SACRAMENTO COUNTY WATER AGENCY

2018 WATER QUALITY REPORT - MATHER / SUNRISE / ANATOLIA (See Note #1)

DETECTED PRIMARY STANDARDS - Mandatory Health-Related Standards
Established by 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 (see #2) RANGE (LO-HI)	SURFACE WATER (see #2) WEIGHTED AVERAGE	GROUNDWATER RANGE (LO-HI)	GROUNDWATER WEIGHTED AVERAGE
INORGANIC CONTAMINANTS									
3 Hexavalent Chromium	2014 - 2018	PPB	0.02	n/a	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.	ND	ND	ND - 2.3	ND
Nitrate (as N)	2017 - 2018	PPM	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.	ND	ND	ND - 0.62	ND
DISTRIBUTION SYSTEM						**RANGE (LO - HI)**		**AVERAGE**	
Chlorine Residuals	2018	PPM	[4]	[4.0]	Drinking water disinfectant added for treatment.	0	**5.5**	1.22	
4 Total Trihalomethanes	2018	PPB	n/a	80	Byproduct of drinking water disinfection.	ND	**110**	33.5	
5 Haloacetic Acids	2018	PPB	n/a	60	Byproduct of drinking water disinfection.	ND	52	20.4	
6 Fluoride (Treated - Distribution)	2018	PPM	1	2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.	0.62	0.84	0.70	
7 Control of DBP Precursors (TOC)	2018	PPM	n/a	TT	Various natural and manmade sources	0.94	1.30	1.05	
MICROBIOLOGICAL CONTAMINANTS						**LEVEL FOUND**			
8 Total Coliform Bacteria	2018	# of Positive Samples	(0)	>1	Naturally present in the envirionment.	1			
			n/a	TT = 1 NTU		0.111 NTU			
9 Turbidity	2018	NTU	n/a	TT = 95% of Samples ≤ 0.3 NTU	Soil Runoff	100%			
SECONDARY STANDARDS - Aesthetic Standards **Established by State Water Resources Control Board (State Board)**						**SURFACE WATER RANGE**	**SURFACE WATER WTD. AVG.**	**GROUNDWATER RANGE**	**GROUNDWATER WTD. AVG.**
Color	2015 - 2018	Units	n/a	15	Naturally-occurring organic materials.	ND	ND	ND - 5	1.09
Manganese	2016 - 2018	PPB	n/a	50	Leaching from natural deposits	ND	ND	ND	ND
Odor-Threshold	2015 - 2018	Units	n/a	3	Naturally-occurring organic materials.	1.8	1.8	1.5 - 1.8	1.69
Turbidity	2016 - 2018	Units	n/a	5	Soil runoff.	ND - 0.111	ND	0.48 - 0.65	0.5
Total Dissolved Solids	2015 - 2018	PPM	n/a	1000	Runoff/leaching from natural deposits.	66 - 87	77	130 - 150	137
Specific Conductance (E.C.)	2018	umhos/cm	n/a	1600	Substances that form ions when in water; seawater influence.	100 - 140	120	160 - 180	172
Chloride	2015 - 2018	PPM	n/a	500	Runoff/leaching from natural deposits; seawater influence.	2.1 - 4.7	3.4	2.9 - 8.1	5.4
Sulfate	2015 - 2018	PPM	n/a	500	Runoff/ leaching from natural deposits; industrial wastes.	2.4 - 3.1	2.8	ND - 1.1	ND
OTHER CONSTITUENTS ANALYZED									
pH	2015 - 2018	Units	n/a	MO		8.2	8.2	7.9 - 8	7.9
Total Hardness (as CaCO3)	2016 - 2018	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	32 - 52	42	53 - 54	53.4
10 Total Hardness (as CaCO3)	2015 - 2018	Grains	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	1.9 - 3.0	2.5	3.1 - 3.2	3.1
Total Alkalinity (as CaCO3)	2016 - 2018	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	35 - 79	51	66 - 81	71.5
Bicarbonate (as HCO3)	2015 - 2018	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	43 - 96	62	81 - 98	87.2
Sodium	2016 - 2018	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	4.1 - 8.2	6	13 - 19	15.2
Calcium	2015 - 2018	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	6.9 - 12	9	11 - 12	11
Magnesium	2015 - 2018	PPM	n/a	MO	Due to chemicals naturally occuring in the soil below the earth's surface.	3.6 - 7	5.0	5.8 - 5.9	5.9

LEAD & COPPER (See Note 11a & 11b)

CONTAMINANT	SAMPLE DATE	UNITS	PHG or (MCLG)	ACTION LEVEL	MAJOR SOURCES IN DRINKING WATER	NUMBER OF SAMPLES	90TH % LEVEL DETECTED	NUMBER EXCEEDING AL
Lead	2018	PPB	(0.2)	15	Internal corrosion of household water plumbing systems; discharges from industrial manufactures; erosion of natural deposits.	62	ND	0
Copper	2018	PPM	(0.3)	1.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	62	0.18	0

UNREGULATED CONTAMINANT MONITORING RULE (UCMR 3) - Established by USEPA (See Note 12)

CONTAMINANT	SAMPLE DATE	UNITS	Notification Level	HEALTH EFFECTS LANGUAGE	DISTRIBUTION SYSTEM RANGE	DISTRIBUTION SYSTEM AVERAGE	SURFACE WATER RANGE	SURFACE WATER AVERAGE	GROUNDWATER RANGE	GROUNDWATER AVERAGE
Molybdenum	2013 - 2014	PPB	n/a		ND - 1.1	0.51	ND	ND	ND - 2.4	0.59
Strontium	2013 - 2014	PPB	n/a		120 - 140	131	68 - 140	101	63 - 180	127
Vanadium	2013 - 2014	PPB	50	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	ND	ND	ND	ND	ND - 3.4	ND
Chlorate	2013 - 2014	PPB	800		37 - 370	106	100 - 300	163	ND - 360	108

LEGEND

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

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 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.
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: 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.

NOTES:

1. The state allows 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.
2. Surface Water is from SCWA's Vineyard Surface Water Treatment Plant (VSWTP) which provided 65% of the water distributed to customers in the Mather, Sunrise, Anatolia area in 2018. SCWA purchased very little water from Golden State (<0.01%) which was used for testing and discharged to waste. For more information regarding Golden State water quality data, please call (800) 999-4033 or look online (www.gxwater.com/sca_homepages/rancho_cordova.html).
3. There is currently no MCL for hexavalent chromium. The previous MCL of 10 PPB was withdrawn on September 11, 2017. Chromium-6 is one of the forms of chromium making up total chromium which has a California MCL of 50 PPB. For more information about Chromium-6, please visit the StateWater Resources Control Board's website: www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chromium6.shtml
4. On Monday April 2, 2018, at 11:00 am, our operators discovered a malfunctioning chlorine feeder was adding too much disinfectant into the Mather business district distribution system. After isolating the feeder from the system, operators took chlorine residuals in the system and found high readings (4.2 mg/L, 5.5mg/L and 6.6 mg/L). SCWA crews immediately turned on automatic flushers to remove the highly chlorinated water from the Mather Main Base distribution system. By 3:00 pm, every Mather Main Base sample location tested well below the MRDL of 4.0 mg/L. The overall average chlorine residual reading is 1.22 mg/L, also well below the MRDL. SCWA reported the incident to the SWRCB. At the time of this incident, no complaints were made by customers about chlorine odor or taste in the water. Disinfection of drinking water maintains chlorine residuals in the finished drinking water to prevent regrowth of microorganisms as water passes through the distribution system. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to the eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
5. On August 22, 2018, one of the twelve (12) quarterly samples taken for trihalomethane (TTHM) in the distribution system returned at 110 µg/L (exceeding the MCL of 80 µg/L). The quarterly average of samples taken at the same time was 53 µg/L and the running annual average was 33.5 µg/L (both well below the MCL). The high TTHM sample came from a point in the distribution that was far from the water production source. SCWA began to lower the dosage of disinfectant in the system to bring down the TTHM levels in the far ends of the system. TTHMs are a byproduct of drinking water disinfection. Some people who drink water containing TTHM in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
6. Haloacetic Acids = sum of results for Bromochloroacetic acid, Dibromoacetic acid, Dichloroacetic acid, Monochloroacetic acid, & Trichloroacetic acid
7. The Mather-Sunrise-Anatolia 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 California State Water Resources Control Board 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.shtml.**
8. 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.
9. On Systems that collect less than 40 samples per month, the Total Coliform Bacteria MCL is one (1) Total Coliform positive sample, per the Total Coliform Rule (TCR). On 08/23/2018, a positive TC sample triggered collection of samples for TC the original location, an upstream and downstream location. All repeat samples taken per the RTCR returned negative (absent) for TC. E. coli samples could not be taken at the source (i.e., groundwater wells per the federal Ground Water Rule) as the source wells were out of service.
9. Turbidity is a measure of the cloudiness of the water. 0.111 NTU is the highest individual measurement in 2018. 100% is the lowest percentage of monthly samples which 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.
10. Hardness units are PPM. Most commercial companies use "grain" units. Conversion: 17.1 PPM = 1 grain.
11a. The levels for Lead & Copper concentrations were obtained from the 90th percentile of 62 tap water samples taken throughout the Mather-Sunrise-Anatolia system. The MCLs for lead and copper are set at "Action Levels." None of the samples in Mather-Sunise-Anatolia exceeded the Action Levels for Lead and Copper. Please refer to the educational information on Lead in drinking water.
11b. Effective January 18, 2017, The State Water Resources Control Board requires the Sacramento County Water Agency (SCWA) to provide one-time assistance with lead sampling to all public, private and/ or charter schools that submit a written request to SCWA and are served water by SCWA. Two (2) schools served by the Mather-Sunrise-Anatolia water system requested lead sampling at their campuses in 2018.
12. Unregulated Contaminants Monitoring Rule (UCMR 3 / 2013 - 2015 Monitoring) with notification Levels help to determine where certain contaminants occur and whether they need to be regulated.

In 2018, the Mather / Sunrise / Anatolia system received its water from two sources: groundwater wells (~35%) and the Vineyard Surface Water Treatment Plant (~65%).
For more detailed information regardeing SCWA water quality, call Aaron Wyley @ (916) 875-5815.

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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.