



11/18/2022

Work Order: 22K0463
Project: 2022 Testing

Willow Springs Natural Spring Water
Attn: Todd Moores
44065 US Highway 189 North
Kemmerer, WY 83101

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:

Dave Gayer, Laboratory Director



Certificate of Analysis

Lab Sample No.: 22K0463-01

Name: Willow Springs Natural Spring Water	Sample Date: 11/6/2022 6:30 PM
Sample Site: Well	Receipt Date: 11/7/2022 8:16 AM
Comments:	Sampler: Client
Sample Matrix: Drinking Water	Project: 2022 Testing
PO Number:	System No.:
Source Code:	Sample Point:
	Report to State:

Parameter	Sample Result	EPA Max Contaminant Level (MCL)	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations								
Langelier Index @ 22 Deg. C	0.15			None	Calculation	11/18/2022	11/18/2022	
Hardness, Total as CaCO3	234		1.32	mg/L	SM 2340 B	11/09/2022	11/10/2022	
Inorganic								
Alkalinity - Bicarbonate (as CaCO3)	204		1.0	mg/L	SM 2320 B	11/08/2022	11/08/2022	
Alkalinity - Carbonate (as CaCO3)	ND		1.0	mg/L	SM 2320 B	11/08/2022	11/08/2022	
Alkalinity - Hydroxide (as CaCO3)	ND		1.0	mg/L	SM 2320 B	11/08/2022	11/08/2022	
Alkalinity - Total (as CaCO3)	204		1.0	mg/L	SM 2320 B	11/08/2022	11/08/2022	
Ammonia as N	ND		0.20	mg/L	SM 4500 NH3 H	11/10/2022	11/10/2022	
Bromate	ND	0.01	0.01	mg/L	EPA 300.0	11/09/2022	11/09/2022	
Bromide	0.1		0.01	mg/L	EPA 300.0	11/09/2022	11/09/2022	
Chloride	34.2	250	1.00	mg/L	EPA 300.0	11/07/2022	11/07/2022	
Color	10	15	0	Color Units	SM 2120 B	11/07/2022 14:07	11/07/2022 14:30	
Conductivity	527		1	umho/cm	EPA 120.1	11/11/2022	11/11/2022	
Cyanide, Free	ND	0.2	0.016	mg/L	SM 4500 CN-E	11/09/2022	11/09/2022	
Fluoride	0.301	4	0.100	mg/L	EPA 300.0	11/07/2022	11/07/2022	
MBAS Surfactants	ND	0.5	0.08	mg/L	SM 5540 C	11/08/2022 15:00	11/08/2022 15:14	
Nitrate as N	ND	10	0.10	mg/L	EPA 300.0	11/07/2022 22:51	11/07/2022 22:51	
Nitrite as N	ND	1	0.10	mg/L	EPA 300.0	11/07/2022 22:51	11/07/2022 22:51	
Odor	ND	3	0	T.O.N.	SM 2150 B	11/07/2022 14:07	11/07/2022 14:30	
pH	7.6		0.1	pH Units	SM 4500 H-B	11/07/2022 17:11	11/07/2022 17:59	SPH
Phosphate, ortho as P	0.02		0.01	mg/L	SM 4500 P-E/F	11/07/2022 18:00	11/07/2022 18:20	
Sulfate	43.9	250	1.00	mg/L	EPA 300.0	11/07/2022	11/07/2022	
Total Dissolved Solids (TDS)	328	1000	20	mg/L	SM 2540 C	11/07/2022	11/07/2022	
Total Organic Carbon	0.8		0.5	mg/L	SM 5310 C	11/11/2022	11/12/2022	
Turbidity	0.18	5	0.05	NTU	EPA 180.1	11/07/2022 16:04	11/07/2022 16:50	
Metals								
Aluminum, Total	ND	0.2	0.05	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Antimony, Total	ND	0.006	0.0005	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Arsenic, Total	0.0008	0.01	0.0005	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Barium, Total	0.065	2	0.005	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Beryllium, Total	ND	0.004	0.001	mg/L	EPA 200.7	11/09/2022	11/10/2022	
Boron, Total	0.05		0.05	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Cadmium, Total	ND	0.005	0.0002	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Calcium, Total	66.3		0.2	mg/L	EPA 200.7	11/09/2022	11/10/2022	
Chromium, Total	ND	0.1	0.005	mg/L	EPA 200.7	11/09/2022	11/10/2022	



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Parameter	Sample Result	EPA Max Contaminant Level (MCL)	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals (cont.)								
Copper, Total	0.0126	1.3	0.0010	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Iron, Total	0.03	0.3	0.02	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Lead, Total	0.0010	0.015	0.0005	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Magnesium, Total	16.7		0.2	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Manganese, Total	ND	0.05	0.005	mg/L	EPA 200.7	11/09/2022	11/10/2022	
Mercury, Total	ND	0.002	0.00020	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Nickel, Total	ND	0.1	0.005	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Potassium, Total	1.4		0.5	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Selenium, Total	0.0016	0.05	0.0005	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Silica, (as SiO2) Total	14.6		0.1	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Silver, Total	ND	0.1	0.0005	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Sodium, Total	27.2		0.5	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Thallium, Total	ND	0.002	0.0002	mg/L	EPA 200.8	11/14/2022	11/14/2022	
Zinc, Total	0.02	5	0.01	mg/L	EPA 200.7	11/09/2022	11/09/2022	
Microbiology								
Coliform, Total	Absent		1	Org/100 mL	EPA 9223B	11/07/2022 12:20	11/08/2022 12:30	
E. Coli	Absent		1	Org/100 mL	EPA 9223B	11/07/2022 12:20	11/08/2022 12:30	
Carbamates								
3-Hydroxycarbofuran	ND		1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Aldicarb	ND		1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Aldicarb sulfone	ND		1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Aldicarb sulfoxide	ND		1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Carbaryl	ND		1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Carbofuran	ND	40	1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Methomyl	ND		1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Oxamyl	ND	200	1	ug/L	EPA 531.1	11/08/2022	11/08/2022	
Herbicides								
2,4,5-TP (Silvex)	ND	50	0.440	ug/L	EPA 515.3	11/07/2022	11/08/2022	
2,4-D	ND	70	0.220	ug/L	EPA 515.3	11/07/2022	11/08/2022	
Dalapon	ND	200	2.20	ug/L	EPA 515.3	11/07/2022	11/08/2022	
Dicamba	ND		1.00	ug/L	EPA 515.3	11/07/2022	11/08/2022	
Dinoseb	ND	7	0.440	ug/L	EPA 515.3	11/07/2022	11/08/2022	
Pentachlorophenol	ND	1	0.088	ug/L	EPA 515.3	11/07/2022	11/08/2022	
Picloram	ND	500	0.220	ug/L	EPA 515.3	11/07/2022	11/08/2022	



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Pesticides								
Endrin	ND	2	0.022	ug/L	EPA 508.1	11/11/2022	11/14/2022	
Heptachlor	ND	0.4	0.088	ug/L	EPA 508.1	11/11/2022	11/14/2022	
Heptachlor epoxide	ND	0.2	0.044	ug/L	EPA 508.1	11/11/2022	11/14/2022	
Lindane	ND	0.2	0.044	ug/L	EPA 508.1	11/11/2022	11/14/2022	
Methoxychlor	ND	40	0.22	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1016	ND	0.2	0.20	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1221	ND	0.5	0.20	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1232	ND	0.5	0.20	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1242	ND	0.5	0.50	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1248	ND	0.5	0.50	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1254	ND	0.5	0.50	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB-1260	ND	0.5	0.50	ug/L	EPA 508.1	11/11/2022	11/14/2022	
PCB - Total	ND	0.5	0.50	ug/L	EPA 508.1	11/11/2022	11/14/2022	
Toxaphene	ND	3	2.2	ug/L	EPA 508.1	11/11/2022	11/14/2022	
Semi-Volatile Compounds								
Alachlor	ND	2	0.44	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Aldrin	ND		2.00	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Atrazine	ND	3	0.22	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Benzo (a) pyrene	ND	0.2	0.04	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Bis (2-ethylhexyl) Adipate	ND	400	1.30	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Bis (2-ethylhexyl) Phthalate	ND	6	1.30	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Butachlor	ND		0.50	ug/L	EPA 525.2	11/11/2022	11/14/2022	
alpha-Chlordane	ND	2	0.44	ug/L	EPA 525.2	11/11/2022	11/14/2022	
gamma-Chlordane	ND	2	0.44	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Chlordane - Total	ND	2	0.44	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Dieldrin	ND		1.00	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Hexachlorobenzene	ND	1	0.22	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Hexachlorocyclopentadiene	ND	50	0.22	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Metolachlor	ND		0.50	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Metribuzin	ND		0.50	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Propachlor	ND		0.50	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Simazine	ND	4	0.15	ug/L	EPA 525.2	11/11/2022	11/14/2022	
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,1,1-Trichloroethane	ND	200	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	



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Volatile Organic Compounds (cont.)								
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,1,2-Trichloroethane	ND	5	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,1-Dichloroethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,1-Dichloroethene	ND	7	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,1-Dichloropropene	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2,3-Trichlorobenzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2,3-Trichloropropane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2,4-Trichlorobenzene	ND	70	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2,4-Trimethylbenzene	ND	70	1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2-Dichlorobenzene	ND	600	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2-Dichloroethane	ND	5	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,2-Dichloropropane	ND	5	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,3,5-Trimethylbenzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,3-Dichlorobenzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,3-Dichloropropane	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
1,4-Dichlorobenzene	ND	75	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
2,2-Dichloropropane	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
2-Chlorotoluene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
4-Chlorotoluene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Benzene	ND	5	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Bromobenzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Bromochloromethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Bromodichloromethane	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Bromoform	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Bromomethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Carbon Tetrachloride	ND	5	1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Chlorobenzene	ND	100	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Chloroethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Chloroform	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Chloromethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
cis-1,2-Dichloroethene	ND	70	1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
cis-1,3-Dichloropropene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Dibromochloromethane	ND		0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Dibromomethane	ND	5	1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Dichlorodifluoromethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	



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Volatile Organic Compounds (cont.)								
Ethyl Benzene	ND	700	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Hexachlorobutadiene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Isopropylbenzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Methyl tert-Butyl Ether (MTBE)	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Methylene Chloride	ND	5	1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Naphthalene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
n-Butyl Benzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
n-Propyl Benzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
p-Isopropyltoluene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
sec-Butyl Benzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Styrene	ND	100	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
tert-Butylbenzene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Tetrachloroethene	ND	5	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Toluene	ND	1000	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
trans-1,2-Dichloroethene	ND	100	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
trans-1,3-Dichloropropene	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Trichloroethene	ND	5	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Trichlorofluoromethane	ND		1.0	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Vinyl Chloride	ND	2	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	
Xylenes, total	ND	10000	0.5	ug/L	EPA 524.2	11/10/2022	11/10/2022	



Certificate of Analysis

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit.

1 mg/L = one milligram per liter or 1 mg/Kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/Kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/Kg = one nanogram per kilogram = 1 part per trillion.

SPH = Sample submitted past method specified holding time.

Data Comparisons

Values reported in **RED** exceed Primary Drinking Water standards.

Values reported in **BLUE** exceed Secondary Drinking Water standards.

BLANK values in the MCL column indicate no standard.