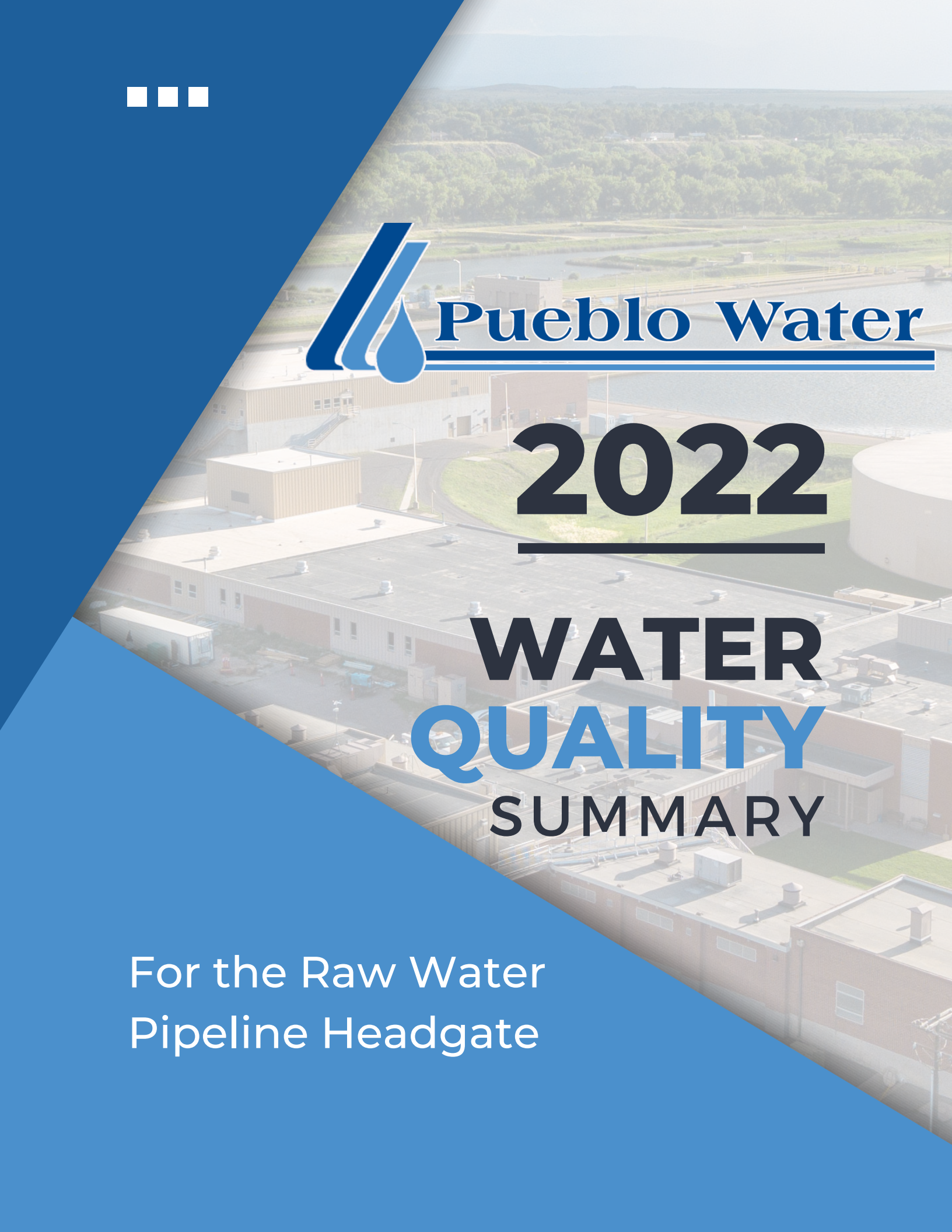

Pueblo Water

2022

WATER QUALITY SUMMARY

For the Raw Water Pipeline Headgate

2022

2022 Analytical Results Summary for Pueblo's Raw Water Pipleline				
Parameter	**Units**	**Range of Detection**	**Pueblo Raw Water Average Level**	**Number of Samples Analyzed**
Clarity				
Turbidity	NTU	0.58 - 6.42	1.43	231
Microbiological				
Total Coliform Bacteria	MPN/100 mL	<1 - 24196	1160	184
E. Coli Bacteria	MPN/100 mL	<1 - 34.5	4.8	184
Radiologicals°				
Gross Alpha	pCi/L	1.1	1.1	1
Radium-226	pCi/L	0.23	0.23	1
Radium-228	pCi/L	0.23	0.23	1
Uranium	pCi/L	2.5	2.5	1
Inorganic Chemicals				
Trace Metals				
Aluminum	µg/L	<1.00 - 13.1	3.95	11
Antimony	µg/L	<1.00	<1.00	11
Arsenic	µg/L	<1.00 - 1.68	1.11	11
Barium	µg/L	48.5 - 70.3	58.5	11
Beryllium	µg/L	<1.00	<1.00	10
Cadmium	µg/L	<1.00	<1.00	11
Calcium	mg/L	36.3 - 59.9	44.9	11
Chromium	µg/L	<1.00	<1.00	11
Cobalt	µg/L	<1.00	<1.00	11
Copper	µg/L	1.06 - 1.72	1.45	11
Iron	mg/L	<0.50	<0.50	11
Lead	µg/L	<1.00	<1.00	11
Magnesium	mg/L	10.7 - 16.1	13.6	11
Manganese	µg/L	<1.00 - 5.55	2.1	11
Mercury	µg/L	<0.50	<0.50	11
Molybdenum	µg/L	3.96 - 5.43	4.71	11
Nickel	µg/L	2.52 - 4.18	3.41	11
Potassium	mg/L	2.33 - 3.07	2.71	11
Selenium	µg/L	3.81 - 5.77	4.77	11
Silver	µg/L	<1.00	<1.00	9
Sodium	mg/L	12.5 - 20.3	15.9	11
Thallium	µg/L	<1.00	<1.00	11
Vanadium	µg/L	1.09 - 1.38	1.25	11
Zinc	µg/L	<1.00 - 2.20	1.27	11

For the Raw Water Pipeline Headgate

2022

2022 Analytical Results Summary for Pueblo's Raw Water Pipleline				
Parameter	**Units**	**Range of Detection**	**Pueblo Raw Water Average Level**	**Number of Samples Analyzed**
Organic Chemicals Total Volatile Organic Compounds (VOC's)**				
Benzene	µg/L	<0.50	<0.50	1
Bromobenzene	µg/L	<0.50	<0.50	1
Bromochloromethane	µg/L	<0.50	<0.50	1
Bromodichloromethane	µg/L	<0.50	<0.50	1
Bromoform	µg/L	<0.50	<0.50	1
Bromomethane	µg/L	<0.50	<0.50	1
n-Butylbenzene	µg/L	<0.50	<0.50	1
sec-Butylbenzene	µg/L	<0.50	<0.50	1
tert-Butylbenzene	µg/L	<0.50	<0.50	1
Carbon tetrachloride	µg/L	<0.50	<0.50	1
Chlorobenzene	µg/L	<0.50	<0.50	1
Chloroethane	µg/L	<0.50	<0.50	1
Chloroform	µg/L	<0.50	<0.50	1
Chloromethane	µg/L	<0.50	<0.50	1
o-Chlorotoluene	µg/L	<0.50	<0.50	1
p-Chlorotoluene	µg/L	<0.50	<0.50	1
Dibromochloromethane	µg/L	<0.50	<0.50	1
Dibromomethane	µg/L	<0.50	<0.50	1
m- Dichlorobenzene	µg/L	<0.50	<0.50	1
o- Dichlorobenzene	µg/L	<0.50	<0.50	1
p- Dichlorobenzene	µg/L	<0.50	<0.50	1
Dichlorodifluoromethane	µg/L	<0.50	<0.50	1
1,1- Dichloroethane	µg/L	<0.50	<0.50	1
1,2- Dichloroethane	µg/L	<0.50	<0.50	1
1,1- Dichloroethylene	µg/L	<0.50	<0.50	1
cis-1,2- Dichloroethylene	µg/L	<0.50	<0.50	1
trans-1,2- Dichloroethylene	µg/L	<0.50	<0.50	1
1,2- Dichloropropane	µg/L	<0.50	<0.50	1
1,3- Dichloropropane	µg/L	<0.50	<0.50	1
2,2- Dichloropropane	µg/L	<0.50	<0.50	1
1,1- Dichloropropene	µg/L	<0.50	<0.50	1
cis-1,3- Dichloropropene	µg/L	<0.50	<0.50	1
trans-1,3- Dichloropropene	µg/L	<0.50	<0.50	1
1,3- Dichloropropene	µg/L	<0.50	<0.50	1
Ethylbenzene	µg/L	<0.50	<0.50	1
Hexachlorobutadiene	µg/L	<0.50	<0.50	1
Isopropylbenzene	µg/L	<0.50	<0.50	1
p-Isopropyltoluene	µg/L	<0.50	<0.50	1
Methylene chloride	µg/L	<0.50	<0.50	1
Naphthalene	µg/L	<0.50	<0.50	1
n-Propylbenzene	µg/L	<0.50	<0.50	1
Styrene	µg/L	<0.50	<0.50	1
Tetrachloroethylene	µg/l	<0.50	<0.50	1
1,1,1 - Trichloroethane	µg/l	<0.50	<0.50	1
1,1,1,2- Tetrachloroethane	µg/L	<0.50	<0.50	1
1,1,2,2- Tetrachloroethane	µg/L	<0.50	<0.50	1
Toluene	µg/L	<0.50	<0.50	1
1,2,3- Trichlorobenzene	µg/L	<0.50	<0.50	1
1,2,4- Trichlorobenzene	µg/L	<0.50	<0.50	1
1,1,2- Trichloroethane	µg/L	<0.50	<0.50	1
Trichloroethylene	µg/L	<0.50	<0.50	1
Trichlorofluoromethane	µg/L	<0.50	<0.50	1
1,2,3- Trichloropropane	µg/L	<0.50	<0.50	1
1,2,4- Trimethylbenzene	µg/L	<0.50	<0.50	1
1,3,5- Trimethylbenzene	µg/L	<0.50	<0.50	1
Vinyl chloride	µg/L	<0.50	<0.50	1
m,p- Xylene	µg/L	<0.50	<0.50	1
o-Xylene	µg/L	<0.50	<0.50	1
Xylenes, Total	µg/L	<0.50	<0.50	1

For the Raw Water Pipeline Headgate

2022

2022 Analytical Results Summary for Pueblo's Raw Water Pipeline

Parameter	Units	Range of Detection	Pueblo Raw Water Average Level	Number of Samples Analyzed
Organic Chemicals (continued)**				
Pesticides				
Aldrin	µg/L	<0.0095	<0.0095	2
alpha-Chlordane	µg/L	<0.0095	<0.0095	2
gamma-Chlordane	µg/L	<0.0095	<0.0095	2
Chlordane	µg/L	<0.19	<0.19	2
Dieldrin	µg/L	<0.0095	<0.0095	2
Endrin	µg/L	<0.0095	<0.0095	2
Hexachlorocyclopentadiene	µg/L	<0.095	<0.095	2
Heptachlor	µg/L	<0.0095	<0.0095	2
Heptachlor epoxide	µg/L	<0.0095	<0.0095	2
Hexachlorobenzene	µg/L	<0.0095	<0.0095	2
Methoxychlor	µg/L	<0.047	<0.047	2
Toxaphene	µg/L	<0.71	<0.71	2
gamma-BHC	µg/L	<0.0095	<0.0095	2
Aroclor 1016	µg/L	<0.076	<0.076	2
Aroclor 1221	µg/L	<0.24	<0.24	2
Aroclor 1232	µg/L	<0.095	<0.095	2
Aroclor 1242	µg/L	<0.095	<0.095	2
Aroclor 1248	µg/L	<0.095	<0.095	2
Aroclor 1254	µg/L	<0.095	<0.095	2
Aroclor 1260	µg/L	<0.095	<0.095	2
PCB-Total	µg/L	<0.24	<0.24	2
Alachlor	µg/L	<0.1	<0.1	2
Atrazine	µg/L	<0.1	<0.1	2
Simazine	µg/L	<0.07	<0.07	2
Herbicides				
2,4,-D	µg/L	<0.10	<0.10	2
2,4,5-TP	µg/L	<0.20	<0.20	2
Dicamba	µg/L	<0.30	<0.30	2
Dalapon	µg/L	<1.0	<1.0	2
Dinoseb	µg/L	<0.20	<0.20	2
Pentachlorophenol	µg/L	<0.040	<0.040	2
Picloram	µg/L	<0.10	<0.10	2
Butachlor	µg/L	<0.1	<0.1	2
Metolachlor	µg/L	<0.1	<0.1	2
Metribuzin	µg/L	<0.1	<0.1	2
Propachlor	µg/L	<0.1	<0.1	2
Endothall	µg/L	<0.90	<0.90	2
Carbamate Pesticides				
3-Hydroxycarbofuran	µg/L	<0.500	<0.500	2
Aldicarb	µg/L	<0.500	<0.500	2
Aldicarb sulfone	µg/L	<0.500	<0.500	2
Aldicarb sulfoxide	µg/L	<0.500	<0.500	2
Carbaryl	µg/L	<0.500	<0.500	2
Carbofuran	µg/L	<0.500	<0.500	2
Methiocarb	µg/L	<0.500	<0.500	2
Methomyl	µg/L	<0.500	<0.500	2
Oxamyl (Vydate)	µg/L	<0.500	<0.500	2
Propoxur	µg/L	<0.500	<0.500	2
1,2-Dibromo 3-chloropropane	µg/L	<0.0098	<0.0098	2
1,2-Dibromoethane	µg/L	<0.0098	<0.0098	2
Other Organic Chemicals				
Benzo(a)pyrene	µg/L	<0.02	<0.02	2
Bis(2-ethylhexyl)adipate	µg/L	<0.60	<0.60	2
Bis(2-ethylhexyl)pthalate	µg/L	<0.60	<0.60	2

For the Raw Water Pipeline Headgate

2022

2022 Analytical Results Summary for Pueblo's Raw Water Pipeline

Parameters (Cont'd)	Units	Range of Detection	Pueblo Raw Water Average Level	Number of Samples Analyzed
Additional Parameters				
Alkalinity (as $CaCO_3$)	mg/L	86 - 117	104	48
Bromide	mg/L	<0.10	<0.10	39
Calcium Hardness (as $CaCO_3$)	mg/L	91.0 - 164	123	48
Chloride	mg/L	5.68 - 8.86	7.29	44
Conductivity	µmho/cm	333 - 451	399	231
Fluoride	mg/L	0.36 - 0.46	0.42	335
Nitrate as N	mg/L	<0.10 - 0.22	0.14	35
Nitrite as N	mg/L	<0.10	<0.10	44
Total Hardness (as $CaCO_3$)	mg/L	128 - 192	161	48
Ortho-Phosphate (as Phosphorous)	mg/L	<0.10	<0.10	48
pH	units	7.94 - 8.72	8.24	231
Total Dissolved Solids	mg/L	224 - 299	270	48
Sulfate	mg/L	70.5 - 99.4	86.0	45
Total Organic Carbon	mg/L	2.10 - 2.60	2.3	48

Listed above are regulated and unregulated contaminants detected in the raw water in 2022.

Terms and Definitions Used in the Above Data Table

Oocysts - Life cycle stage of a parasitic organism.

Turbidity - Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our plant's filtration system.

NTU - Nephelometric Turbidity Unit - A unit of measurement of turbidity in the water.

MPN/100 mL - Most Probable Number per 100 milliliter - The most probable number of bacterial colonies per 100 milliliters of a water sample.

ND - Not Detected

µg/L - microgram per liter or one part per billion

mg/L - milligram per liter or one part per million

µmho/cm - a unit of measurement of the conductivity of the water

< - Less Than > - Greater Than

**Organics analyzed in 2017.
° Radiologicals analyzed in 2020.
Please contact the Board of Water Works Water Quality Laboratory for any additional information regarding water quality at (719) 584-0266. Hours are 7:00 am - 3:30 pm Monday through Friday.

For the Raw Water Pipeline Headgate