWC. Detected levels of hexavalent chromium were below the MCL at all times. The District is in full compliance with hexavalent chromium drinking water standards. BAT for lowering hexavalent chromium below the PHG are coagulation/filtration, ion exchange, lime softening, and reverse osmosis. Since hexavalent chromium concentrations are already below the MCL, implementing BAT is not required. The estimated cost for coagulation filtration is $0.45 per 1,000 gallons treated or about $173,319 per year.

GROSS ALPHA PARTICLE ACTIVITY

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. The source of gross alpha particle activity in water supplies is mainly from the erosion of natural deposits. A PHG for gross alpha particles has not been established. The MCL is 15 pCi/L. The category of health risk associated with gross alpha particles and the reason that a drinking water standard was adopted for it is that some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. The numerical health risk for gross alpha particles at the MCLG of 0 pCi/L is zero and an MCL of 15 pCi/L may increase the risk of cancer over a lifetime of exposure.

Gross alpha particles have been detected above the MCL in 2024 in CDWC. Detected levels of gross alpha particles were below the MCL at all times. RWD is in full compliance with gross alpha particle drinking water standards. BAT for lowering gross alpha particle activity below the PHG is reverse osmosis. Since gross alpha particle activity are already below the MCL, implementing BAT is not required because Gross Beta levels remain well within regulatory safety limits, and no samples exceeded the MCL, no additional treatment action is currently needed.

GROSS BETA PARTICLE ACTIVITY

Certain minerals are radioactive and may emit a form of radiation known as photons and beta radiation. There is no PHG for Gross Beta Particle Activity as the OEHHA concluded in 2003 that a PHG for this constituent is not practical. The PHG set by the US EPA is 0 pCi/L and the MCL is 50 pCi/L. The DDW and US EPA, which set drinking water standards, have determined Gross Beta Particle Activity is a health concern at certain levels of exposure. This radiological constituent is a naturally occurring contaminant in some groundwater and surface water supplies. The numerical health risk for gross alpha particles at the PHG of 0 pCi/L is zero and an MCL of 50 pCi/L may increase the risk of cancer over a lifetime of exposure.

Gross Beta Particle Activity was detected throughout 2022-2024 in MWD's imported water supply and TVMWD Miramar Plant supply, at levels above the PHG of 0 but well below the MCL of 50 pCi/L at all times. The BATs identified to treat Gross Beta Particle Activity are ion exchange and reverse osmosis. The most effective method to consistently remove Gross Beta Particle Activity is to utilize reverse osmosis treatment. The estimated cost for this method of treatment ranges from $1.05 to $9.00 per 1,000 gallons of treated water or annual cost of $2,730,165 to $23,351,623 per year.

N-NITROSO DIMETHYLAMINE

N-Nitroso Dimethylamine (NDMA) is a chemical classified as a probable human carcinogen by both the U.S. EPA and OEHHA. Although there is currently no federal or state MCL for NDMA, CA has established a Notification Level of 10 nanograms per liter (ng/L) to the SWRCB. OEHHA has established a PHG of 0.003 ng/L. This health risk has been associated with liver damage and increased cancer risk, which corresponds to a one-in-a-million cancer risk over a lifetime of exposure.

NDMA has been detected in MWD in 2023 below the Notification Level and did not trigger regulatory response. Because of its potential health risks, NDMA is closely monitored. The BATs for removing NDMA from drinking water include ultraviolet (UV) oxidation, reverse osmosis, and, in some cases, granular activated carbon (GAC) as a pre-treatment method. Of these, UV oxidation is considered the most effective. The estimated cost for implementing UV oxidation treatment ranges from $1.50 to $3.50 per 1,000 gallons of water treated or an annual cost of $1,449,043 to $3,381,101.

PERCHLORATE

Perchlorate is a regulated inorganic chemical that can interfere with the normal function of the thyroid gland by inhibiting the uptake of iodide, which is essential for hormone production and normal growth and development. Sensitive populations, such as pregnant women and infants, may be particularly vulnerable to its effects. For perchlorate, the PHG is 1 ppb and the MCL is 6 ppb. The category health risk for Perchlorate above the MCL over many years are at a higher risk of developing endocrine toxicity (affects the thyroid) as well as developmental toxicity (causes neurodevelopmental deficits).

Perchlorate was detected in CDWC from 2022-2024. All detections were below the MCL and did not require formal notification or corrective action; however, perchlorate continues to be monitored due to its potential health impacts. The BATs identified to lower Perchlorate levels is ion exchange. The estimated cost for this method of treatment ranges from $1.05 to $9.00 per 1,000 gallons of treated water or an annual cost of $352,519 to $3,016,616 per year.

RADIUM-226

The PHG for Radium-226 is 0.05 pCi/L and the MCL is 5 pCi/L. This radiological constituent is a naturally occurring contaminant in some groundwater and surface water supplies. The category health risk for Radium-226, is that some people who drink water containing levels above the MCL over many years could experience an increased risk of developing cancer. The numerical health risk for Radium-226 at the PHG of 0.05 pCi/L is one excess cancer case per one million people over a lifetime of exposure. The numerical health risk for Radium-226 at the MCL of 5 pCi/L is one excess cancer case per ten thousand people over a lifetime of exposure.

Radium-226 was detected in CDWC in 2024 and in TVMWD Ground Water in 2023 and 2024. The levels detected were below the MCL at all times. The BATs identified to lower Radium-226 is ion exchange, reverse osmosis, and lime softening. The estimated cost for this method of treatment ranges from $1.05 to $9.00 per 1,000 gallons of treated water or an annual cost of $2,065,107 to $17,668,974 per year.

RADIUM-228

The source of Radium-228 in water supplies is mainly from the erosion of natural deposits. A PHG for Radium-228 is 0.019 pCi/L and the MCL is 5 pCi/L (combined Ra226+228). The category of health risk associated with Radium-228 in excess of the MCL over many years may have an increased risk of getting cancer. The numerical health risk for Radium-228 at the PHG of 0.019 pCi/L is one excess cancer case per one million people over a

lifetime of exposure, and the MCL of 5 pCi/L (combined Ra226+228) is three excess cancer cases per ten thousand people over a lifetime of exposure.

In 2023, Radium-228 was detected in some samples from TVMWD's Miramar and groundwater sources, and in 2024, it was also detected in samples from TVMWD groundwater and CDWC. While some of the detected levels exceeded the PHG, all results remained below the MCL. BATs for removing Radium-228 include reverse osmosis, ion exchange, and lime softening. These treatment methods are highly effective but can be costly to implement, particularly when existing levels are already considered safe. Because all detections were below regulatory limits and the water complies with applicable health standards, no additional treatment is currently required.

PERFLUOROOCTANESULFONIC ACID (PFOS)

Perfluorooctane sulfonic acid (PFOS) is a synthetic chemical that belongs to the group of substances known as per- and polyfluoroalkyl substances (PFAS). PFOS is widely used in consumer products such as stain repellents, firefighting foams, and non-stick coatings. The PHG for PFOS is 0.000001 ppm, or 1 ppt. California has not yet established an MCL for PFOS, but notification and response levels are in place for monitoring and public awareness. CA previously established a Notification Level of 6.5 ppt to the SWRCB. The health risk associated with PFOS exposure results in developmental issues, immune system suppression, thyroid disruption, and increased risk of certain cancers.

From 2022 to 2024, PFOS was detected in samples collected from CDWC sources, and in 2024, it was also detected in TVMWD groundwater. Some results exceeded above the PHG but below the state's response level, all results remain within regulatory requirements, and no formal action has been triggered. BATs for PFOS removal include GAC, ion exchange, and reverse osmosis. These methods are effective in reducing PFOS to non-detectable levels. Because current PFOS levels are below the enforceable MCL, and the water system remains in compliance with all applicable health regulations, no additional treatment is currently required. RWD remains committed to ongoing monitoring and proactively PFOS levels and evaluating treatment options as regulatory standards continue to evolve.

PERFLUORROOCTANOIC ACID (PFOA)

Perfluorooctanoic acid (PFOA) is a man-made chemical that is part of the broader group of per- and polyfluoroalkyl substances (PFAS). It was commonly used in products such as non-stick cookware, water-repellent fabrics, and cosmetics. The EPA established an MCL of .007 ppt. While CA has not formally established a PHG for PFOA, a previous Notification Level was set at 5.1 ppt. PFOA is highly persistent in the environment and the human body and has been linked to several potential health risks, including developmental effects, liver and kidney damage, immune system impacts, and increased risk of certain cancers.

PFOA was detected in CDWC sources in 2022 and in 2024 in TVMWD groundwater. Some of the detected levels exceeded the current federal MCL; however, all detections were below the current California Notification or Response Levels. RWD continues to monitor PFOA in accordance with state and federal guidelines and is committed to ensuring that all sources remain in compliance with drinking water standards.

The BATs for reducing PFOA in drinking water include GAC, ion exchange, and reverse osmosis. These methods are capable of removing PFOA to non-detectable levels.

Since PFOA levels were detected below the enforceable federal standard and RWD's water continues to meet all health-based regulations, no additional treatment is currently required. However, RWD remains proactive in its monitoring efforts and prepared to implement treatment solutions if future regulatory requirements or water quality conditions warrant additional action.

TETRACHLOROETHYLENE (PCE)

Tetrachloroethylene, also known as perchloroethylene (PCE), is a perchlorinated two-carbon olefin. The primary use of PCE is as a chemical intermediate for the production of chlorofluorocarbons and as a solvent used in cleaning operations (metal cleaning, vapor degreasing, and dry cleaning). In addition, numerous household products contain some level of PCE. PCE has a PHG of 0.06 ppb and an MCL of 5 ppb. The category health risk for PCE containing levels above the MCL over many years could experience an increased risk of developing cancer. The numerical health risk for PCE at the PHG of 0.06 ppb is one excess cancer case per million people over a lifetime of exposure. The numerical health risk for PCE at the MCL of 5 ppb is eight excess cancer cases per one hundred thousand people over a lifetime of exposure.

PCE was detected in CDWC from 2022-2024. The BATs for treating PCE include the following treatment techniques: Granular Activated Carbon (GAC) and Packed Tower Aeration. The cost to treat PCE by Packed Tower Aeration would be $0.38 to $1.42. If GAC were selected as the BAT to further reduce PCE an additional cost could range from $ 0.36 to $3.04 per 1,000 gallons of water treated. The estimated cost for this method of treatment ranges from $0.74 to $4.46 per 1,000 gallons of treated water or an annual cost of $247,653 to $1,493,577 per year.

TRICHLOROETHYLENE (TCE)

Trichloroethylene (TCE) is a volatile organic compound (VOC) that has historically been used as an industrial solvent for metal degreasing and in the manufacture of other chemicals. TCE can enter drinking water sources through industrial discharges, improper disposal, or leaching from contaminated soil. The PHG for TCE is 1.7 ppb and the MCL is 5 ppb. Long-term exposure to has been associated with serious health risks, and an increased risk of certain cancers such as kidney and liver cancer.

TCE was detected in 2024 in CDWC. While detected concentrations exceeded the PHG, all levels remained below the regulatory MCL, and therefore no mandatory treatment or public notification was required. BATs for reducing TCE is packed tower aeration and GAC. Both methods are highly effective in removing volatile organic compounds like TCE from water supplies. The estimated cost for TCE treatment varies depending on the selected method and system size, ranging from approximately $0.80 to $3.00 per 1,000 gallons of treated water, the estimated annual cost of treatment could range from $267,997 to $1,004,990 per year. Since TCE concentrations in RWD's water sources have remained below the enforceable standard and all health-based regulations continue to be met, no additional treatment is currently necessary. RWD remains committed to monitoring this compound and protecting water quality through preventive and responsive actions.

URANIUM

The PHG for Uranium is 0.43 pCi/L and the MCL is 20 pCi/L. This radiological constituent is a naturally occurring contaminant in some groundwater and surface water supplies. The category of health risk associated with Uranium, and the reason that a drinking water standard was adopted for it, is that some people who drink water containing Uranium in excess of the MCL over many years may have kidney problems or an increased risk of cancer. The numerical health risk associated with the PHG 0.43 pCi/L is one excess cancer case per million people over a lifetime of exposure. The numerical health risk for uranium at the MCL of 20 pCi/L is five excess cancer cases per one hundred thousand people over a lifetime of exposure.

In 2022-2024 Uranium was detected in MWD, additionally, in 2023-2024 it was also detected in CDWC and TVMWD Groundwater water supplies. The levels detected in RWD's water supplies were above the PHG; however, the levels were below the MCL at all times. The BATs identified to treat Uranium are coagulation/filtration, ion exchange, and reverse osmosis. The most effective method to consistently remove Uranium to the PHG is to utilize reverse osmosis treatment. The cost for removing Uranium is the same cost as Gross Beta Particle Activity, listed above.

RECOMMENDATIONS FOR FURTHER ACTION

RWD's drinking water quality meets all DDW and US EPA drinking water standards set to protect public health. To further reduce the levels of the constituents identified in this report would require additional costly treatment processes for constituents that are already significantly below the health-based MCLs established to provide "safe drinking water." The effectiveness of the treatment processes to provide any significant reduction in constituent levels at these already low values is uncertain. The health protection benefits of these further hypothetical reductions are not at all clear and may not be quantifiable. Therefore, no action is proposed.

EXHIBIT A

CA Health & Safety Code Section 116470 (b)

California Health and Safety Code §116470 (b)

On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

(1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.
(2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.
(3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.
(4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.
(5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.
(6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.
(c) Public water systems required to prepare a report pursuant to subdivision (b) shall hold a public hearing for the purpose of accepting and responding to public comment on the report. Public water systems may hold the public hearing as part of any regularly scheduled meeting.
(d) The department shall not require a public water system to take any action to reduce or eliminate any exceedance of a public health goal.
(e) Enforcement of this section does not require the department to amend a public water system's operating permit.
(f) Pending adoption of a public health goal by the Office of Environmental Health Hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.
(g) This section is intended to provide an alternative form for the federally required consumer confidence report as authorized by 42 U.S.C. Section 300g-3(c).

EXHIBIT B

MCL's, DLRs, and PHGs for Regulated Drinking Water Contaminants

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants

Last Update: November 2024

This table includes:

- California's maximum contaminant levels (MCLs)
- Detection limits for purposes of reporting (DLRs)
- Public health goals (PHGs) from the Office of Environmental Health Hazard Assessment (OEHHA)
- The PHGs for NDMA, PFOA and PFOS (which are not yet regulated in California) are included at the bottom of this table.
- The Federal MCLs for PFOA and PFOS are also listed at the end of this table.

Units are in milligrams per liter (mg/L), unless otherwise noted.

Chemicals with MCLs in 22 CCR §64431 – Inorganic Chemicals

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Aluminum	1	0.05	0.6	2001
Antimony	0.006	0.006	0.001	2016
Arsenic	0.010	0.002	0.000004	2004
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	0.2 MFL	7 MFL	2003
Barium	1	0.1	2	2003
Beryllium	0.004	0.001	0.001	2003
Cadmium	0.005	0.001	0.00004	2006
Chromium, Total	0.05	0.01	withdrawn Nov. 2001	1999
Chromium, Hexavalent	0.01	0.0001	0.00002	2011
Cyanide	0.15	0.1	0.15	1997
Fluoride	2	0.1	1	1997
Mercury (inorganic)	0.002	0.001	0.0012	1999 (rev2005)*
Nickel	0.1	0.01	0.012	2001
Nitrate (as nitrogen, N)	10 as N	0.4	45 as NO3 (=10 as N)	2018
Nitrite (as N)	1 as N	0.4	1 as N	2018
Nitrate + Nitrite (as N)	10 as N	--	10 as N	2018
Perchlorate	0.006	0.004	0.001	2015
Selenium	0.05	0.005	0.03	2010
Thallium	0.002	0.001	0.0001	1999 (rev2004)

*OEHHA's review of this chemical during the year indicated (rev20XX) resulted in nochange in the PHG.

Radionuclides with MCLs in 22 CCR §64441 and §64443 – Radioactivity

Units are picocuries per liter (pCi/L), unless otherwise stated; n/a = not applicable

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Gross alpha particle activity - OEHHA concluded in 2003 that a PHG was notpractical	15	3	none	n/a
Gross beta particle activity - OEHHA concluded in 2003 that a PHG was notpractical	4 mrem/yr	4	none	n/a
Radium-226	--	1	0.05	2006
Radium-228	--	1	0.019	2006
Radium-226 + Radium-228	5	--	--	--
Strontium-90	8	2	0.35	2006
Tritium	20,000	1,000	400	2006
Uranium	20	1	0.43	2001

Chemicals with MCLs in 22 CCR §64444 – Organic Chemicals

(a) Volatile Organic Chemicals (VOCs)

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Benzene	0.001	0.0005	0.00015	2001
Carbon tetrachloride	0.0005	0.0005	0.0001	2000
1,2-Dichlorobenzene	0.6	0.0005	0.6	1997 (rev2009)
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	0.006	1997
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	0.003	2003
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	0.0004	1999 (rev2005)
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	0.01	1999
Cis-1,2-Dichloroethylene	0.006	0.0005	0.013	2018
Trans-1,2-Dichloroethylene	0.01	0.0005	0.05	2018
Dichloromethane (Methylene chloride)	0.005	0.0005	0.004	2000
1,2-Dichloropropane	0.005	0.0005	0.0005	1999
1,3-Dichloropropene	0.0005	0.0005	0.0002	1999 (rev2006)
Ethylbenzene	0.3	0.0005	0.3	1997
Methyl tertiary butyl ether (MTBE)	0.013	0.003	0.013	1999
Monochlorobenzene	0.07	0.0005	0.07	2014
Styrene	0.1	0.0005	0.0005	2010
1,1,2,2-Tetrachloroethane	0.001	0.0005	0.0001	2003
Tetrachloroethylene (PCE)	0.005	0.0005	0.00006	2001
Toluene	0.15	0.0005	0.15	1999
1,2,4-Trichlorobenzene	0.005	0.0005	0.005	1999
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	0.0005	1	2006
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	0.0003	2006
Trichloroethylene (TCE)	0.005	0.0005	0.0017	2009
Trichlorofluoromethane (Freon 11)	0.15	0.005	1.3	2014
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	0.01	4	1997 (rev2011)
Vinyl chloride	0.0005	0.0005	0.00005	2000
Xylenes	1.75	0.0005	1.8	1997

(b) Non-Volatile Synthetic Organic Chemicals (SOCs)

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Alachlor	0.002	0.001	0.004	1997
Atrazine	0.001	0.0005	0.00015	1999
Bentazon	0.018	0.002	0.2	1999 (rev2009)
Benzo(a)pyrene	0.0002	0.0001	0.000007	2010
Carbofuran	0.018	0.005	0.0007	2016
Chlordane	0.0001	0.0001	0.00003	1997 (rev2006)
Dalapon	0.2	0.01	0.79	1997 (rev2009)
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0.00001	0.000003	2020
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	0.01	0.02	2009
Di(2-ethylhexyl) adipate	0.4	0.005	0.2	2003
Di(2-ethylhexyl) phthalate (DEHP)	0.004	0.003	0.012	1997
Dinoseb	0.007	0.002	0.014	1997 (rev2010)
Diquat	0.02	0.004	0.006	2016
Endothal	0.1	0.045	0.094	2014
Endrin	0.002	0.0001	0.0003	2016
Ethylene dibromide (EDB)	0.00005	0.00002	0.00001	2003
Glyphosate	0.7	0.025	0.9	2007
Heptachlor	0.00001	0.00001	0.000008	1999
Heptachlor epoxide	0.00001	0.00001	0.000006	1999
Hexachlorobenzene	0.001	0.0005	0.00003	2003
Hexachlorocyclopentadiene	0.05	0.001	0.002	2014
Lindane	0.0002	0.0002	0.000032	1999 (rev2005)
Methoxychlor	0.03	0.01	0.00009	2010
Molinate	0.02	0.002	0.001	2008
Oxamyl	0.05	0.02	0.026	2009
Pentachlorophenol	0.001	0.0002	0.0003	2009
Picloram	0.5	0.001	0.166	2016
Polychlorinated biphenyls (PCBs)	0.0005	0.0005	0.00009	2007
Simazine	0.004	0.001	0.004	2001
Thiobencarb	0.07	0.001	0.042	2016
Toxaphene	0.003	0.001	0.00003	2003
1,2,3-Trichloropropane	0.000005	0.000005	0.0000007	2009
2,3,7,8-TCDD (dioxin)	$3x10^{-8}$	$5x10^{-9}$	$5x10^{-11}$	2010
2,4,5-TP (Silvex)	0.05	0.001	0.003	2014

Copper and Lead, 22 CCR §64672.3

Values referred to as MCLs for lead and copper are not actually MCLs; instead, they arecalled "Action Levels" under the lead and copper rule

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Copper	1.3	0.05	0.3	2008
Lead	0.015	0.005	0.0002	2009

Chemicals with MCLs in 22 CCR §64533 – Disinfection Byproducts

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Total Trihalomethanes	0.080	--	--	--
Bromodichloromethane	--	0.0010	0.00006	2020
Bromoform	--	0.0010	0.0005	2020
Chloroform	--	0.0010	0.0004	2020
Dibromochloromethane	--	0.0010	0.0001	2020
Haloacetic Acids (five) (HAA5)	0.060	--	--	--
Monochloroacetic Acid	--	0.0020	--	--
Dichloroacetic Adic	--	0.0010	--	--
Trichloroacetic Acid	--	0.0010	--	--
Monobromoacetic Acid	--	0.0010	--	--
Dibromoacetic Acid	--	0.0010	--	--
Bromate	0.010	0.0050**	0.0001	2009
Chlorite	1.0	0.020	0.05	2009

**The DLR for Bromate is 0.0010 mg/L for analysis performed using EPA Method 317.0 Revision 2.0, 321.8, or 326.0.

Chemicals with PHGs established in response to DDW requests. These are not currently regulated drinking water contaminants.***

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
N-Nitrosodimethylamine (NDMA)	--	--	0.000003	2006
Perfluorooctanoic acid (PFOA)***	--	--	0.00000007	2024
Perfluorooctane sulfonic acid (PFOS)***	--	--	0.000001	2024

***PFOA and PFOS have US EPA MCLGs and MCLs.

PFOA – MCLG is zero. MCL is 4 ng/L

PFOS – MCLG is zero. MCL is 4 ng/L

EXHIBIT C

Annual Water Quality Reports: 2022, 2023, 2024

ROWLAND WATER DISTRICT

2022 ANNUAL

Water Quality Report

Published June 2023

KNOW YOUR WATER

This report contains important information about your drinking water. Translate it or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

此報告中包含有關您的飲用水的重要資訊。您可請求翻譯或與能夠讀懂此報告的人交談。

해당 보고서에는 식수에 대한 중요한 정보가 포함되어 있습니다. 내용을 이해하는 사람이 번역하거나 혹은 그러한 사람과 의논해 주십시오.

Naglalaman ang ulat na ito ng mahalagang impormasyon tungkol sa iyong inuming tubig. Isalin ito o makipag-usap sa isang taong nakauunawa rito.

Báo cáo này có các thông tin quan trọng về nước uống của quý vị. Hãy biên dịch báo cáo hoặc thảo luận với người hiểu được báo cáo.

#DiscoverRWD RWD.org

WHERE DOES YOUR WATER COME FROM?

In December 2002, Metropolitan Water District completed a source water assessment of its Colorado River and State Water Project supplies. Colorado River water is most vulnerable to the effects of recreation, urban and stormwater runoff, increasing urbanization in the watershed, and wastewater. The State Water Project is most vulnerable to the effects of urban and stormwater runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting Metropolitan Water District at (213) 217-6000.

In addition to these sources, Rowland Water District stores supplemental groundwater in the Main San Gabriel Basin and owns water rights in the Central Basin. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity. To ensure that water is safe to drink, the USEPA and State Water Resources Control Board, Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DDW regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Some people may be more vulnerable to contaminants found in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available by calling the Safe Drinking Water Hotline at (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. RWD is responsible for providing high quality drinking water but cannot control the variety of materials used in household plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/lead.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER

Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants that can be naturally occurring or the result of oil and gas production and mining activities.

2022 SAMPLE RESULTS

*For specific questions regarding this report or any additional questions related to District drinking water, please contact **Elisabeth Mendez, Compliance & Safety Manager, at (562) 697-1726** or email info@rwd.org*

Unless otherwise noted, the data presented in this table is from testing completed January 1 - December 31, 2022. The state requires the District to monitor for certain contaminants less than once per year because the concentrations are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. Unregulated contaminant monitoring helps EPA and the DDW determine where certain contaminants occur and whether they need to be regulated.

PRIMARY STANDARDS

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
CLARITY										
Combined Filter Effluent (CFE)	TT	NA	NA	Highest	0.04				NTU	Soil Runoff
Turbidity (a)	TT			% <0.3	100%	100%	100%	ND	%	
MICROBIOLOGICAL										
Total Coliform Bacteria (b) (Total Coliform Rule)	5%	(0)	NA		RWD Distribution System-Wide – 1.3%				%	Naturally present in the environment
Fecal Coliform and E.coli (c) (Total Coliform Rule)	(c)	(0)	NA		RWD Distribution System-Wide – 0%				(c)	Human and animal fecal waste
Heterotrophic Plate Count (e)	TT	NA	(1)	Range					CFU/mL	Naturally present in the environment
				Average	ND	ND	ND	NC		
INORGANIC CHEMICALS										
Aluminum (d) (p)	200	600	50	Range	58 – 240				ppb	Residue from water treatment process; erosion of natural deposits
				Average	156	ND	NR	ND		
Arsenic	10	.004	2	Range					ppb	Erosion of natural deposits: glass & electronics production wastes
				Average	ND	ND	NR	ND		
Barium	1000	2000	100	Range				120 –130	ppb	Discharge of oil drilling waste and from metal refineries; erosion of natural deposits
				Average	107	ND	NR	125		
Copper (d) (f)	AL = 1.3	0.3	0.05		RWD Distribution System-Wide – 36 Samples Collected RWD Distribution System-Wide – 90th Percentile Level = 0.120 RWD Distribution System-Wide – Samples Exceeding Action Level = 0				ppm	Internal corrosion of household pipes; erosion of natural deposits
Fluoride (m)	2	1	0.1	Range	0.6 – 0.8			.30 – .31	ppm	Erosion of natural deposits; water additive that promotes strong teeth
				Average	0.7	0.17	NR	0.31		
Lead (f)	AL = 15	0.2	5		RWD Distribution System-Wide – 36 Samples Collected RWD Distribution System-Wide – 90th Percentile Level = ND RWD Distribution System-Wide – Samples Exceeding Action Level = 0				ppb	Internal corrosion of household pipes; erosion of natural deposits
Nitrate (as N)	10	10	0.4	Range		ND – .57		3 – 7.5	ppm	Runoff and leaching from fertilizer use; septic tank and sewage; erosion or natural deposits
				Average	ND	0.35	NR	3.8		
Nitrate + Nitrite (as N)	1	1	0.4	Range					ppm	Runoff and leaching from fertilizer use; septic tank and sewage; erosion or natural deposits
				Average	ND	ND	NR	ND		
Perchlorate (ClO4)	6	1	2	Range				.58 – 3.5	ppb	Industrial waste discharge
				Average	ND	ND	NR	2.06		

PRIMARY STANDARDS *(Continued)*

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
VOLATILE ORGANIC CONTAMINANTS										
Dibromochloropropane (DBCP)	200	1.7	10	Range					ppt	Banned nematicide that may still be present in soils due to runoff/leaching
				Average	ND	ND	ND	ND		
Tetrachloroethylene (PCE)	5	0.06	0.5	Range				ND – 1.1	ppb	Discharge from factories, dry cleaners, and auto shops
				Average	ND	ND	ND	0.15		
Toluene	150	150	0.5	Range					ppb	Discharge from petroleum and chemical refineries
				Average	ND	ND	ND	ND		
Trichloroethylene (TCE)	5	1.7	0.5	Range				ND – 1.3	ppb	Discharge from metal degreasing sites and other factories
				Average	ND	ND	ND	0.72		
RADIOLOGICALS										
Gross Beta Particle Activity (h)	50	(0)	4	Range	4 – 7				pCi/L	Decay of natural and man-made deposits
				Average	6	5.82	NR	NC		
Combined Radium	5	(0)	NA	Range			.148 (2016)	2 – 3.2	pCi/L	Erosion of natural deposits
				Average	ND	Due 2023	Due 2028	2.7		
Radium 226	NA	0.05	1	Range	ND – 1		.147 (2016)		pCi/L	Erosion of natural deposits
				Average	ND	Due 2023	Due 2028	NC		
Radium 228	NA	0.019	1	Range			.001 (2016)		pCi/L	Erosion of natural deposits
				Average	ND	Due 2023	Due 2028	NC		
Strontium-90	8	0.35	2	Range					pCi/L	Decay of natural and man-made deposits
				Average	ND	0.330	NR	NC		
Tritium	20,000	400	1,000	Range					pCi/L	Decay of natural and man-made deposits
				Average	ND	170	NR	NC		
Uranium	20	0.43	1	Range	1 – 3				pCi/L	Erosion of natural deposits
				Average	2	Due 2023		ND		
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (k)										
Bromate (h)	10	0.1	1.0	Range	ND – 7.6				ppb	By-product of drinking water ozonation
				Average	ND	NR	NR	NC		
Total Trihalomethanes (TTHM)	80	NA	1	Range	RWD Distribution System-Wide – 1.4 – 63.3				ppb	By-product of drinking water disinfection
				Average	RWD Distribution System-Wide – 29.88					
Haloacetic Acids (HAA5)	60	NA	1	Average	RWD Distribution System-Wide – 0.0 – 12.4				ppb	By-product of drinking water disinfection
				Highest	RWD Distribution System-Wide – 7.46					
Total Chlorine Residual	[4]	[4]	NA	Range	RWD Distribution System-Wide – 2.43 – 2.78				ppm	Drinking water disinfectant added for treatment
				Average	RWD Distribution System-Wide – 2.65					
Total Organic Carbon (TOC)	TT	NA	0.30	Range	1.7 – 2.6	1.0 – 1.32			ppm	Various natural and man-made sources; TOC as a medium for the formation of disinfection by-products.
				Average	2.4	1.35	NR	NC		

SECONDARY STANDARDS - AESTHETIC STANDARDS

Parameter	State MCL	PHG (MCLG)	State DLR	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
Aluminum (d) (p)	200	600	50	Range	58 – 240				ppb	Residue from water treatment processes; erosion of natural deposits
				Average	156	ND	NR	ND		
Chloride	500	NA	(2)	Range	98 – 105			22 – 25	ppm	Runoff / leaching from natural deposits; seawater influence
				Average	102	ND	NR	23.5		
Color	15	NA	(1)	Range					Units	Naturally occurring organic materials
				Average	1	ND	NR	ND		
Copper (d) (f)	1	0.3	0.05		RWD Distribution System-Wide – 36 Samples Collected RWD Distribution System-Wide – 90th Percentile Level = 0.120 RWD Distribution System-Wide – Samples Exceeding Action Level = 0				ppm	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents-MBAS	500	NA	(50)	Range		ND – .28			ppb	Municipal and industrial waste discharges
				Average	ND	0.14	NR	ND		
Iron	300	NA	100	Range					ppb	Leaching from natural deposits: industrial wastes
				Average	ND	ND	NR	ND		
Odor Threshold (i)	3	NA	1	Range				1	TON	Naturally occurring organic materials
				Average	3	1	NR	1		
Specific Conductance	1,600	NA	NA	Range	964 – 1,020			500 – 520	µS/cm	Substances that form ions when in water; seawater influence
				Average	992	480	NR	510		
Sulfate	500	NA	0.5	Range	212 – 232			42 – 46	ppm	Runoff / leaching from natural deposits; industrial wastes
				Average	222	50	NR	44		
Total Dissolved Solids (TDS) (n)	1,000	NA	(2)	Range	632 – 643			290 – 310	ppm	Runoff / leaching from natural deposits; seawater influence
				Average	638	260	NR	300		

OTHER PARAMETERS

GENERAL MINERALS

Alkalinity	NA	NA	(1)	Range	126 – 128	76 – 86		160 – 190	ppm	Measure of water quality
				Average	127	83.25	NR	175		
Bicarbonate (HCO3)	NA	NA	NA	Range				200 – 230	mg/L	Naturally occurring from organic materials
				Average	NC	NC	NC	215		
Calcium	NA	NA	(0.1)	Range	68 – 71	23 – 25		67 – 70	ppm	Measure of water quality
				Average	70	24	NR	69		
Magnesium	NA	NA	(0.01)	Range	25 – 26			12 – 13	ppm	Measure of water quality
				Average	26	4.9	NR	12.5		
Perfluorooctanesulfonic acid (PFOS)	NL = 6.5	NA	NA	Range				2.1 – 8.2	ppt	Discharge from manufacturing facilities
				Average	NC	NC	NC	4.2		
Perfluorooctanoic acid (PFOA) (ppt)	NL = 5.1	NA	NA	Range				ND – 3.1	ppt	Discharge from manufacturing facilities
				Average	NC	NC	NC	1.7		
Potassium	NA	NA	(0.2)	Range	4.5 – 4.8			3.3 – 3.6	ppm	Measure of water quality
				Average	4.6	1.9	NR	3.5		
Sodium	NA	NA	(1)	Range	98 – 103			17	ppm	Measure of water quality
				Average	100	61	NR	17		
Total Hardness (as CaCO3)	NA	NA	(1)	Range	277 – 281			220	ppm	Measure of water quality
				Average	279	82	NR	220		
Total Anions	NA	NA	NA	Range				4.96 – 5.28	ppm	Negatively Charged Ions
				Average	NR	NR	NR	5.12		
Total Cations	NA	NA	NA	Range				5.24 – 5.32	ppm	Positively Charged Ions
				Average	NR	NR	NR	5.28		
Total Hardness (Grains per Gallon)	NA	NA	NA	Range					gpg	Measure of water quality
				Average	16.32	4.8	NR	12.87		

OTHER PARAMETERS *(Continued)*

Parameter	State MCL	PHG (MCLG)	State DLR	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
UNREGULATED CONTAMINANTS										
Boron	NL = 1000	NA	100	Range					ppb	Runoff / leaching from natural deposits; industrial wastes
				Average	140	180	Due 2023	ND		
Chlorate	NL = 800	NA	20	Range					ppb	By-product of drinking water chlorination; industrial processes
				Average	88	ND	NR	NC		
Chromium VI	NA	0.02	1	Range				2.8 – 3.0	ppb	Runoff / leaching from natural deposits; discharge from industrial waste factories
				Average	ND	ND	Due 2023	2.9		
N-Nitrosodimethylamine (NDMA)	NL = 10	3	(2)	Range					ppt	By-product of drinking water chlorination; industrial processes
				Average	NC	NC	NC	ND		
MISCELLANEOUS										
Calcium Carbonate Precipitation Potential (CCPP) (l)	NA	NA	NA	Range	5.7 – 11				ppm	Elemental balance in water; affected by temperature, other factors
				Average	9.4	NR	NR	NC		
Corrosivity (Aggressiveness Index)(g)	NA	NA	NA	Range				12.32 – 12.38	AI	Elemental balance in water; affected by temperature, other factors
				Average	12.5	12.21	NR	12.35		
Corrosivity (j) (as Saturation Index)	NA	NA	N/A	Range	0.56 – 0.75				SI	Elemental balance in water; affected by temperature, other factors
				Average	0.66	0.40	NR	NC		
pH	NA	NA	N/A	Range				7.8 – 7.9	pH units	Measure of water quality
				Average	8.1	8.5	NR	7.85		
Total Dissolved Solids (TDS) (o)	1,000	NA	(2)	Range	522 – 633				ppm	Runoff / leaching from natural deposits; seawater influence
				Average	602	260	NC	NC		

DEFINITION OF TERMS

AI	Aggressiveness Index
AL	Action Level
Average	Average value of all samples collected
$CaCO_3$	Calcium Carbonate
CCPP	Calcium Carbonate Precipitation Potential
CDWC	California Domestic Water Company
CFE	Combined Filter Effluent
CFU	Colony-Forming Units
DLR	Detection Limits for Purposes of Reporting
HAA5	Sum of five haloacetic acids
HPC	Heterotrophic Plate Count
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFL	Million Fibers per Liter
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
MWD	Metropolitan Water District of Southern California
NA	Not Applicable
NC	Not Collected
NR	Not Required
ND	Not Detected at or above DLR or RL
NL	Notification Level to SWRCB
NTU	Nephelometric Turbidity Units
pCi/L	PicoCuries per Liter
PHG	Public Health Goal
ppb	Parts per billion or micrograms per liter (µg/L)
ppm	Parts per million or milligrams per liter (mg/L)
ppq	Parts per quadrillion or picograms per liter (pg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
RAA	Running Annual Average
Range	Lowest to highest sampling results
RL	Reporting Limit
SI	Saturation Index (Langelier)
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TON	Threshold Odor Number
TT	Treatment Technique is a required process intended to reduce the level of a contaminate in drinking water
TTHM	Total Trihalomethanes
TVMWD	Three Valleys Municipal Water District

GLOSSARY

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standard (PDWS): MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Running Annual Average (RAA): Highest RAA is the highest of all Running Annual Averages calculated as an average of all within a 12-month period.

Locational Running Annual Average (LRAA): highest LRAA is the highest of all Locational Running Annual Averages calculated as an average of all samples collected within a 12-month period.

HIGHLIGHTS

(a) Metropolitan and Three Valleys MWD monitor turbidity at the CFE locations using continuous and grab samples. Turbidity, a measure of cloudiness of the water, is an indicator of treatment performance. Turbidity was in compliance with the TT primary drinking water standard and the secondary drinking water standard of less than 5 NTU.

(b) Results are based on Rowland Water District's distribution system's highest monthly percent positives; 936 samples were analyzed in 2022. The highest monthly percentage was 1.3%. Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform positive.

(c) The MCL for E. coli is based on routine and repeat samples that are total coliform-positive, and either is E. coli-positive or the system fails to take repeat samples following an E. coli-positive routine sample, or the system fails to analyze a total coliform-positive repeat sample for E. coli. The MCL was not violated.

(d) Aluminum and Copper have both primary and secondary standards.

(e) All distribution system samples had detectable total chlorine residuals, so no HPC was required. Metropolitan and Three Valleys MWD monitor HPCs to ensure treatment process efficacy.

(f) Lead and Copper samples are required to be collected once every three years during the months of June - September. Sample results are from 2021.

(g) AI ≥ 12.0 = Non-aggressive water; AI 10.0-11.9 = Moderately aggressive water; AI ≤ 10.0 = Highly aggressive water. Reference: ANSI/AWWA Standard C400-93 (R98)

(h) Compliance with the state and federal bromate MCL is based on RAA.

(i) Compliance with odor threshold secondary MCL is based on RAA. Treatment plants begin quarterly monitoring if annual monitoring results are above 3.

(j) Positive SI = non-corrosive; tendency to precipitate and/or dissolve scale on pipes. Negative SI = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM2330)

(k) RWD was in compliance with all provisions of the Stage 2 Disinfectants and Disinfection By-Products Rule (D/DBPR). Compliance was based on the highest Locational Running Annual Average (LRAA) of all data collected at distribution system-wide monitoring locations.

(l) Positive CCPP = non corrosive; tendency to precipitate and/or deposit scales on pipe. Negative CCPP = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM 2330)

(m) Metropolitan was in compliance with all provisions of the State's fluoridation system requirements. TVWD does not have fluoride feed systems and all fluoride results are naturally occurring.

(n) Metropolitan's TDS compliance data are based on flow-weighted monthly composite samples collected twice per year (April and October). The 12-month statistical summary of flow-weighted data is reported in "Other Parameters". TVMVD is required to test once annually for TDS.

(o) Statistical summary represents 12 months of flow-weighted data and values may be different than the TDS reported to meet compliance with secondary drinking water regulations for Metropolitan. Metropolitan's and TVMWD's TDS goal is < 500 mg/L.

(p) Compliance with the State MCL for aluminum is based on RAA. No secondary standard MCL exceedance occurred at the Metropolitan or TVMWD plant effluents.

(q) Data are from voluntary monitoring of constituents and are provided for informational purposes.

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Water Quality Report

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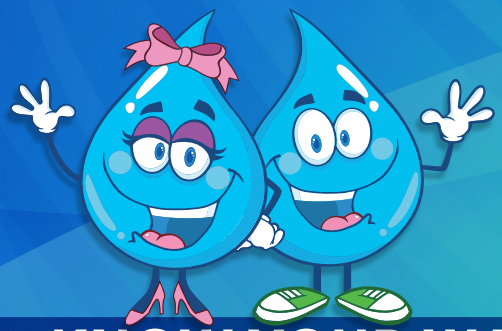
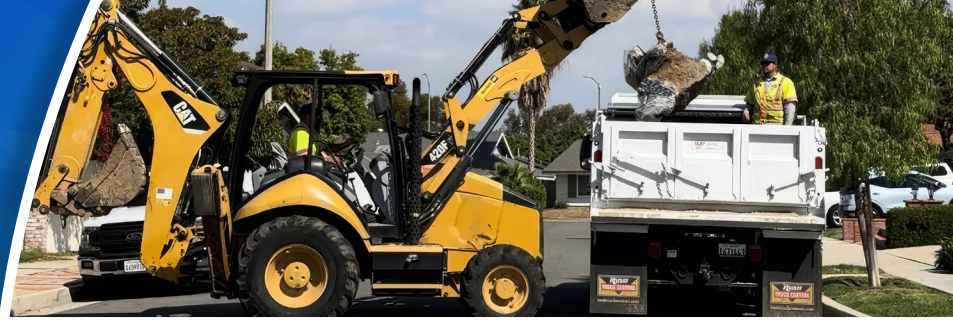
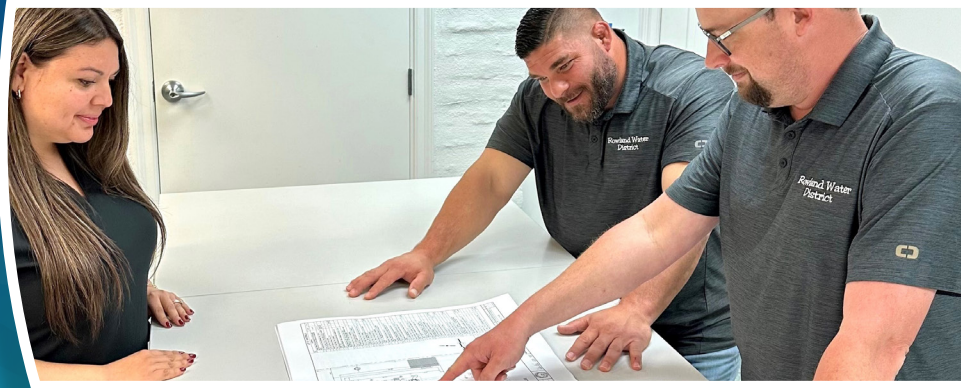
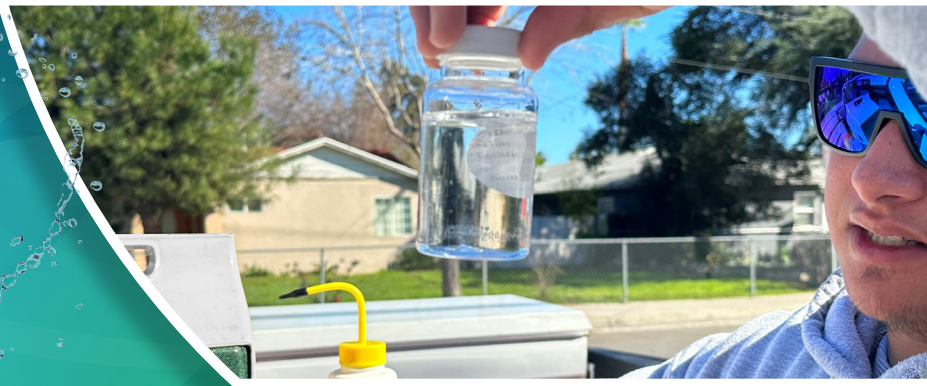








KNOW YOUR WATER

We are devoted to caring for our neighbors and our future.

This report contains important information about your drinking water. Translate it or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

此報告中包含有關您的飲用水的重要資訊。您可請求翻譯或與能夠讀懂此報告的人交談。

해당 보고서에는 식수에 대한 중요한 정보가 포함되어 있습니다. 내용을 이해하는 사람이 번역하거나 혹은 그러한 사람과 의논해 주십시오.

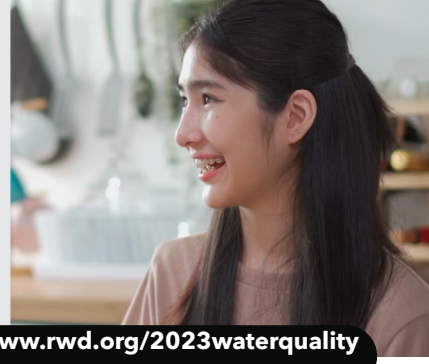
Naglalaman ang ulat na ito ng mahalagang impormasyon tungkol sa iyong inuming tubig. Isalin ito o makipag-usap sa isang taong nakauunawa rito.

Báo cáo này có các thông tin quan trọng về nước uống của quý vị. Hãy biên dịch báo cáo hoặc thảo luận với người hiểu được báo cáo.

2023 SAMPLE RESULTS

For specific questions regarding this report or any additional questions related to District drinking water, please contact Elisabeth Mendez, Compliance & Safety Manager, at (562) 697-1726 or email info@rwd.org

Unless otherwise noted, the data presented in this table is from testing completed January 1 – December 31, 2023. The state requires the District to monitor for certain contaminants less than once per year because the concentrations are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. Unregulated contaminant monitoring helps EPA and the DDW determine where certain contaminants occur and whether they need to be regulated.



Visit **www.rwd.org/2023waterquality** to learn more.

PRIMARY STANDARDS

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range / Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
CLARITY										
Combined Filter Effluent (CFE)	TT	NA	NA	Highest	0.06				NTU	Soil Runoff
Turbidity (a)				% <0.3	100%	100%	100%	ND	%	
MICROBIOLOGICAL										
Total Coliform Bacteria (b) (Total Coliform Rule)	5%	(0)	NA		RWD Distribution System-Wide -- 0%				%	Naturally present in the environment
Fecal Coliform and E.coli (c) (Total Coliform Rule)	(c)	(0)	NA		RWD Distribution System-Wide – 0%				(c)	Human and animal fecal waste
Heterotrophic Plate Count (e)	TT	NA	(1)	Range					CFU/mL	Naturally present in the environment
				Average	ND	ND	ND	NC		
INORGANIC CHEMICALS										
Aluminum (d) (p)	200	600	50	Range	ND - 71				ppb	Residue from water treatment process; erosion of natural deposits
				Average	Highest RAA 115	ND	NR	ND		
Arsenic	10	.004	2	Range		2.0 - 3.1			ppb	Erosion of natural deposits: glass & electronics production wastes
				Average	ND	2.55	ND	ND		
Barium	1000	2000	100	Range					ppb	Discharge of oil drilling waste and from metal refineries; erosion of natural deposits
				Average	107	ND	ND	120		
Copper (d) (f)	AL = 1.3	0.3	0.05		RWD Distribution System-Wide -- 36 Samples Collected RWD Distribution System-Wide -- 90th Percentile Level = .120 RWD Distribution System-Wide -- Samples Exceeding Action Level = 0				ppm	Internal corrosion of household pipes; erosion of natural deposits
Fluoride (m)	2	1	0.1	Range	0.6 - 0.8			0.28 - 0.30	ppm	Erosion of natural deposits; water additive that promotes strong teeth
				Average	0.7	0.18 (naturally occurring)	0.34 (naturally occurring)	0.29		
Lead (f)	AL = 15	0.2	5		RWD Distribution System-Wide – 36 Samples Collected RWD Distribution System-Wide – 90th Percentile Level = ND RWD Distribution System-Wide – Samples Exceeding Action Level = 0				ppb	Internal corrosion of household pipes; erosion of natural deposits
Nitrate (as N)	10	10	0.4	Range		0.53 - 0.7	2.4 - 4.8	3.1 - 4.9	ppm	Runoff and leaching from fertilizer use; septic tank and sewage; erosion or natural deposits
				Average	0.8	0.64	2.9	3.6		
Nitrate + Nitrite (as N)	1	1	0.4	Range					ppm	Runoff and leaching from fertilizer use; septic tank and sewage; erosion or natural deposits
				Average	ND	ND	ND	ND		
Perchlorate (ClO4)	6	1	2	Range				0.94 - 2.3	ppb	Industrial waste discharge
				Average	ND	ND	ND	1.4		

PRIMARY STANDARDS *(Continued)*

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
VOLATILE ORGANIC CONTAMINANTS										
Dibromochloropropane (DBCP)	200	1.7	10	Range					ppt	Banned nematicide that may still be present in soils due to runoff/leaching
				Average	ND	ND	ND	NC		
Tetrachloroethylene (PCE)	5	0.06	0.5	Range				ND - 0.54	ppb	Discharge from factories, dry cleaners, and auto shops
				Average	ND	ND	ND	ND		
Toluene	150	150	0.5	Range					ppb	Discharge from petroleum and chemical refineries
				Average	ND	ND	ND	ND		
Trichloroethylene (TCE)	5	1.7	0.5	Range				ND - 1.2	ppb	Discharge from metal degreasing sites and other factories
				Average	ND	ND	ND	0.77		
RADIOLOGICALS										
Gross Beta Particle Activity (h)	50	(0)	4	Range	ND - 6				pCi/L	Decay of natural and man-made deposits
				Average	ND	6.86	NR	NC		
Combined Radium	5	(0)	NA	Range			.148 (2016)	ND	pCi/L	Erosion of natural deposits
				Average	ND	2.58	Due 2028	ND		
Radium 226	NA	0.05	1	Range			.147 (2016)		pCi/L	Erosion of natural deposits
				Average	ND	ND	Due 2028	NC		
Radium 228	NA	0.019	1	Range			.001 (2016)		pCi/L	Erosion of natural deposits
				Average	ND	2.01	Due 2028	NC		
Strontium-90	8	0.35	2	Range					pCi/L	Decay of natural and man-made deposits
				Average	ND	ND	NR	NC		
Tritium	20,000	400	1,000	Range					pCi/L	Decay of natural and man-made deposits
				Average	ND	ND	NR	NC		
Uranium	20	0.43	1	Range	ND - 3		1.4 - 2.1	2.0 - 3.2	pCi/L	Erosion of natural deposits
				Average	ND	ND	1.92	2.7		
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (k)										
Bromate (h)	10	0.1	1.0	Range	ND - 12				ppb	Byproduct of drinking water ozonation
				Average	Highest RAA 2.4	NR	NR	NC		
Total Trihalomethanes (TTHM)	80	NA	1	Range	RWD Distribution System-Wide – 1.0 - 35.7				ppb	Byproduct of drinking water disinfection
				Average	RWD Distribution System-Wide – 21.73					
Haloacetic Acids (HAA5)	60	NA	1	Average	RWD Distribution System-Wide – 1.2 - 25.2				ppb	Byproduct of drinking water disinfection
				Highest	RWD Distribution System-Wide – 11.37					
Total Chlorine Residual	[4]	[4]	NA	Range	RWD Distribution System-Wide – 2.37 - 2.78				ppm	Drinking water disinfectant added for treatment
				Average	RWD Distribution System-Wide – 2.62					
Total Organic Carbon (TOC)	TT	NA	0.30	Range	1.8 – 3.0	0.76 - 1.02			ppm	Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts.
				Average	Highest RAA 2.4	Highest RAA 0.89	NR	NC		

SECONDARY STANDARDS - AESTHETIC STANDARDS

Parameter	State MCL	PHG (MCLG)	State DLR	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
Aluminum (d) (p)	200	600	50	Range	ND - 71				ppb	Residue from water treatment processes; erosion of natural deposits
				Average	115	ND	ND	ND		
Chloride	500	NA	(2)	Range	34 - 55				ppm	Runoff / leaching from natural deposits; seawater influence
				Average	44	58	28	20		
Color	15	NA	(1)	Range					Units	Naturally occurring organic materials
				Average	1	ND	ND	ND		
Copper (d) (f)	1	0.3	0.05		RWD Distribution System-Wide – 36 Samples Collected RWD Distribution System-Wide – 90th Percentile Level = 0.120 RWD Distribution System-Wide – Samples Exceeding Action Level = 0				ppm	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents-MBAS	500	NA	(50)	Range					ppb	Municipal and industrial waste discharges
				Average	ND	ND	ND	ND		
Iron	300	NA	100	Range					ppb	Leaching from natural deposits: industrial wastes
				Average	ND	ND	ND	ND		
Odor Threshold (i)	3	NA	1	Range				1	TON	Naturally occurring organic materials
				Average	2	1	1	1		
Specific Conductance	1,600	NA	NA	Range	357 - 507	270 - 430		480 - 500	µS/cm	Substances that form ions when in water; seawater influence
				Average	432	350	600	490		
Sulfate	500	NA	0.5	Range	51 - 72			40 - 41	ppm	Runoff / leaching from natural deposits; industrial wastes
				Average	62	41	39	40.5		
Total Dissolved Solids (TDS) (n)	1,000	NA	(2)	Range	209 - 296		280 - 350	300 - 330	ppm	Runoff / leaching from natural deposits; seawater influence
				Average	252	100	315	315		

OTHER PARAMETERS

GENERAL MINERALS

Alkalinity	NA	NA	(1)	Range	65 - 78	59 - 71	170 - 220		ppm	Measure of water quality
				Average	72	66	195	170		
Bicarbonate (HCO3)	NA	NA	NA	Range				200 - 210	mg/L	Naturally occurring from organic materials
				Average	NC	NC	NC	205		
Calcium	NA	NA	(0.1)	Range	20 - 28	17 - 32	57 - 89	65 - 70	ppm	Measure of water quality
				Average	24	24.5	73	67.5		
Magnesium	NA	NA	(0.01)	Range	7.8 - 13		9.4 - 16	12 – 13	ppm	Measure of water quality
				Average	10	4.5	12.7	12.5		
Perfluorooctanesulfonic acid (PFOS)	NL = 6.5	NA	NA	Range				ND - 2.4	ppt	Discharge from manufacturing facilities
				Average	ND	ND	ND	1.5		
Perfluorooctanoic acid (PFOA) (ppt)	NL = 5.1	NA	NA	Range					ppt	Discharge from manufacturing facilities
				Average	ND	ND	ND	ND		
Potassium	NA	NA	(0.2)	Range	2.6 - 30		1.5 - 2.1	3.4 – 3.6	ppm	Measure of water quality
				Average	2.8	1.9	1.8	3.5		
Sodium	NA	NA	(1)	Range	39 - 55		21 - 25	15 - 17	ppm	Measure of water quality
				Average	47	56	23	16		
Total Hardness (as CaCO3)	NA	NA	(1)	Range	81 - 122		180 - 290	210 - 230	ppm	Measure of water quality
				Average	102	74	235	220		
Total Anions	NA	NA	NA	Range				4.71 - 4.85	ppm	Negatively Charged Ions
				Average	NR	NR	NR	4.78		
Total Cations	NA	NA	NA	Range				4.98 - 5.40	ppm	Positively Charged Ions
				Average	NR	NR	NR	5.19		
Total Hardness (Grains per Gallon)	NA	NA	NA	Range					gpg	Measure of water quality
				Average	5.96	4.33	13.74	12.87		

OTHER PARAMETERS *(Continued)*

Parameter	State MCL	PHG (MCLG)	State DLR	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Groundwater Miramar (TVMWD)	Imported Groundwater (CDWC)	Units	Major Sources in Drinking Water
UNREGULATED CONTAMINANTS										
Boron	NL = 1000	NA	100	Range			150 - 170	ND - 110	ppb	Runoff / leaching from natural deposits; industrial wastes
				Average	140	100	160	55		
Chlorate	NL = 800	NA	20	Range					ppb	By-product of drinking water chlorination; industrial processes
				Average	19	ND	ND	NC		
Chromium VI	NA	0.02	1	Range				2.8 - 3.0	ppb	Runoff / leaching from natural deposits; discharge from industrial waste factories
				Average	ND	ND	ND	2.7		
N-Nitrosodimethylamine (NDMA)	NL = 10	3	(2)	Range	ND - 5.3				ppt	By-product of drinking water chlorination; industrial processes
				Average	2.2	ND	NR	ND		
MISCELLANEOUS										
Calcium Carbonate Precipitation Potential (CCPP) (l)	NA	NA	NA	Range	1.3 - 9.4				ppm	Elemental balance in water; affected by temperature, other factors
				Average	4.2	NR	NR	NC		
Corrosivity (Aggressiveness Index)(g)	NA	NA	NA	Range	12.1 - 12.4			12.32 - 12.43	AI	Elemental balance in water; affected by temperature, other factors
				Average	12.2	11.86	12.53	12.38		
Corrosivity (j) (as Saturation Index)	NA	NA	N/A	Range	0.21 - 0.58				SI	Elemental balance in water; affected by temperature, other factors
				Average	0.39	0.01	0.69	NC		
pH	NA	NA	N/A	Range		8.2 - 8.8		7.9 - 8.0	pH units	Measure of water quality
				Average	8.6	8.6	7.9	7.95		
Total Dissolved Solids (TDS) (o)	1,000	NA	(2)	Range	210 - 641				ppm	Runoff / leaching from natural deposits; seawater influence
				Average	357	130	350	NC		

DEFINITION OF TERMS

AI Aggressiveness Index

AL Action Level

Average Average value of all samples collected

$CaCO_3$ Calcium Carbonate

CCPP Calcium Carbonate Precipitation Potential

CFE Combined Filter Effluent

CFU Colony-Forming Units

DLR Detection Limits for Purposes of Reporting

HAA5 Sum of five haloacetic acids

HPC Heterotrophic Plate Count

LRAA Locational Running Annual Average

MCL Maximum Contaminant Level

MCLG Maximum Contaminant Level Goal

MFL Million Fibers per Liter

MRDL Maximum Residual Disinfectant Level

MRDLG Maximum Residual Disinfectant Level Goal

NA Not Applicable

NC Not Collected

NR Not Required

ND Not Detected at or above DLR or RL

NL Notification Level to SWRCB

NTU Nephelometric Turbidity Units

pCi/L PicoCuries per Liter

PHG Public Health Goal

ppb Parts per billion or micrograms per liter (µg/L)

ppm Parts per million or milligrams per liter (mg/L)

ppq Parts per quadrillion or picograms per liter (pg/L)

ppt parts per trillion or nanograms per liter (ng/L)

RAA Running Annual Average

Range Lowest to highest sampling results

RL Reporting Limit

SI Saturation Index (Langelier)

SWRCB State Water Resources Control Board

TDS Total Dissolved Solids

TON Threshold Odor Number

TT Treatment Technique is a required process intended to reduce the level of a contaminate in drinking water

TTHM Total Trihalomethanes

NOTES

(a) Metropolitan and Three Valleys MWD monitors turbidity at the CFE locations using continuous and grab samples. Turbidity, a measure of cloudiness of the water, is an indicator of treatment performance. Turbidity was in compliance with the TT primary drinking water standard and the secondary drinking water standard of less than 5 NTU.

(b) Results are based on Rowland Water District's distribution system's highest monthly percent positives. 937 samples were analyzed in 2023. The highest monthly percentage was 0%. Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform positive.

(c) The MCL for E. coli is based on routine and repeat samples that are total coliform-positive, and either is E. coli-positive or the system fails to take repeat samples following an E. coli-positive routine sample, or the system fails to analyze a total coliform-positive repeat sample for E. coli. The MCL was not violated.

(d) Aluminum and Copper have both primary and secondary standards.

(e) All distribution system samples had detectable total chlorine residuals, so no HPC was required. Metropolitan and Three Valleys MWD monitors HPCs to ensure treatment process efficacy.

(f) Lead and Copper samples are required to be collected once every three years during the months of June – September. Sample results are from 2021.

(g) AI ≥ 12.0 = Non-aggressive water; AI 10.0–11.9 = Moderately aggressive water; AI ≤ 10.0 = Highly aggressive water. Reference: ANSI/AWWA Standard C400-93 (R98)

(h) Compliance with the state and federal bromate MCL is based on RAA.

(i) Compliance with odor threshold secondary MCL is based on RAA. Treatment plants begin quarterly monitoring if annual monitoring results are above 3.

(j) Positive SI = non-corrosive; tendency to precipitate and/or dissolve scale on pipes. Negative SI = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM2330)

(k) RWD was in compliance with all provisions of the Stage 2 Disinfectants and Disinfection By-Products Rule (D/DBPR). Compliance was based on the highest Locational Running Annual Average (LRAA) of all data collected at distribution system-wide monitoring locations.

(l) Positive CCPP = non corrosive; tendency to precipitate and/or deposit scales on pipe. Negative CCPP = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM 2330)

(m) Metropolitan was in compliance with all provisions of the State's fluoridation system requirements. TVWD does not have fluoride feed systems and all fluoride results are naturally occurring.

(n) Metropolitan's TDS compliance data are based on flow-weighted monthly composite samples collected twice per year (April and October). The 12-month statistical summary of flow-weighted data is reported in "Other Parameters". TVMVD is required to test once annually for TDS.

(o) Statistical summary represents 12 months of flow-weighted data and values may be different than the TDS reported to meet compliance with secondary drinking water regulations for Metropolitan. Metropolitans and TVMWD TDS goal is < 500 mg/L.

(p) Compliance with the State MCL for aluminum is based on RAA. No secondary standard MCL exceedance occurred at the Metropolitan or TVMWD plant effluents.

(q) Data are from voluntary monitoring of constituents and are provided for informational purposes.

2024 ANNUAL WATER QUALITY REPORT

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We are devoted to caring for our neighbors and our future.

ROWLAND WATER DISTRICT

2024 SAMPLE RESULTS

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PRIMARY STANDARDS - Mandatory Health-Related Standards										
Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Ground Water Miramar (TVMWD)	Imported Ground Water (CDWC)	Units	Major Sources in Drinking Water
CLARITY										
Combined Filter Effluent (CFE) Turbidity (a)	TT	NA	NA	Highest %<0.3	0.06 100%	0.08 100%	0.09-0.34/0.21 100%	 ND	NTU %	Soil Runoff
MICROBIOLOGICAL										
Total Coliform Bacteria (b) (Total Coliform Rule)	TT	(0)	NA		RWD Distribution System-Wide -- 0%				%	Naturally present in the environment
Fecal Coliform and *E.coli* (c) (Total Coliform Rule)	TT	(0)	NA		RWD Distribution System-Wide -- 0%				(c)	Human and animal fecal waste
INORGANIC CHEMICALS										
Aluminum (d) (p)	1000	600	50	Range Average	ND-150 Highest RAA 93	 ND	 ND	 ND	ppb	Residue from water treatment processes; erosion of natural deposits
Barium	1000	2000	100	Range Average	 124	 ND	 ND	 140	ppb	Discharge of oil drilling waste and from metal refineries; erosion of natural deposits
Chromium VI	10	0.02	0.1	Range Average	 ND	 ND	0.4-0.63 0.5	2.6-3.4 3.0	ppb	Runoff / leaching from natural deposits; discharge from industrial wastes
Copper (d) (f)	AL=1.3	0.3	0.05		RWD Distribution System-Wide -- 31 Samples Collected RWD Distribution System-Wide -- 90th Percentile Level = .147 RWD Distribution System-Wide -- Samples Exceeding Action Level = 0				ppm	Internal corrosion of household pipes; erosion of natural deposits
Fluoride (m)	2	1	0.1	Range Average	0.3-0.8 0.7	 0.11 (naturally occurring)	0.1-0.62 0.38 (naturally occurring)	0.31-0.34 0.33	ppm	Erosion of natural deposits; water additive that promotes strong teeth
Lead (f)	AL=15	0.2	5		RWD Distribution System-Wide -- 31 Samples Collected RWD Distribution System-Wide -- 90th Percentile Level = 0 RWD Distribution System-Wide -- Samples Exceeding Action Level = 0				ppb	Internal corrosion of household pipes; erosion of natural deposits
Nitrate (as N)	10	10	0.4	Range Average	 ND	ND-0.49 0.23	ND-4.2 1.55	2.6-4.0 3.5	ppm	Runoff and leaching from fertilizer use; septic tank and sewage; erosion of natural deposits
Nitrate + Nitrite (as N)	1	1	0.4	Range Average	 ND	 ND	 ND	4.0-4.7 4.35	ppm	Runoff and leaching from fertilizer use; septic tank and sewage; erosion of natural deposits
Perchlorate (ClO4)	6	1	1	Range Average	 ND	 ND	 ND	0.89-1.8 1.4	ppb	Industrial waste discharge
VOLATILE ORGANIC CONTAMINANTS										
Tetrachloroethylene (PCE)	5	0.06	0.5	Range Average	 ND	 ND	 ND	ND-1.10 0.56	ppb	Discharge from factories, dry cleaners, and auto shops
Trichloroethylene (TCE)	5	1.7	0.5	Range Average	 ND	 ND	 ND	ND-2.7 1.5	ppb	Discharge from metal degreasing sites and other factories

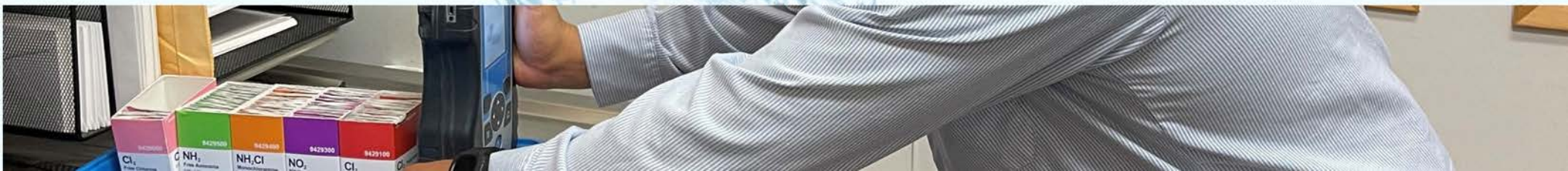
For specific questions regarding this report or any additional questions related to District drinking water, please contact Elisabeth Mendez, Compliance & Safety Manager, at (562) 697-1726 or info@rwd.org.

SAMPLE RESULTS CONTINUED

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Ground Water Miramar (TVMWD)	Imported Ground Water (CDWC)	Units	Major Sources in Drinking Water
RADIOLOGICALS										
Gross Alpha Particle Activity	15	(0)	3	Range				ND-3.81	pCi/L	Erosion of natural deposits
				Average	ND	ND	ND	1.56		
Gross Beta Particle Activity	50	(0)	4	Range	ND-5				pCi/L	Decay of natural and man-made deposits
				Average	ND	2.29	NR	NR		
Radium 226	NA	0.05	1	Range			0.82	ND-0.233	pCi/L	Erosion of natural deposits
				Average	ND	ND	DUE 2028	0.105		
Radium 228	NA	0.019	1	Range			0.34	ND-1.02	pCi/L	Erosion of natural deposits
				Average	ND	ND	DUE 2028	0.384		
Uranium	20	0.43	1	Range	ND-3		1.6-3.4	2.2-3.0	pCi/L	Erosion of natural deposits
				Average	ND	ND	2.5	2.6		
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (k)										
Bromate (h)	10	0.1	1.0	Range					ppb	Byproduct of drinking water ozonation
				Highest	Highest RAA 2.0	NR	NR	NR		
Total Trihalomethanes (TTHM)	80	NA	1	Range	RWD Distribution System-Wide -- 8.6 - 51.4				ppb	By-product of drinking water disinfection
				Average	RWD Distribution System-Wide -- 31.52					
Haloacetic Acids (HAA5)	60	NA	1	Range	RWD Distribution System-Wide -- 2.1 - 30.6				ppb	By-product of drinking water disinfection
				Average	RWD Distribution System-Wide -- 12.32					
Total Chlorine Residual	[4]	[4]	NA	Range	RWD Distribution System-Wide -- 0.95 - 3.61				ppm	Drinking water disinfectant added for treatment
				Average	RWD Distribution System-Wide -- 2.65					
Total Organic Carbon (TOC)	TT	NA	0.30	Range					ppm	Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts.
				Average	Highest RAA 2.4	Highest RAA 1.18	NR	NR		
SECONDARY STANDARDS - Aesthetic Standards										
Aluminum (d) (p)	200	600	50	Range	ND-150				ppb	Residue from water treatment processes; natural deposits erosion
				Average	93	ND	ND	ND		
Chloride	500	NA	(2)	Range	96-116		4.9-15	23-28	ppm	Runoff / leaching from natural deposits; seawater influence
				Average	106	56	9.3	25.5		
Color	15	NA	(1)	Range					Units	Naturally occurring organic materials
				Average	1	ND	ND	ND		
Copper (d) (f)	1	0.3	0.05	RWD Distribution System-Wide -- 31 Samples Collected RWD Distribution System-Wide -- 90th Percentile Level = 0.147 RWD Distribution System-Wide -- Samples Exceeding Action Level = 0					ppm	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Odor Threshold (i)	3	NA	1	Range					TON	Naturally occurring organic materials
				Average	ND	1	1	1		
Specific Conductance	1,600	NA	NA	Range	912-1080		380-450	520-560	mS/cm	Substances that form ions when in water; seawater influence
				Average	996	420	417	540		
Sulfate	500	NA	0.5	Range	200-250		21-28	45-50	ppm	Runoff / leaching from natural deposits; industrial wastes
				Average	225	31	23	47.5		
Total Dissolved Solids (TDS) (n)	1,000	NA	(2)	Range	573-690		220-280	310-360	ppm	Runoff / leaching from natural deposits; seawater influence
				Average	632	230	253	335		
Turbidity (a)	5	NA	0.1	Range			0.4-0.95		NTU	Soil Runoff
				Average	ND	0.044	0.58	ND		

SAMPLE RESULTS CONTINUED

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Ground Water Miramar (TVMWD)	Imported Ground Water (CDWC)	Units	Major Sources in Drinking Water
OTHER PARAMETERS										
Perfluoroalkyl and Polyfluoroalky Substances PFAS Analyzed by EPA Methods 553 and 537.1 (t,u)										
Perfluorooctanesulfonic acid (PFOS)	NL=6.5	1	4	Range			ND-3.4	ND-2.6	ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	1.68	0.5		
Perfluorooctanoic acid (PFOA)	NL=5.1	.007	4	Range			ND-4.7		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	4.0	ND		
Perfluorobutanesulfonic acid (PFBS)	NL=500	NA	3	Range			ND-3.8		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	1.43	ND		
Perfluorohexanesulfonic acid (PFHxS)	NL=1000	NA	3	Range			ND-2.7		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	1.9	ND		
Perfluoroheptanoic Acid (PFHpA)	NA	NA	2	Range			ND-3.1		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	2.08	NR		
Perfluorohexanoic Acid (PFHxA)	NA	NA	2	Range			3.2-5.7		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	4.65	NR		
Perfluoroalkyl and Polyfluoroalky Substances PFAS Analyzed by EPA Methods 553 Only (t)										
Perfluorobutanoic Acid (PFBA)	NA	NA	5	Range			ND-3.5		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	2.4	NR		
Perfluoropenetanoic Acid (PFPeA)	NA	NA	3	Range			ND-5.5		ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	3.7	NR		
Nonafluoro-3,6-dioxaheptanoic Acid (NFDHA)	NA	NA	20	Range					ppt	Industrial chemical factory discharges: runoff/leaching from landfills: used in fire-retarding foams and various industrial processes
				Average	ND	ND	8	NR		
General Minerals										
Alkalinity	NA	NA	(1)	Range	109-127			170-180	ppm	Measure of water quality
				Average	118	78	170	175		
Bicarbonate (HCO3)	NA	NA	NA	Range					mg/L	Naturally occurring from organic materials
				Average	NR	NR	NR	210		
Calcium	NA	NA	(0.1)	Range	59-76		59-66	69-74	ppm	Measure of water quality
				Average	68	22	62	72		
Magnesium	NA	NA	(0.01)	Range	25-29		8.5-9.4	12-14	ppm	Measure of water quality
				Average	26	11	9.1	13		
Potassium	NA	NA	(0.2)	Range	4.6-5.4		1.5-1.9	3.3-3.7	ppm	Measure of water quality
				Average	5.0	2.4	1.7	3.5		
Sodium	NA	NA	(1)	Range	93-117		9.8-17	17-20	ppm	Measure of water quality
				Average	105	46	14.2	18.5		
Total Hardness (as CaCO3)	NA	NA	(1)	Range	241-303		20-190	220-240	ppm	Measure of water quality
				Average	272	99	130	230		
Total Anions	NA	NA	NA	Range				5.05-5.29	meq/L	Negatively Charged Ions
				Average	NR	NR	NR	5.17		
Total Cations	NA	NA	NA	Range				5.26-5.82	meq/L	Positively Charged Ions
				Average	NR	NR	NR	5.54		



SAMPLE RESULTS CONTINUED

Parameter	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR (RL)	Range Average	Imported Surface Water Weymouth (MWD)	Imported Surface Water Miramar (TVMWD)	Ground Water Miramar (TVMWD)	Imported Ground Water (CDWC)	Units	Major Sources in Drinking Water
Unregulated Contaminants										
Boron	NL=1,000	NA	100	Range					ppb	Runoff / leaching from natural deposits; industrial wastes
				Average	140	140	ND	ND		
Chlorate	NL=800	NA	(10)	Range					ppb	By-product of drinking water chlorination; industrial processes
				Average	80	56	ND	NR		
Lithium	NA	NA	(10)	Range	32-47				ppb	and pharmaceuticals
				Average	40	NR	ND	NR		
Vanadium	NL=50	NA	3	Range			3.4-3.9		ppb	Naturally occuring; industrial waste discharge
				Average	ND	ND	3.65	ND		
Miscellaneous (q)										
Calcium Carbonate Precipitation Potential (CCPP) (f)	NA	NA	NA	Range	5.5-11				ppm	Measures of the balance between pH and calcium carbonate saturation in the water
				Average	8.4	NR	NR	NR		
Corrosivity (Aggressiveness Index)(g)	NA	NA	NA	Range	12.4-12.6			12.1-12.35	AI	Measures of the balance between pH and calcium carbonate saturation in the water
				Average	12.5	12.3	NR	12.23		
Corrosivity (j) (as Saturation Index)	NA	NA	NA	Range	0.60-0.65				SI	Measures of the balance between pH and calcium carbonate saturation in the water
				Average	0.62	.44	NR	NR		
pH	NA	NA	NA	Range		7.9-8.6		7.6-7.8	pH units	Measure of water quality
				Average	8.2	8.25	NR	7.7		
Total Dissolved Solids (TDS) (o)	1,000	NA	NA	Range	506-680	230-270	220-280	310-360	ppm	Runoff / leaching from natural deposits
				Average	587	250	253	335		

DEFINITION OF TERMS

AI Aggressiveness Index
AL Action Level
Average Result based on arithmetic mean
CaCO3 Calcium Carbonate
CCPP Calcium Carbonate Precipitation Potential
CFE Combined Filter Effluent
CFU Colony-Forming Units
DLR Detection Limits for Purposes of Reporting
HAA5 Sum of five haloacetic acids
HPC Heterotrophic Plate Count
LRAA Locational Running Annual Average
MCL Maximum Contaminant Level
MCLG Maximum Contaminant Level Goal
MFL Million Fibers per Liter
MRDL Maximum Residual Disinfectant Level
MRDLG Maximum Residual Disinfectant Level Goal
MWD Metropolitan Water District of Southern California
NA Not Applicable
NC Not Collected
NR Not Required
ND Not Detected at or above DLR or RL
NL Notification Level to SWRCB
NTU Nephelometric Turbidity Units
pCi/L picoCuries per Liter
PHG Public Health Goal
ppb Parts per billion or micrograms per liter (µg/L)
ppm Parts per million or milligrams per liter (mg/L)
ppq Parts per quadrillion or picograms per liter (pg/L)
RAA Running Annual Average
Range Results based on minimum and maximum values; range and average values are the same if a single value is reported for samples collected once or twice annually
RL Reporting Limit
SI Saturation Index (Langelier)
SWRCB State Water Resources Control Board
TDS Total Dissolved Solids
TON Threshold Odor Number
TT Treatment Technique is a required process intended to reduce the level of a contaminate in drinking water
TTHM Total Trihalomethanes
TVMWD Three Valleys Municipal Water District
UCMR5 Fifth unregulated contaminant monitoring rule

NOTES

(a) Metropolitan and Three Valleys MWD monitors turbidity at the CFE locations using continuous and grab samples. Turbidity, a measure of cloudiness of the water, is an indicator of treatment performance. Turbidity was in compliance with the TT primary drinking water standard and the secondary drinking water standard of less than 5 NTU.

(b) Results are based on Rowland Water District's distribution system's highest monthly percent positives. 954 samples were analyzed in 2024. The highest monthly percentage was 0%. Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform positive.

(c) The MCL for E. coli is based on routine and repeat samples that are total coliform-positive, and either is E. coli-positive or the system fails to take repeat samples following an E. coli-positive routine sample, or the system fails to analyze a total coliform-positive repeat sample for E. coli. The MCL was not violated.

(d) Aluminum and Copper have both primary and secondary standards.

(e) All distribution system samples had detectable total chlorine residuals, so no HPC was required. Metropolitan and Three Valleys MWD monitors HPCs to ensure treatment process efficacy.

(f) Lead and Copper samples are required to be collected once every three years during the months of June - September. Sample results are from 2024.

(g) AI ≥ 12.0 = Non-aggressive water; AI 10.0–11.9 = Moderately aggressive water; AI ≤ 10.0 = Highly aggressive water. Reference: ANSI/AWWA Standard C400-93 (R98)

(h) Compliance with the state and federal bromate MCL is based on RAA.

(i) Compliance with odor threshold secondary MCL is based on RAA. Treatment plants begin quarterly monitoring if annual monitoring results are above 3.

(j) Positive SI = non-corrosive; tendency to precipitate and/or dissolve scale on pipes. Negative SI = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM2330)

(k) RWD was in compliance with all provisions of the Stage 2 Disinfectants and Disinfection By-Products Rule (D/DBPR). Compliance was based on the highest Locational Running Annual Average (LRAA) of all data collected at distribution system-wide monitoring locations.

(l) Positive CCPP = non corrosive; tendency to precipitate and/or deposit scales on pipe. Negative CCPP = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM 2330)

(m) Metropolitan was in compliance with all provisions of the State's fluoridation system requirements. TVWD does not have fluoride feed systems and all fluoride results are naturally occurring.

(n) Metropolitan's TDS compliance data are based on flow-weighted monthly composite samples collected twice per year (April and October). The 12-month statistical summary of flow-weighted data is reported in "Other Parameters". TVMVD is required to test once annually for TDS.

(o) Statistical summary represents 12 months of flow-weighted data and values may be different than the TDS reported to meet compliance with secondary drinking water regulations for Metropolitan. Metropolitans and TVMWD TDS goal is < 500 mg/L.

(p) Compliance with the State MCL for aluminum is based on RAA. No secondary standard MCL exceedance occurred at the Metropolitan or TVMWD plant effluents.

(q) Data are from voluntary monitoring of constituents and are provided for informational purposes.