

Sonoma County Water Agency - Production Wells 1, 4, 6, 7, Occidental, Todd and Sebastopol Production Wells - 2021 Water Quality Report

VOLATILE ORGANIC COMPOUNDS	Units	STATE	DLR	PHG	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2
Section 64444 - Table A		MCL		{ MCLG }		18-Aug-21	18-Aug-21		26-Oct-21	17-Aug-21	17-Aug-21
Benzene	mg/L	0.001	0.0005	0.00015		ND	ND		ND	ND	ND
Carbon Tetrachloride	mg/L	0.0005	0.0005	0.0001		ND	ND		ND	ND	ND
1,2-Dichlorobenzene (o-DCB)	mg/L	0.6	0.0005	0.6		ND	ND		ND	ND	ND
1,4-Dichlorobenzene (p-DCB)	mg/L	0.005	0.0005	0.006		ND	ND		ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	mg/L	0.005	0.0005	0.003		ND	ND		ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	mg/L	0.0005	0.0005	0.0004	WELL	ND	ND	WELL	ND	ND	ND
1,1-Dichloroethylene (1,1-DCE)	mg/L	0.006	0.0005	0.01		ND	ND		ND	ND	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	mg/L	0.006	0.0005	0.013	NOT	ND	ND	NOT	ND	ND	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	mg/L	0.01	0.0005	0.05		ND	ND		ND	ND	ND
Dichloromethane (Methylene Chloride)	mg/L	0.005	0.0005	0.004	RUN	ND	ND	RUN	ND	ND	ND
1,2-Dichloropropane	mg/L	0.005	0.0005	0.0005		ND	ND		ND	ND	ND
1,3-Dichloropropane (Cis & Trans)	mg/L	0.0005	0.0005	0.0002	IN	ND	ND	IN	ND	ND	ND
Ethylbenzene	mg/L	0.3	0.0005	0.3		ND	ND		ND	ND	ND
Methyl tert-butyl ether (MTBE) ⁽¹⁾	mg/L	0.013	0.003	0.013	2021	ND	ND	2021	ND	ND	ND
Monochlorobenzene (Chlorobenzene)	mg/L	0.07	0.0005	0.07		ND	ND		ND	ND	ND
Styrene	mg/L	0.1	0.0005	0.0005		ND	ND		ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/L	0.001	0.0005	0.0001		ND	ND		ND	ND	ND
Tetrachloroethylene (PCE)	mg/L	0.005	0.0005	0.00006		ND	ND		ND	ND	ND
Toluene	mg/L	0.15	0.0005	0.15		ND	ND		ND	ND	ND
1,2,4-Trichlorobenzene	mg/L	0.005	0.0005	0.005		ND	ND		ND	ND	ND
1,1,1-Trichloroethane (1,1,1-TCA)	mg/L	0.2	0.0005	1.0		ND	ND		ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	mg/L	0.005	0.0005	0.0003		ND	ND		ND	ND	ND
Trichloroethylene (TCE)	mg/L	0.005	0.0005	0.0017		ND	ND		ND	ND	ND
Trichlorofluoromethane (Freon 11)	mg/L	0.15	0.005	1.3		ND	ND		ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	mg/L	1.2	0.01	4		ND	ND		ND	ND	ND
Vinyl Chloride (VC)	mg/L	0.0005	0.0005	0.00005		ND	ND		ND	ND	ND
Xylenes (m,p, & o)	mg/L	1.75	0.0005	1.8		ND	ND		ND	ND	ND

⁽¹⁾ Methyl tert-butyl ether (MTBE) is listed in both the Primary (Organic Chemicals - VOCs) and Secondary Standards.

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SYNTHETIC ORGANIC COMPOUNDS	Units	STATE	DLR	PHG	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2
Section 64444 - Table A		MCL		{ MCLG }		18-Aug-21	18-Aug-21		26-Oct-21	17-Aug-21	17-Aug-21
Alachlor	mg/L	0.002	0.001	0.004		ND	ND		ND	ND	ND
Atrazine	mg/L	0.001	0.0005	0.00015		ND	ND		ND	ND	ND
Bentazon	mg/L	0.018	0.002	0.2		ND	ND		ND	ND	ND
Benzo(a)pyrene	mg/L	0.0002	0.0001	0.000007		ND	ND		ND	ND	ND
Carbofuran	mg/L	0.018	0.005	0.0007		ND	ND		ND	ND	ND
Chlordane	mg/L	0.0001	0.0001	0.00003	WELL	ND	ND	WELL	ND	ND	ND
2,4 - Dichlorophenoxyacetic acid (2,4-D)	mg/L	0.07	0.01	0.02		ND	ND		ND	ND	ND
Dalapon	mg/L	0.2	0.01	0.79	NOT	ND	ND	NOT	ND	ND	ND
1,2-Dichloropropane (1,2-Dibromo-3-chloropropane)	mg/L	0.0002	0.00001	0.000003		ND	ND		ND	ND	ND
Di(2-ethylhexyl)adipate	mg/L	0.4	0.005	0.2	RUN	ND	ND	RUN	ND	ND	ND
Di(2-ethylhexyl)phthalate (DEHP)	mg/L	0.004	0.003	0.012		ND	ND		ND	ND	ND
Dinoseb	mg/L	0.007	0.002	0.014	IN	ND	ND	IN	ND	ND	ND
Diquat	mg/L	0.02	0.004	0.006		ND	ND		ND	ND	ND
Endothal	mg/L	0.1	0.045	0.094	2021	ND	ND	2021	ND	ND	ND
Endrin	mg/L	0.002	0.0001	0.0003		ND	ND		ND	ND	ND
Ethylene Dibromide (EDB) (1,2-Dibromoethane)	mg/L	0.00005	0.00002	0.00001		ND	ND		ND	ND	ND
Glyphosate	mg/L	0.7	0.025	0.9		ND	ND		ND	ND	ND
Heptachlor	mg/L	0.00001	0.00001	0.000008		ND	ND		ND	ND	ND
Heptachlor Epoxide	mg/L	0.00001	0.00001	0.000006		ND	ND		ND	ND	ND
Hexachlorobenzene	mg/L	0.001	0.0005	0.00003		ND	ND		ND	ND	ND
Hexachlorocyclopentadiene ⁽⁶⁾	mg/L	0.05	0.001	0.002		(6)	(6)		(6)	(6)	(6)
Lindane (HCH-Gamma)	mg/L	0.0002	0.0002	0.000032		ND	ND		ND	ND	ND
Methoxychlor	mg/L	0.03	0.01	0.00009		ND	ND		ND	ND	ND
...inate	mg/L	0.02	0.002	0.001		ND	ND		ND	ND	ND
Oxamyl	mg/L	0.05	0.02	0.026		ND	ND		ND	ND	ND
Pentachlorophenol	mg/L	0.001	0.0002	0.0003		ND	ND		ND	ND	ND
Picloram	mg/L	0.5	0.001	0.166		ND	ND		ND	ND	ND
Polychlorinated Biphenyls (PCBs)	mg/L	0.0005	0.0005	0.00009		ND	ND		ND	ND	ND
Simazine	mg/L	0.004	0.001	0.004		ND	ND		ND	ND	ND
Thiobencarb ^{(2),(6)}	mg/L	0.07	0.001	0.042		(6)	(6)		(6)	(6)	(6)
Toxaphene	mg/L	0.003	0.001	0.00003		ND	ND		ND	ND	ND
1,2,3-Trichloropropane(1,2,3-TCP)	µg/L	0.0	0.005	0.0007		ND	ND		ND	ND	ND
2,3,7,8-TCDD (Dioxin)	mg/L	3 x 10 ⁻⁸	5 x 10 ⁻⁹	5 x 10 ⁻¹¹		ND	ND		ND	ND	ND
2,4,5-TP (Silvex)	mg/L	0.05	0.001	0.003		ND	ND		ND	ND	ND

⁽²⁾ Thiobencarb is listed in both the Primary (Organic Chemicals - SOCs) and Secondary Standards.

⁽⁶⁾ Hexachlorocyclopentadiene & Thiobencarb: Sonoma Water was not aware that our contract laboratory, Alpha Laboratories was no longer ELAP certified for these compounds at the time of sampling. These results were not included in this report. Alpha Laboratories is currently in the process of validating the method/analytes and will be applying for accreditation as soon as they can.

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INORGANIC CHEMICALS <i>Section 64431 - Table A</i>	Units	STATE	DLR	PHG	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2
		MCL		{ MCLG }		18-Aug-21	18-Aug-21		26-Oct-21	17-Aug-21	17-Aug-21
Aluminum ⁽³⁾	µg/L	1000	50	600		< 50	< 50		< 50	< 50	< 50
Antimony	µg/L	6	6	1		< 6.0	< 6.0		< 6.0	< 6.0	< 6.0
Arsenic	µg/L	10	2	0.004		< 2.0	< 2.0		< 2.0	< 2.0	< 2.0
Asbestos	MFL	7	0.2	7		<0.2	<0.2		< 0.2	< 0.2	< 0.2
Barium	µg/L	1000	100	2000		< 100	< 100		< 100	< 100	< 100
Beryllium	µg/L	4	1	1	WELL	< 1.0	< 1.0	WELL	< 1.0	< 1.0	< 1.0
Cadmium	µg/L	5	1	0.04		< 1.0	< 1.0		< 1.0	< 1.0	< 1.0
Chromium omium, Hexavalent (CrVI)	µg/L	50 ---	10 ---	{ 100 } 0.02	NOT	< 10	< 10	NOT	< 10	< 10	< 10
Cyanide	mg/L	0.15	0.1	0.15	RUN	< 0.0030	< 0.0030	RUN	< 0.0030	< 0.0030	< 0.0030
Fluoride (F) Natural-Source	mg/L	2.0	0.1	1		< 0.10	< 0.10		< 0.10	0.12	0.14
Mercury	µg/L	2	1	1.2	IN	< 0.20	< 0.20	IN	< 0.20	< 0.20	< 0.20
Nickel	µg/L	100	10	12		< 10	< 10		< 10	< 10	< 10
Nitrate (as N)	mg/L	10	0.4	10	2021	< 0.40	< 0.40	2021	< 0.40	< 0.40	< 0.40
Nitrate + Nitrite (as N)	mg/L	10	---	10		< 0.40	< 0.40		< 0.40	< 0.40	< 0.40
Nitrite (as N)	mg/L	1	0.4	1		< 0.20	< 0.20		< 0.20	< 0.20	< 0.20
Perchlorate	µg/L	6	2	1		< 2.0	< 2.0		< 2.0	< 2.0	< 2.0
Selenium	µg/L	50	5	30		< 5.0	< 5.0		< 5.0	< 5.0	< 5.0
Thallium	µg/L	2	1	0.1		< 1.0	< 1.0		< 1.0	< 1.0	< 1.0

RADIONUCLIDE - <i>Section 64442</i>	Units	STATE	DLR	PHG	Next Complete Sampling Due 2023							
		MCL		{ MCLG }	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2	
Gross Alpha (4 quarterly samples every 9 years)												
11-Mar-14	pCi/L	15	3	{ 0 }	1.35 ± 1.23	0.736 ± 1.05	0.930 ± 1.03	1.28 ± 1.18	0.336 ± 0.972	0.261 ± 1.03	0.847 ± 1.21	
24-Jun-14	pCi/L	15	3	{ 0 }	0.455 ± 0.893	0.203 ± 0.800	0.214 ± 0.845	0.116 ± 0.745	---	---	---	
26-Jun-14	pCi/L	15	3	{ 0 }	---	---	---	---	0.051 ± 0.838	0.000 ± 0.809	0.443 ± 1.00	
19-Aug-14	pCi/L	15	3	{ 0 }	0.000 ± 0.705	0.252 ± 0.994	---	0.422 ± 0.827	---	---	---	
20-Aug-14	pCi/L	15	3	{ 0 }	---	---	0.570 ± 1.00	---	---	0.000 ± 0.764	0.000 ± 0.766	
27-Aug-14	pCi/L	15	3	{ 0 }	---	---	---	---	0.217 ± 0.858	---	---	
28-Oct-14	pCi/L	15	3	{ 0 }	---	---	---	---	0.556 ± 0.923	---	---	
4-Nov-14	pCi/L	15	3	{ 0 }	---	---	---	---	---	0.223 ± 0.881	---	
6-Nov-14	pCi/L	15	3	{ 0 }	---	---	---	---	---	---	1.000 ± 1.13	
18-Nov-14	pCi/L	15	3	{ 0 }	0.192 ± 0.756	0.728 ± 1.04	0.114 ± 0.737	0.156 ± 0.809	---	---	---	

⁽³⁾ Aluminum is listed in both the Primary (Inorganic Chemicals) and Secondary Standards.

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SECONDARY STANDARDS <i>Section 64449 - Table A</i>	Units	Secondary MCL	DLR	PHG { MCLG }	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2
						18-Aug-21	18-Aug-21		26-Oct-21	17-Aug-21	17-Aug-21
Aluminum ⁽³⁾	µg/L	200	50	600		< 50	< 50		< 50	< 50	< 50
Color	Color Units	15			WELL	< 3.0	3.0	WELL	3.0	4.0	3.0
Copper	µg/L	1000	50	300		< 50	< 50		< 50	< 50	< 50
Foaming Agents (MBAS)	mg/L	0.5			NOT	< 0.050	< 0.050	NOT	< 0.050	< 0.050	< 0.050
Iron	µg/L	300	100			< 100	< 100		< 100	< 100	< 100
Manganese	µg/L	50	20		RUN	< 20	< 20	RUN	< 20	56	< 20
Methyl tert-butyl ether (MTBE) ⁽¹⁾	mg/L	0.005	0.003	0.013		< 0.003	< 0.003		< 0.003	< 0.003	< 0.003
Odor - Threshold	TON	3	1		IN	< 1.0	< 1.0	IN	< 1.0	< 1.0	20
or	µg/L	100	10			< 10	< 10		< 10	< 10	< 10
Thiobencarb ⁽²⁾⁽⁶⁾	mg/L	0.001	0.001	0.042	2021	(6)	(6)	2021	(6)	(6)	(6)
Turbidity	NTU	5				< 0.10	< 0.10		0.95	< 0.10	0.55
Zinc	µg/L	5000	50			< 50	< 50		< 25	< 50	< 50

SECONDARY STANDARDS <i>Section 64449 - Table A</i>	Units	Secondary MCL	DLR	PHG { MCLG }	Sebastopol #2 (Quarterly for Color, Odor, Manganese)			
					24-Mar-21	10-Jun-21	17-Aug-21	26-Oct-21
Color	Color Units	15			< 3.0	3.0	4.0	4.0
Manganese	µg/L	50	20		75	51	56	47
Odor - Threshold	TON	3	1		5.0	2.8	< 1.0	17.0

SECONDARY STANDARDS <i>Section 64449 - Table B</i>	Units	Recommended MCL	DLR	Upper MCL	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2
						18-Aug-21	18-Aug-21		26-Oct-21	17-Aug-21	17-Aug-21
Total Dissolved Solids	mg/L	500		1000	WELL	130	140	WELL	240	200	160
Specific Conductance	µS/cm	900		1600	NOT	220	220	NOT	270	260	250
or	mg/L	250		500	RUN IN	5.6	5.7	RUN IN	20	14	14
sulfate	mg/L	250	0.5	500	2021	11	11	2021	3.6	7.4	0.53

⁽¹⁾ Methyl tert-butyl ether (MTBE) is listed in both the Primary (Organic Chemicals - VOCs) and Secondary Standards.

⁽²⁾ Thiobencarb is listed in both the Primary (Organic Chemicals - SOCs) and Secondary Standards.

⁽³⁾ Aluminum is listed in both the Primary (Inorganic Chemicals) and Secondary Standards.

⁽⁶⁾ Hexachlorocyclopentadiene & Thiobencarb: Sonoma Water was not aware that our contract laboratory, Alpha Laboratories was no longer ELAP certified for these compounds at the time of sampling. These results were not included in this report. Alpha Laboratories is currently in the process of validating the method/analytes and will be applying for accreditation as soon as they can.

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ADDITIONAL CONSTITUENTS ANALYZED	Units	STATE MCL	DLR	PHG { MCLG }	Production 1	Production 4	Production 6	Production 7	Todd #1	Sebastopol #2	Occidental #2
						18-Aug-21	18-Aug-21		26-Oct-21	17-Aug-21	17-Aug-21
pH	pH					7.49	7.41		7.80	7.86	8.14
Total Hardness as CaCO ₃	mg/L					116	111		53	44	28
Calcium	mg/L					23	22		14	12	8.5
Magnesium	mg/L				WELL	14	14	WELL	4.6	3.1	1.6
Sodium	mg/L					9.6	9.4		36	50	55
Potassium	mg/L				NOT	1.1	1.0	NOT	1.7	1.5	1.0
Total Alkalinity as CaCO ₃	mg/L					100	99		97	110	120
Hydroxide	mg/L				RUN	< 5.0	< 5.0	RUN	< 5.0	< 5.0	< 5.0
Carbonate	mg/L					< 5.0	< 5.0		< 5.0	< 5.0	< 5.0
Bicarbonate	mg/L				IN	100	99	IN	97	110	120
Aggressiveness Index						11.25	11.15		11.33	11.38	11.55
Lead	µg/L	15 ⁽⁴⁾	5	0.2	2021	< 5.0	< 5.0	2021	< 5.0	< 5.0	< 5.0
Boron	µg/L	1000 ⁽⁵⁾				270	270		< 100	< 100	< 100
Total Radon 222 ± Counting Error	pCi/L		100			196 ± 22.4	222 ± 23.5		110 ± 22.0	277 ± 28.1	270 ± 27.9
1,4 Dioxane	µg/L	1.0 ⁽⁶⁾ ⁽⁷⁾				< 0.070 ⁽⁸⁾	< 0.070 ⁽⁸⁾		< 0.070 ⁽⁸⁾	< 0.070 ⁽⁸⁾	< 0.070 ⁽⁸⁾
N-Nitrosodimethylamine (NDMA)	µg/L	0.01 ⁽⁵⁾		0.003		< 0.002	< 0.002		< 0.002	< 0.002	< 0.002
Perfluorooctyl Sulfonate (PFOS)	µg/L	0.0065 ⁽⁵⁾ ⁽⁶⁾	0.040			< 0.002	< 0.002		< 0.002	< 0.002	< 0.002
Perfluorooctanoic Acid (PFOA)	µg/L	0.0051 ⁽⁵⁾ ⁽⁶⁾	0.020			< 0.002	< 0.002		< 0.002	< 0.002	< 0.002
Perfluoro-1-butanesulfonic acid (PFBS)	µg/L	0.5 ⁽⁵⁾ ⁽⁶⁾				< 0.002	< 0.002		< 0.002	< 0.002	< 0.002

⁽⁴⁾ Action Level under the Lead and Copper Rule.

⁽⁵⁾ Notification Level.

⁽⁶⁾ Response Level for: PFOS = 0.040 µg/L, PFOA = 0.010 µg/L, PFBS = 5 µg/L.

⁽⁷⁾ Response Level for: 1,4 Dioxane = 35 µg/L.

⁽⁸⁾ 1, 4 Dioxane collected for Production 4 & 6 on 11-08-21. Todd, Sebastopol and Occidental collected on 10-26-21.

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NOTES:

MCL:	<u>Maximum Contaminant Level</u> : The highest level of a contaminant that is allowed in drinking water. MCLs are set close to the PHGs and MCLGs as is economically and technologically feasible. Blanks indicate that no numerical values have been established.
DLR:	<u>Detection Limits for the Purposes of Reporting</u> : The designated minimum level at or above which any analytical finding of a contaminant in drinking water resulting from monitoring shall be reported. Blanks indicate that no numerical values have been established.
MCLG:	<u>Maximum Contaminant Level Goal</u> : 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. Blanks indicate that no numerical values have been established.
PHG:	<u>Public Health Goal</u> : The level of a contaminant in drinking water that pose no significant health risk if consumed for a lifetime based on current risk assessment principles, practices, and methods. PHGs are established by the Office of Environmental Health Hazard Assessment (OEHHA). Blanks indicate that no numerical values have been established.
Notification Levels:	<u>Notification Levels</u> : Notification levels are health-based advisory levels established by the Division of Drinking Water (DDW) for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply. The level at which DDW recommends removal of a drinking water source from service is called the "response level."
Response Levels:	<u>Response Levels</u> : The level at which DDW recommends that the drinking water system take the source out of service if a chemical is present at levels considerably higher than its notification level.
Unregulated Contaminants:	<u>Unregulated Contaminants</u> : Constituents that do not have drinking water standards and have been determined by DDW or EPA to warrant monitoring for occurrence data.

µg/L:	Micrograms per liter (equals parts per billion)	TON:	Threshold Odor Number
mg/L:	Milligrams per liter (equals parts per million)	µmho/cm:	Micromhos per centimeter
pCi/L:	Picocuries per liter (a measure of radioactivity)	ND:	Non detected
NTU:	Nephelometric Turbidity Units	N/A:	Not available
MFL:	Million fibers per liter greater than 10 micrometers		

Production 1, 4, & 7: Wells 1 through 7. Collectively referred to as the "Russian River Well Field". Chemical monitoring required on Wells 1, 4, & 7.

FOOTNOTES:

- ⁽¹⁾ Methyl tert-butyl ether (MTBE) is listed in both the Primary (Organic Chemicals - VOCs) and Secondary Standards.
- ⁽²⁾ Thiobencarb is listed in both the Primary (Organic Chemicals - SOCs) and Secondary Standards.
- ⁽³⁾ Aluminum is listed in both the Primary (Inorganic Chemicals) and Secondary Standards.
- ⁽⁴⁾ Action Level under the Lead and Copper Rule.
- ⁽⁵⁾ Notification Level.
- ⁽⁶⁾ Response Level for: PFOA = 0.010 µg/L, PFOS = 0.040 µg/L, PFBS = 5 µg/L.
- ⁽⁷⁾ Response Level for: 1,4 Dioxane = 35 µg/L.
- ⁽⁸⁾ Hexachlorocyclopentadiene & Thiobencarb: Sonoma Water was not aware that our contract laboratory, Alpha Laboratories was no longer ELAP certified for these compounds at the time of sampling. These results were not included in this report. Alpha Laboratories is currently in the process of validating the method/analytes and will be applying for accreditation as soon as they can.
- ⁽⁹⁾ 1, 4 Dioxane collected for Production 4 & 6 on 11-08-21. Todd, Sebastopol and Occidental collected on 10-26-21.