SACRAMENTO COUNTY WATER AGENCY

2023 WATER QUALITY REPORT - NORTH SERVICE AREA (NSA) (See Note #1)

DETECTED PRIMARY STANDARDS - Mandatory Health-Related Standards
Established by the State Water Resources Control Board (State Board)

CONSTITUENT	SAMPLE DATE (See #2)	UNITS	PHG or (MCLG) or [MRDLG]	MCL OR [MRDL]	MAJOR SOURCES IN DRINKING WATER	SURFACE WATER RANGE (LO-HI)	SURFACE WATER AVERAGE	GROUNDWATER RANGE (LO-HI)	GROUNDWATER WEIGHTED AVERAGE
INORGANIC CONTAMINANTS									
Arsenic	2016 - 2023	PPB	0.004	10	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.	ND - 2	ND	ND - 2.1	ND
Nitrate (as N)	2022 - 2023	PPM	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.	ND	ND	ND - 1.5	ND
DISINFECTION BYPRODUCT PRECURSORS									
5 Control of DBP Precursors (TOC)	2023	PPM	n/a	TT	Various natural and manmade sources	0.80 - 1.3	1.0	NA	NA
DISTRIBUTION SYSTEM						**RANGE (LO - HI)**		**AVERAGE**	
Chlorine Residuals	2023	PPM	[4]	[4.0]	Drinking water disinfectant added for treatment.	0.35	1.98	1.35	
6 Total Trihalomethanes (TTHM's)	2023	PPB	n/a	80	Byproduct of drinking water disinfection.	30	68	47.5	
7 Haloacetic Acids (HAA5's)	2023	PPB	n/a	60	Byproduct of drinking water disinfection.	19	46	29.3	
8 Fluoride (Treated - Distribution)	2023	PPM	1	2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.	0.63	0.87	0.73	
MICROBIOLOGICAL CONTAMINANTS						**LEVEL FOUND**			
9 Total Coliform Bacteria	2023	# of Positive Samples	(0)	2 or more Monthly samples are positive	Naturally present in the envirionment.	1			
			n/a	TT = 1 NTU		0.059 NTU			
10 Turbidity	2023	NTU	n/a	TT = 95% of Samples ≤ 0.3 NTU	Soil Runoff	100%			

NOTES:

1. The North Service Area (NSA) is blend of groundwater from the Mather/ Sunrise/ Anatolia water system and surface water from the Vineyard Surface Water Treatment Plant (SWTP).
2. The State Water Resources Control Board Division of Drinking Water (SWRCB DDW) allows Sacramento County Water Agency (SCWA) to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.
5. Only surface water sources must monitor for Disinfection By-Product precursors. Treatment Technique is not required if the raw or treated water TOC is <2 mg/L.
6. Total Trihalomethanes are the sum of Four Regulated THMs, i.e., Chloroform, Bromodichloromethane, Dibromochloromethane, and Bromoform.
7. Haloacetic Acids are the Sum of Five Regulated HAAs, i.e., Monochloroacetic Acid, Monobromoacetic Acid, Dichloroacetic Acid, Dibromoacetic Acid, and Trichloroacetic Acid.
8. The NSA water system's facilities are all fluoridated to reduce tooth decay in children. Studies show that water fluoridation reduces tooth decay by 20 to 40 percent. The SWRCB DDW advised SCWA to implement the CDC's recommended optimal fluoride content of 0.7 mg/L and control range of 0.6 mg/L – 1.2 mg/L. Information about fluoridation, oral health and current issues is available from **http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html**
9. For systems collecting less than 40 samples per month, the Total Coliform Bacteria MCL is 2 or more of the monthly samples collected return total coliform positive, per the Total Coliform Rule (TCR). A positive TC sample triggers collection of samples for E.coli at the source (i.e., groundwater wells) per the federal Groundwater Rule (GWR). In 2023, all samples taken per the GWR retrned negative (absent) for E. coli.
10. Turbidity is a measure of the cloudiness of the water. 0.09 NTU is the highest individual measurement in 2021. 100% of the monthly samples were in compliance (below the 0.3 NTU range). SCWA monitors turbidity because it is a good indicator of the effectiveness of its filtration systems. Only surface water sources must comply with PDWS for turbidity.

SECONDARY STANDARDS - Aesthetic Standards
Established by the State Water Resources Control Board (State Board)

CONSTITUENT	SAMPLE DATE:	UNITS	PHG or (MCLG) or [MRDLG]	MCL or [MRDL]	MAJOR SOURCES IN DRINKING WATER	SURFACE WATER RANGE (LO-HI)	SURFACE WATER AVERAGE	GROUNDWATER RANGE (LO-HI)	GROUNDWATER WEIGHTED AVERAGE
Color	2022 - 2023	Units	n/a	15	Naturally-occurring organic materials.	ND - 5	1.7	ND	ND
Odor-Threshold	2022 - 2023	Units	n/a	3	Naturally-occurring organic materials.	1.5 - 2	1.8	ND - 1.8	1.3
Turbidity	2022 - 2023	Units	n/a	5	Soil runoff.	ND	ND	ND - 0.46	0.13
Total Dissolved Solids	2022 - 2023	PPM	n/a	1000	Runoff/leaching from natural deposits.	71 - 91	83	91 - 160	145
Specific Conductance (E.C.)	2022 - 2023	umhos/cm	n/a	1600	Substances that form ions when in water; seawater influence.	56 - 110	92	150 - 190	175
Chloride	2022 - 2023	PPM	n/a	500	Runoff/leaching from natural deposits; seawater influence.	3.3 - 3.6	3.4	3.2 - 7.8	5.8
Sulfate	2022 - 2023	PPM	n/a	500	Runoff/ leaching from natural deposits; industrial wastes.	3 - 3.8	3.3	ND - 5.1	ND
OTHER CONSTITUENTS ANALYZED									
pH	2022 - 2023	Units	n/a	MO		7.2 - 8	7.7	7.1 - 8.1	7.9
Total Hardness (as CaCO3)	2022 - 2023	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	41 - 51	46	48 - 56	56
11 Total Hardness (as CaCO3)	2022 - 2023	Grains	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	2.4 - 3	2.7	2.8 - 3.3	3.3
Total Alkalinity (as CaCO3)	2022 - 2023	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	43 - 70	56.0	60 - 85	83
Bicarbonate (as HCO3)	2022 - 2023	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	43 - 77	58	60 - 85	84
Sodium	2022 - 2023	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	5.2 - 8.7	7	9.8 - 17	17
Calcium	2022 - 2023	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	9.2 - 11	10	11 - 12	12
Magnesium	2022 - 2023	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	4.3 - 6.1	5	5.1 - 6.1	6.1

LEAD & COPPER (See Note 12)

CONTAMINANT	SAMPLE DATE	UNITS	PHG or (MCLG)	ACTION LEVEL	MAJOR SOURCES IN DRINKING WATER	NUMBER OF SAMPLES	90TH % LEVEL DETECTED	NUMBER EXCEEDING AL
Lead	2021	PPB	(0.2)	15	Internal corrosion of household water plumbing systems; discharges from industrial manufactures; erosion of natural deposits.	30	ND	0
Copper	2021	PPM	(0.3)	1.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	30	0.12	0
LEAD Sampling in schools	**SAMPLE DATE**	**UNITS**	**PHG or (MCLG)**	**ACTION LEVEL**	**MAJOR SOURCES IN DRINKING WATER**	**NUMBER OF SCHOOLS**	**RANGE DETECTED**	**NUMBER EXCEEDING AL**
Lead (Elk Grove School District)	2017	PPB	(0.2)	15	Internal corrosion of household water plumbing systems; discharges from industrial manufactures; erosion of natural deposits.	2	ND	0
Lead (Folsom Cordova School District)	2018	PPB	(0.2)	15	Internal corrosion of household water plumbing systems; discharges from industrial manufactures; erosion of natural deposits.	2	1.1 - 8	0

NOTES:

11. Hardness units are PPM. General guidelines for classification of water hardness are: 0 - 60 PPM as **soft**; 61 - 120 PPM as **moderately hard**; 121 - 180 PPM as **hard**; and greater than 180 PPM as **very hard**. Most commercial companies use "grain" units. Conversion: 17.1 PPM = 1 grain.
12. The levels for Lead & Copper concentrations were obtained from the 90th percentile of 30 tap water samples taken throughout the NSA. The MCLs for lead and copper are set at "Action Levels." None of the samples in the NSA exceeded the Action Levels for Lead and Copper. Please refer to the educational information on Lead in drinking water.

FEDERAL UNREGULATED CONTAMINANT MONITORING RULE (UCMR 4) - Established by USEPA (See Note 13)

CHEMICAL	SAMPLE DATE	UNITS	Minimum Reporting Level	ADDITIONAL INFORMATION	DISTRIBUTION SYSTEM RANGE	DISTRIBUTION SYSTEM AVERAGE	SURFACE WATER RANGE	SURFACE WATER AVERAGE	GROUNDWATER RANGE	GROUNDWATER AVERAGE
14 Total Organic Carbon	2023	PPM	n/a		NA	NA	0.8 - 1.3	1	NA	NA
HAA5	2023	PPB	n/a		ND - 57	25.5	NA	NA	NA	NA
HAA6Br	2018 - 2019	PPB	n/a		ND - 4.1	2.1	NA	NA	NA	NA
HAA9	2018 - 2019	PPB	n/a		0.21 - 42.2	18.63	NA	NA	NA	NA

Cyanotoxins (see Note 15)		Additional Chemical Contaminants			
Total Microcystin	Microcystin-RR	Germanium	Tebuconazole	Oxyfluorfen	o-toluidine
Microcystin-LA	Microcystin-YR	Manganese	Dimethipin	1-butanol	quinoline
Microcystin-LF	Nodularin	Alpha-hexachlorocyclohexane	Total Permethrin (cis- & trans-)	2-propen-1-ol	HAA5
Microcystin-LR	Anatoxin-a	Profenofos	Ethoprop	2-methoxyethanol	HAA6Br (see Note 16)
Microcystin-LY	Cylindrospermopsin	Chlorpyrifos	Tribufos	butylated hydroxyanisole	HAA9

NOTES:

13. The Fourth Unregulated Contaminants Monitoring Rule (UCMR 4 / 2018 - 2019 Monitoring) with Notification Levels help determine where certain contaminants occur and whether they need to be regulated.
14. According to UCMR4, the two indicators (TOC & Bromide) need to be monitored at the source water intake (raw water) for surface water (i.e., the Sacramento River).
15. The SCWA is required by the fourth Federal UCMR to monitor for ten (10) **cyanotoxins** at the entry point to the distribution system during a 4-consecutive month period, according to the list of constituents above. SCWA was also required to monitor for twenty (20) **additional chemical contaminants** at the entry point to the distribution system and indicators (TOC & Bromide) during a 12-month perod. The Haloacetic Acids (HAAs) need to be monitored in the distribution system. For more information about the Federal UCMR4, go online at **https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule** .
16. The HAAs (HAA5, HAA6Br & HAA9) each comprise of a different combination of the Haloacetic Acids Chlorodibromoacetic acid, Dichloroacetic acid, Monochloroacetic acid, Trichloroacetic acid, Bromochloroacetic acid, Dibromacetic acid, Monobromoacetic acid, Tribromoacetic acid, Bromodichloroacetic acid and Dibromochloroacetic acid.

SACRAMENTO COUNTY WATER AGENCY

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PER- & POLYFLUOROALKYL SUBSTANCES (PFAS) - See # 17.

The State Water Resources Control Board Division of Drinking Water (SWRCB DDW) established new drinking water guidelines for water agencies to follow in detecting and reporting the presence of perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS) – four members of a large family of chemicals known as per- and polyfluoroalkyl substances (PFAS). Until PFOA and PFOS were phased out in the 2000s due to health concerns, these chemicals were widely used in grease and stain resistant coatings for consumer products and firefighting foams. Drinking water containing PFAS has become an increasing concern due to the persistence of these chemicals in the environment and their tendency to accumulate in groundwater. Long-term exposure to PFAS over certain levels is associated with adverse health effects that include cancer and developmental harm. SWRCB DDW has identified analytical methods capable of detecting the following twenty-five (25) perfluorinated compounds in drinking water:

PERFLUOROBUTANE SULFONIC ACID (PFBS)	HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)	11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)	perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
PERFLUOROHEPTANOIC ACID (PFHpA)	PERFLUOROUNDECANOIC ACID (PFUnA)	1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	perfluoro-3-methoxypropanoic acid (PFMPA)
PERFLUOROHEXANE SULFONIC ACID (PFHxS)	PERFLUORODECANOIC ACID (PFDA)	1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	perfluoro-4-methoxybutanoic acid (PFMBA)
PERFLUORONONANOIC ACID (PFNA)	PERFLUORODODECANOIC ACID (PFDoA)	1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	perfluorobutanoic acid (PFBA)
PERFLUOROOCTYL SULFONIC ACID (PFOS)	PERFLUOROHEXANOIC ACID (PFHxA)	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl- PF3ONS)	perfluoroheptanesulfonic acid (PFHpS)
PERFLUOROOCTANOIC ACID (PFOA)	4,8-DIOXA-3H-PERFLUORONONANOIC ACID (ADONA)	nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	perfluoropentanesulfonic acid (PFPeS)
			perfluoropentanoic acid (PFPeA)

NOTES:

17. Starting on March 2, 2021, the SWRCB DDW directed SCWA to complete four quarters of sampling in the North Service Area (NSA) water systems. SCWA tested for PFAS in groundwater wells near locations where the chemicals are believed to be especially prevalent. SCWA is committed to providing safe drinking water to our customers; therefore, in 2019 and 2020 SCWA began voluntarily sampling for these chemicals at the groundwater wells throughout the North Service Area (NSA) water system. All sampling results returned Non-Detect (ND) in the NSA water system. For more information on PFAS, PFOA and PFOS, please visit the SWRCB DDW's resource page: **https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/pfas.html**

PARTS PER MILLION (PPM) OR MILLIGRAMS PER LITER (mg/L)

Parts per million (PPM) and milligrams per liter (mg/L) are units of measurement used to determine the amount of a chemical in water. If we thought of each "part" or "milligram" as a second in a period of time, the following time frames would be an appropriate or accurate comparison:

1 milligram per liter (mg/L)	or	1 part per million (PPM)	=1 second in 11.5 days
1 microgram per liter (µg/L)	or	1 part per billion (PPB)	=1 second in nearly 32 years
1 nanogram per liter (ng/L)	or	1 part per trillion (PPT)	=1 second in nearly 32,000 years
1 picogram per liter (pg/L)	or	1 part per quadrillion (PPQ)	=1 second in nearly 32,000,000 years

In 2023, SCWA blended its water for the NSA from two (2) sources. Approximately 97% surface water from its Vineyard Surface Water Treatment Plant and approximately 3% groundwater from its seven (7) groundwater wells and two (2) water treatment plants (WTPs). For more detailed information regarding this report or SCWA water quality, call Aaron Wyley @ (916) 875-5815.

LEGEND:

AL…Regulatory Action Level	NA…Not Analyzed	NR…Not Required	PPB…Parts per Billion (ug/l)	TOC…Total Organic Carbon
MFL…Million Fibers Per Liter	n/a…Not Applicable	NTU…Nephelometric Turbidity Units	PPM…Parts per Million (mg/l)	TT…Treatment Technique
MO…Monitored Only	ND…Non-Detected	PDWS…Primary Drinking Water Standard	PPT…Parts per Trillion (ng/l)	WTP…Water Treatment Plant
MPN…Most Probable Number	NL…Notification Level	pCi/L…Pico Curies per Liter		

DEFINITIONS

Average: The annual average of all tests for a particular substance.
Detection Limit for Reporting: The limit at or above which a contaminant is detected.
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.
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, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting 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.
Range (Lo - Hi): The range between the lowest and highest values of a specific substance measured throughout the course of the year.
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
Weighted Average (WTD AVG): An average of water quality samples in which each sample is assigned a weight. Each sample's contribution (or weight) is based on the amount of water the corresponding water source produces for the whole system. Instead of each of the sample results contributing equally to the final average, some of the results contribute more than others.

State Mandated Information for Lead.

Lead:
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. The Sacramento County Water Agency 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, you may wish to 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 or at **http://www.epa.gov/lead**

Cryptosporidium:
Cryptosporidium is a microbial pathogen found in surface water (e.g., rivers, lakes and streams) throughout the U.S. SCWA's monitoring indicates the presence of these organisms in our source water, which is the Sacramento River. Between May 2015 and April 2017 SCWA took monthly samples for Giardia and Cryptosporidium, as well as turbidity and E. coli. Of the 24 samples taken, only one detected the presence of these organisms. The results ranged from non-detect (ND) to 0.182 Oocysts per liter. The maximum average is below the threshold of 0.075 oocysts per liter. SCWA's surface water is treated with a thorough disinfection and filtration process to remove Cryptosporidium before distribution to the customer; however, the most commonly-used filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immune-compromised people, infants and small children and the elderly are at greater risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

SOURCE WATER ASSESSMENT

To help protect the quality of existing and future groundwater supplies, the Drinking Water Source Assessment and Protection (DWSAP) program calls for examining the vulnerability of drinking water sources to potential contamination. The Water Agency completed its latest comprehensive report in May 2019. The Water Agency's report identified the following potential contamination results:

Arden Park Vista & Northgate:
Most vulnerable to commercial types of activities such as the dry cleaning business, gas stations, a sewer collection system and a leaking underground storage tank, electronic manufacturers and photo processors.

Central & South Service Area (CSA & SSA)
Most vulnerabe to activities including automobile-gas stations; boat services/ repair/ refinishing; chemical/ petroleum pipelines; dry cleaners; fleet/ truck/ bus terminal; grazing; historic waste dumps/ landfills; leaking underground storage tanks; other animal operations; pesticides/ fertilizer/ petroleum storage transfer areas; plastics/ synthetics producers; research laboratory; wells-agricultural/ irrigation types; wells-oil, gas, and geothermal types; wood preserving/ treating and sewer collection systems

Hood, East Walnut Grove and Delta Estates:
Most vulnerable to irrigated crops and septic systems.

North Service Area (NSA):
Most vulnerable to commercial types of activities such as grazing, known contaminant plumes, low-density septic systems, sewer collection systems and wells-agricultural irrigation types