ABOUT US:

Santa Fe Irrigation District (SFID) is a special district providing drinking water services for residential, commercial, institutional, and agricultural customers as well as recycled water for irrigation of public common areas, golf courses, schools, businesses, and Caltrans. SFID's service area encompasses approximately 10,000 acres and provides service to approximately 20,000 people in the city of Solana Beach and the communities of Rancho Santa Fe and Fairbanks Ranch.

Five publicly elected Board of Directors are responsible for the SFID's policies and decision making. Board meetings are open to the public and are held on the third Thursday of the month at 8:30 a.m. Additional information on public meetings can be found at sfidwater.org.

SFID owns and operates a water distribution system that includes more than 150 miles of pipelines, 30 pressure regulating stations and a six million gallon treated water reservoir. SFID is also joint owner with San Dieguito Water District of the San Dieguito Reservoir, raw water pumping stations, a hydroelectric power plant and nearly eight miles of transmission pipelines.

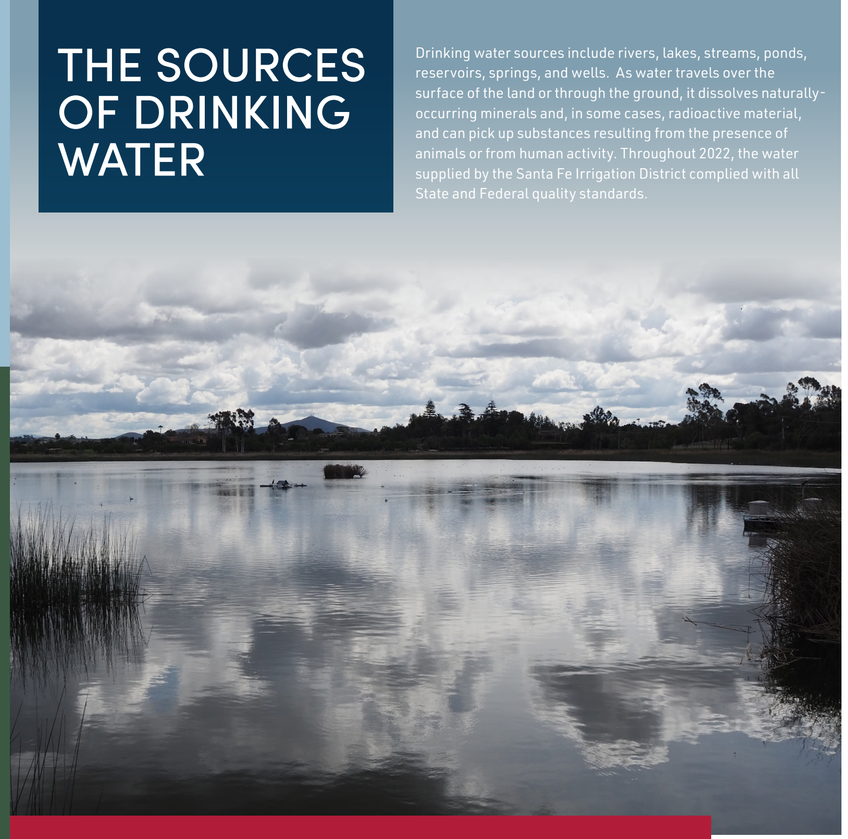
WATER TREATMENT:

SFID's clean drinking water comes from the R.E. Badger Filtration Plant (REB Plant), where local water supply from Lake Hodges, San Dieguito Reservoir and imported raw water are treated. It has the capacity to treat up to 40 million gallons of drinking water a day. SFID has a robust treatment process to ensure clean and safe water supplies.

SFID and San Dieguito Water District jointly own the REB Plant with SFID managing and operating the facility for both water districts. The REB Plant was originally constructed in 1970 and underwent major upgrades in 1993. The water is continuously tested throughout the treatment process to ensure it is clean, safe and in compliance with state and federal water quality standards. It is a conventional water treatment plant using flocculation/coagulation, sedimentation, filtration, and disinfection to treat imported raw and local surface water to use as safe drinking water.

THE SOURCES OF DRINKING WATER

Drinking water sources 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 material, and can pick up substances resulting from the presence of animals or from human activity. Throughout 2022, the water supplied by the Santa Fe Irrigation District complied with all State and Federal quality standards.



ADDITIONAL GENERAL INFORMATION ON DRINKING WATER:

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from 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 from the Safe Drinking Water Hotline (1-800-426-4791).

WATER QUALITY REPORT

2022

PWS ID # 3710023

Santa Fe Irrigation District's drinking water met every requirement set by the State Water Resources Control Board Division of Drinking Water and the United States Environmental Protection Agency. Throughout 2022, the treatment plant staff conducted over 60,000 individual tests, from the start of the treatment process, all the way to your meter to ensure the safety of the water. SFID tests the drinking water quality for hundreds of constituents every year. Results provided in this report reflect all constituents that were detected as well as a selection of non-detected results from constituents of public interest.

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

For more information contact: (858) 756 -2424

Where Does My Water Come From?

San Diego County is a semi-arrid desert and receives less than 10 inches of rainfall a year on average. Large canals and pipelines import water to our region from the Colorado River and the Sierra Nevada via Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority (SDCWA). Local water originates from Lake Hodges and is either transferred to the San Dieguito Reservoir through a small aqueduct and then to the treatment plant, or directly to the treatment plant via the Cielo Pump Station. In 2022, approximately 65% of the SFID's supply was from imported sources, 30% from local, and 5% from recycled water.

WATER QUALITY TEST RESULTS

In 2022 sfid tested for 349 individual constituents in over 60,000 individual analyses. 100% of tests results complied with both State and Federal primary water quality standards and resulted in zero water quality violations. In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. In 2022, 100% of the water supplied to SFID customers complied with all State and Federal water quality standards. Most of the sampling results are from the treatment plant effluent. However Table 1, Table 2, Chlorite, and Chlorate samples are taken from representative points in the distribution system. Total THMs and Total HAA5 samples reflect both treatment plant effluent and distribution samples.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	(In a month) 1 (1.19%)	0	5% positive monthly samples	0	Naturally present in the environment
Fecal Coliform or E. coli (Federal Revised Total Coliform Rule)	(In the year) 0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is E. coli-positive or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper	Sample Date	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	2022	32	1.0	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2022	32	0.063	0	1.3	0.3	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2022	103	92 - 120	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2022	297	280 - 330	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Aluminum (ppm)	2022	0.022	ND - 0.027	1	0.6	Erosion of natural deposits; residual from some surface water treatment processes
Arsenic (ppb)	2022	1.3	ND - 1.5	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2022	0.10	0.08 - 0.12	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Copper (ppm)	2022	0.002	ND - 0.007	1.3 (Action Level)	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide (µg/L)	2021	ND	ND	150	150	Discharge from steel/metal, plastic and fertilizer factories
Fluoride (ppm)	2022	0.30	0.28 - 0.33	1.3 (Action Level)	0.3	Erosion from natural deposits, water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ug/L)	2021	ND	ND	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Mercury [Inorganic] (µg/L)	2021	ND	ND	2	1.2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nitrate (mg/L)	2021	0.045	0 - 0.18	10 (as N)	10 (as N)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (mg/L)	2021	ND	ND	1 (as N)	1 (as N)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate (µg/L)	2021	ND	ND	6	1	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used
PCBs [Polychlorinated Biphenyls] (ng/L)	2021	ND	ND	500	90	Runoff from landfills; discharge of waste chemicals
Total THMs (ppb)	2022	37.5	20.0 - 59.0	80	-	Byproduct of drinking water disinfection
Total HAA5 (ppb)	2022	13.4	8.3 - 20.0	60	-	Byproduct of drinking water disinfection
Turbidity (NTU)	2021	0.02	0.02 – 0.07	TT	-	Soil runoff
Chloramines (ppm)	2022	2.52	2.3 - 2.8	4	4	Drinking water disinfectant added for treatment
Chlorite (ppm)	2022	0.315	0.22 - 0.49	1	0.05	Byproduct of drinking water disinfection
Chlorine Dioxide (ppm)	2022	10.0	ND - 140.0	800	800	Drinking water disinfectant added for treatment
Control of DBP Precursors (TOC)	2022	3.4	2.3 - 4.5	TT	-	Various Natural and manmade sources
1,2,3-Trichloropropane [TCP] (µg/L)	2021	ND	ND	0.005	0.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (SMCL)	Typical Source of Contaminant
Aluminum (ppb)	2022	22.3	ND - 27	200	N/A	Erosion of natural deposits; residual from some surface water treatment processes
Copper (ppm)	2022	0	0	15	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Turbidity (NTU)	2021	0.02	0.02 – 0.07	5	N/A	Soil runoff
Total Dissolved Solids (ppm)	2022	622	610 - 640	1000	N/A	Runoff, leaching from natural deposits
Specific Conductance (uS/cm)	2022	1040	980 - 1200	1600	N/A	Substances that form ions in water; seawater influence
Chloride (ppm)	2022	135	110 - 160	500	N/A	Runoff, leaching form natural deposits; seawater influence
Sulfate (ppm)	2022	2125	190 - 230	500	N/A	Runoff, leaching form natural deposits; industrial wastes
Color	2022	0	0	15	N/A	Naturally-occurring organic materials

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level / Public Health Goal	Health Effects Language
Chlorate (ug/L)	2021	422	370 - 480	800 (notification level)	Animal studies demonstrated that chlorate exposure in rats caused adverse effects to the pituitary and thyroid glands.
Total HAA6Br (ug/L)	2020	18.7	0 - 40	N/A	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer
Total HAA9	2020	27	0 - 64	N/A	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Hexavalent Chromium (ug/L) *	2021	0.052	0.052	0.02 (public health goal)	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer
Perfluorooctanoic Acid [PFOA] (ng/L) (One of the chemicals the comprises the PFAS group)	2013	ND	ND	5.1 (notification level)	Perfluorooctanoic acid exposures resulted in increased liver weight and cancer in laboratory animals
Perfluorooctanesulfonic Acid [PFOS] (ng/L) (One of the chemicals that comprises the PFAS group)	2013	ND	ND	6.5 (notification level)	Perfluorooctanesulfonic acid exposures resulted in immune suppression and cancer in laboratory animals.

* While Hexavalent Chromium is currently an Unregulated Contaminant, it is in the process of being re-evaluated by the EPA and may have an MCL set in the future.

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique (a) (Type of approved filtration technology used)	Conventional Treatment
Turbidity Performance Standards (b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.30 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100.00%
Highest single turbidity measurement during the year	0.11 NTU
Number of violations of any surface water treatment requirements	0

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

How to read the tables

The tables above summarize the analyses performed on your water from sample locations at the water treatment plant and throughout the distribution system, conducted throughout 2020. Some of the data presented may be from analyses performed prior to 2020 if annual monitoring is not required for a particular constituent. The State Board can determine if SFID is not vulnerable to particular constituents to reduce the frequency of required monitoring. Generally, only chemicals that are detected are included on this report, as listing every single chemical would be unfeasible; however several chemicals of recent public interest that were tested for but not detected are included for reassurance.

The MCL, SMCL, and MRDL are the highest levels of a chemical that are allowed either by state or federal regulations. MCL's and MRDL's are in place to protect your health while SMCL's are in place for aesthetic qualities like appearance and taste. The MCLG, MRDLG, and PHG are not set by the EPA, usually lower than the MCL or MRDL, these goals are concentrations where no known or expected risk to health is present.

Different units of measurement are used for some chemicals, many use the metric system of measurement, for example mg/L (milligrams per liter), ug/L (micrograms per liter), and ng/L (nanograms per liter). You can use basic math to convert from one unit of measurement to another, for example 1 mg is equal to 1000 ug, and 1 ug is equal to 1000 ng. Different units are used to make sure the concentration of a chemical is easy to read or doesn't appear too daunting. Reporting a measurement as 1 ug/L is much easier to read than 0.001 mg/L, and reporting it as 1000 ng makes it appear to be present at a dangerous level even if it's present at a safe level according to the MCL. These units can also be expressed as PPM and PPB, that allow you to get a better idea of the relative amount of chemical present. PPM (parts per million) is equivalent to mg/L, one part per million is equal to one cent in $10,000, or one minute in 2 years. PPB (parts per billion) is equivalent to ug/L. One part per billion is equal to one cent in $10,000,000, or one minute in 2,000 years.

The "Level detected" column represents the average of all measurements taken throughout the year for a given chemical, while the "Range of detections" shows the minimum and maximum level that was detected during the year.

Some Unregulated Contaminants are included on the report. These chemicals do not currently have an MCL set by the state, but may have either a PHG or a notification level. This notification level is the concentration of a chemical that would require us to inform you of its presence in a timely manner.

The table "Violation of a MCL, MRDL, AL, TT, or monitoring and reporting requirement" will show if any chemical was detected at a level above the State or Federal standard; if any errors in the treatment process occurred at the treatment plant; if any required samples were not collected and analyzed by the laboratory, or if there was a failure to report a violation to the proper authorities and the public in the proper amount of time.

Regulatory Updates and Emerging Contaminants

The staff at SFID is continuously keeping up with developing regulations surrounding emerging contaminants. A few such contaminants are:

Microplastics

Micro-plastics are an emerging contaminant that has been gaining attention lately within the media. In 2017, the EPA brought together a group of experts from different scientific fields for a micro-plastics Expert Workshop to identify information gaps and emerging areas of interest within micro-plastics research. The EPA has not set a Drinking Water MCL for micro-plastics yet as there is no established standard method for their detection or quantification, however, as more research is conducted, the EPA or the State of California may begin to regulate micro-plastics in drinking water. SFID staff are closely watching the development of micro-plastic research in order to better protect the health of our customers and our environment. For more information on micro-plastics, see https://www.epa.gov/trash-free-waters/science-case-studies

Polyfluorinated Alkyl Substances (PFAS)

SFID is committed to providing our community with drinking water that meets or exceeds all State and Federal drinking water standards. As part of this commitment, we regularly participate in the study of, and development of Standards for, emerging contaminants such as Perfluorooctanoate (PFOA) and Perfluorooctanesulfonate (PFOS), often times referred to collectively as PFAS. PFAS are a group of man-made chemicals that are used in the manufacturing of such products as carpets, clothes, food packaging, firefighting foams and non-stick coatings often found on pots and pans. While these chemicals are no longer produced in the United States, they are still found in some products imported to the US.

While PFAS can exist in surface waters, throughout California the issue of PFAS is concentrated mostly around groundwater systems and have not been detected in any of SFID's local surface water sources. The results of the most recent set of testing (Not Detected) is included in this report and can be found on Table 6 in the results section. Regulations for PFAS monitoring are currently evolving and, per California State Water Resources Control Board (SWRCB), Division of Drinking Water guidance, results that have SWRCB notification levels were reported. We will continue to work to stay up to date on all regulatory developments to ensure ongoing compliance with all drinking water standards and requirements.

Lead and Copper

The water provided to you from SFID meets all standards for lead and copper under the USEPA's Lead and Copper Rule which sets standards for the presence of these contaminants within your home plumbing system. SFID is required to take samples for lead and copper from 30 residences within our service area to ensure compliance with the standard. SFID has no lead service lines within its system and the data from 2019 shown below comply with the standard.

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. Santa Fe Irrigation District is responsible for providing high quality drinking water, but cannot control the variety of materials used in 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.

If you are concerned about lead in your water, private water analysis companies can perform this test for you. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/lead.

Lead in Schools - Assembly Bill 746, which was signed into law in October 2017, requires California water providers to conduct lead testing at public K-12 schools within their service area to determine if lead is present in the school's private plumbing or water fixtures.

SFID proactively contacted all schools within its service area and offered testing in advance of the state's 2019 deadline. All school samples met the lead standards established by the U.S. Environmental Protection Agency Lead and Copper Rule. Please contact each school directly to obtain individualized testing results.

Water Treatment

In 2022, 100% of water provided to SFID passed through the R.E. Badger Filtration Plant and complied with all State and Federal drinking water standards. The R.E. Badger Filtration Plant uses an extremely reliable, cost effective, multi-barrier approach to water treatment which includes coagulation, sedimentation, filtration and disinfection. From this approach, the treatment system can reliably remove a wide range or chemical contaminants as well as inactivate 99.99% of potentially harmful organisms before the water leaves the treatment facility.

Water Testing

Each year over 60,000 individual tests are performed on the water as it passes through the treatment plant and distribution system. The laboratory at the R.E. Badger Filtration Plant is a State certified facility and performs many of these analyses each day. SFID spares no expense when it comes to testing and monitoring the treatment process. State of the art online monitoring systems as well as high-tech hands on tests keep our State certified operators continuously up to speed on the treatment process so that the water continuously meets all State and Federal Standards.

Cryptosporidium - is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Conventional filtration plants remove 99.9% of Crytosporidium cysts however along with chlorine disinfection, SFID water regularly achieves 99.99% removal and inactivation of Cryptosporidium.

Contaminants that may be present in source water include:

- 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 be the result of oil and gas production and mining activities.

TERMS USED IN THIS REPORT

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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 (USEPA).

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.

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

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.

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

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

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

uS/cm: conductivity measurement