

Town of Payson 2023 Water Quality Analysis

The Water Quality Table lists all the drinking water contaminants that were detected during the 2023 calendar year. As such, some of our data, though representative, may be more than one year old. Although many more contaminants were tested, only detected constituents of concern deemed by primary drinking water standards are listed.

The table show results of our monitoring for the period of January 1 to December 31, 2023, for PWS 04-04032, unless otherwise noted.

Microbiological Revised Total Coliform Rule (RTCRC)	Unit	MCL	MCLG	Low Range	High Range	Running Annual Average	Violation	Likely Source of Contamination
Total Coliform/E.coli (240 Annual samples)	Present/Absent	TT	0	Absent	Absent	Absent	No	Naturally present in the environment
Disinfection By-Products, Disinfectants and Surface Water Rule	Unit	MCL	MCLG	Low Range	High Range	Running Annual Average	Violation	Likely Source of Contamination
Total Trihalomethanes (TTHMs)	ppb	80	N/A	13.0	85	43	No	By-product of drinking water disinfection
Total Haloacetic Acids (HAAs)	ppb	60	N/A	ND	65	30.0	No	By-product of drinking water disinfection
<i>Compliance is based on a system wide locational running annual average, not the highest detected amount.</i>								
	Unit	MCL MRDL	MCLG MRDLG	Low Range	High Range	Running Annual	Violation	Likely Source of Contamination
Chlorine Residual	ppm	4	4	0.50	1.79	88.00	No	Water additive used to control microbes
Turbidity (Surface Water)				Technique)		Level Detected	Violation	Likely Source of Contamination
		Highest single measurement		1NTU		0.047 NTU		Soil runoff
		Lowest monthly % meeting Limit		0.3 NTU		1.00	No	Soil runoff
<i>Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.</i>								
	Unit	AL	MCLG	90th Percentile Value	Sites Exceeding Action Level	Likely Source of Contamination		
Lead	ppm	0.015	0	0.0055	1-Water department staff were able to help customer figure out the cause of their high result and offer resolution.	Corrosion of household plumbing		
Copper (30 samples-annually)	ppm	1.3	1.3	0.3000	0	Corrosion of household plumbing		
<i>Lead and Copper Rule Standard: 90% of homes tested must have lead and copper levels below the action level.</i>								
Inorganic Contaminants	Unit	MCL	MCLG	Low Range	High Range	Avg. Detected	Violation	Likely Source of Contamination
Arsenic	ppb	10	0	N/D	2.5	1.90	No	Erosion of natural deposits; runoff from orchards, glass, and electronic production waste glass, and electronic production wastes
Barium	ppm	2	2	0.0089	0.17	0.069	No	Discharge of drilling wastes; from metal refineries; erosion of natural deposits
Fluoride	ppm	4	4	N/D	1.8	0.61	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury	ppm	2	2	N/D	0.00076	0.00009	No	Common element in nature
Nitrate as N	ppm	10	10	N/D	6.2	1.67	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants	Unit	MCL	MCLG	Highest Level	Range of levels	Violation	Likely Source of Contamination	
Combined Radium 226/228	pCi/L	5	0	2.0	0-2	No	Erosion of natural deposits	
Volatile Organic Contaminants	Unit	MCL	MCLG	Highest Level Detected	Range of levels	Violation	Likely Source of Contamination	
Xylenes	ppm	10	10	0.00076	00-0.000076	No	Discharge from petroleum factories and/or chemical factories	

Secondary Standards Constituents of Frequent Interest to Customers for 2023	Unit	2nd MCL	2nd MCLG	Low Range	High Range	Avg. Detected	Violation	Noticeable Effects above Secondary MCL
Total Hardness	ppm	-	-	88	450	231.60	No	Mineral buildup on items;
	Grains	-	-	5.2	26.32	13.54	No	
Iron	ppm	0.3	-	N/D	0.1.8	0.42	No	Rusty Color; sediment; metallic taste;
PH	SU	6.5-8.5		6.60	7.7	7.20	No	Low pH=bitter metallic taste; High pH=slippery feel, soda taste
Chloride	ppm			6.70	141.0	35.67	No	Salty taste
Manganese	ppm			N/D	0.38	0.043	No	Black to brown in color and staining
	ppm			7.80	68.0	22.89	No	
Sodium								
Sulfate as SO4	ppm			1.38	87.4	19.56	No	Salty taste
	ppm			116.00	642.0	303.43	No	Hardness; deposits; colored staining water and salty taste
Total Dissolved Solids								

UCMR5 PFAS results

Twenty-nine Per- and Polyfluoroalkyl Substances (In parts per trillion)	Detected (Y/N)	Average of Results (ppt)	Detection Range (Low-High)	Minimum Reporting Level (ppt)	Analytical Methods
11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	N			5	EPA 533
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	N			5	EPA 533
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	N			3	EPA 533
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	N			5	EPA 533
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	N			3	EPA 533
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	N			2	EPA 533
hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	N			5	EPA 533
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	N			20	EPA 533
Perfluoro-3-methoxypropanoic acid (PFMPA)	N			3	EPA 533
Perfluoro-4-methoxybutanoic acid (PFMBA)	N			4	EPA 533
Perfluorobutanesulfonic acid (PFBS)	Y	11.2	N/D-54.8	3	EPA 533
Perfluorobutanoic acid (PFBA)	Y	5.53	N/D-32	5	EPA 533
Perfluorodecanoic acid (PFDA)	Y	0.33	N/D-3.5	3	EPA 533
Perfluorododecanoic acid (PFDoA)	N			3	EPA 533
Perfluoroheptanesulfonic acid (PFHpS)	N			3	EPA 533
Perfluoroheptanoic acid (PFHpA)	Y	2.29	N/D-13.2	3	EPA 533
Perfluorohexanesulfonic acid (PFHxS)	Y	5.04	N/D-22.7	3	EPA 533
Perfluorohexanoic acid (PFHxA)	Y	5.73	3.2-3.3	3	EPA 533
Perfluorononanoic acid (PFNA)	N			4	EPA 533
Perfluorooctanesulfonic acid (PFOS)	Y	7.88	N/D-42.2	4	EPA 533
Perfluorooctanoic acid (PFOA)	Y	8.51	N/D-40.9	4	EPA 533

Per- and Polyfluoroalkyl Substances	Payson's Highest Level Detected	Range of All Samples from Payson	Hazard Index (HI) level	Proposed MCL
PFOA (in parts per trillion)	40.9	N/D-40.9	N/A*	4.0 ppt
PFOS (in parts per trillion)	42.2	N/D-42.2	N/A*	4.0 ppt
PFNA (in parts per trillion)	0	N/D	10	N/A*
PFHxS (in parts per trillion)	22.7	N/D-22.7	9	N/A*
PFBS (in parts per trillion)	54.8	N/D-54.8	2000	N/A*
GenX (in parts per trillion)	0	N/D	10	N/A*
Calculated Hazard Index (HI)	2.55			1 (no units)

Perfluoropentanesulfonic acid (PFPeS)	N			4	EPA 533
Perfluoropentanoic acid (PFPeA)	Y	7.05	N/D-48.2	3	EPA 533
Perfluoroundecanoic acid (PFUnA)	N			2	EPA 533
n-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N			5	EPA 537.1
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N			6	EPA 537.1
Perfluorotetradecanoic acid (PFTA)	N			8	EPA 537.1
PFEESA	N				EPA 533
Perfluorotridecanoic acid (PFTriDA)	N			7	EPA 537.1
One Metal	Detected (Y/N)	Average	Detection Range (Low-High)	MRL (ppb)	Analytical Methods
Lithium (ppb)	Y	24.38	N/D-57.2	9 µg/L	EPA 200.7, SM 3120 B, ASTM D1976-20