

Table 3–1. Spearman rank correlation coefficients for selected physical properties of, and constituents measured, in water samples collected for the NAWQA Program, 1995–2007.

[All coefficients shown are significant at the 95-percent confidence limit ($p < 0.05$). Coefficients of 0.60 and higher are bold. DOC, dissolved organic carbon; SC, specific conductance]

	Ca	Mg	Na	K	Si	HCO ₃	SO ₄	Cl	F	Br	DS	NH ₃	NO ₃	DOC	As	Ba	B	Fe	Pb	Li	Mn	Mo	Ni	Sr	U	Zn	Radium-226	Radium-228	Radon-222	Tritium	DO	SC	Temp	pH	Hardness	Well depth	Casing depth	Depth to bedrock				
Calcium (Ca)	1																																									
Magnesium (Mg)	0.79	1																																								
Sodium (Na)	0.47	0.45	1																																							
Potassium (K)	0.45	0.44	0.86	1																																						
Silica (Si)			-0.45	-0.60	1																																					
Bicarbonate (HCO ₃)	0.54	0.55	0.27	0.33		1																																				
Sulfate (SO ₄)	0.58	0.58	0.75	0.72	-0.44	0.19	1																																			
Chloride (Cl)	0.28	0.25	0.59	0.40	-0.19		0.57	1																																		
Fluoride (F)	0.33	0.34	0.81	0.87	-0.53	0.22	0.67	0.33	1																																	
Bromide (Br)	0.49	0.40	0.72	0.66	-0.30	0.17	0.70	0.63	0.62	1																																
Dissolved solids (DS)	0.73	0.70	0.81	0.73	-0.32	0.42	0.84	0.63	0.66	0.72	1																															
Ammonia (NH ₃)	0.38	0.39	0.80	0.82	-0.41	0.37	0.59	0.24	0.81	0.61	0.63	1																														
Nitrate (NO ₃)			-0.43	-0.52	0.54		-0.28		-0.55	-0.30	-0.30	-0.59	1																													
DOC			-0.18	-0.20	0.27	0.34	-0.29	-0.32	-0.32	-0.25				1																												
Arsenic (As)				-0.26	0.42				-0.19						1																											
Barium (Ba)			-0.22			0.32	-0.37	-0.37	-0.18	-0.29	-0.28			0.37		1																										
Boron (B)	0.45	0.39	0.90	0.94	-0.55	0.32	0.79	0.48	0.89	0.75	0.77	0.87	-0.39	-0.29	-0.23	-0.28	1																									
Iron (Fe)	0.40	0.32	0.34	0.46	-0.29	0.30	0.35		0.43	0.35	0.34	0.56	-0.50		0.21			0.44	1																							
Lead (Pb)		-0.26	-0.34	-0.49	0.35		-0.39		-0.42	-0.29	-0.32	-0.55	0.57	-0.23				-0.46	-0.64	1																						
Lithium (Li)	0.48	0.42	0.89	0.91	-0.46	0.27	0.83	0.50	0.90	0.76	0.80	0.84	-0.38	-0.37		-0.33	0.93	0.46	-0.46	1																						
Manganese (Mn)	0.38	0.19			0.32	0.28		-0.25				0.17	-0.17	0.36	0.36			0.53	-0.50		1																					
Molybdenum (Mo)	0.27			-0.18	0.38			-0.21						0.21	0.56			0.34				0.52	1																			
Nickel (Ni)	0.55	0.50	0.33	0.38		0.40	0.47		0.28	0.41	0.40	0.42						0.50	0.37	-0.34	0.43	0.33	0.22	1																		
Strontium (Sr)	0.50	0.42	0.87	0.88	-0.54		0.80	0.52	0.89	0.76	0.77	0.81	-0.49	-0.28		-0.26	0.86	0.49	-0.47	0.89	0.28		0.36	1																		
Uranium (U)	0.32	0.29		-0.19	0.48	0.20			-0.19			-0.24	0.51		0.35							0.22	0.39	0.20	1																	
Zinc (Zn)			-0.26	-0.40	0.49		-0.23		-0.42			-0.39	0.47		0.24		-0.31		0.41	-0.26		0.31		-0.26	0.40	1																
Radium-226	0.39	0.45	0.76	0.76	-0.41	0.32	0.73	0.47	0.77	0.66	0.74	0.70	-0.56					0.73	0.36	-0.59	0.76		0.44	0.77	-0.22	-0.49	1															
Radium-228	0.32	0.36	0.61	0.72	-0.59	0.38	0.57	0.35	0.62	0.54	0.55	0.58	-0.56					0.65	0.38	-0.60	0.61	0.22		0.46	0.67	-0.26	-0.45	0.76	1													
Radon-222	-0.17	-0.18	-0.46	-0.49	0.52		-0.40	-0.23	-0.47	-0.32	-0.33	-0.47	0.37	0.39	0.27			-0.51	-0.19		-0.46	0.19	0.26		-0.48	0.22	0.28	-0.38	-0.36	1												
Tritium	-0.26	-0.29	-0.71	-0.73	0.63	-0.27	-0.59	-0.21	-0.72	-0.40	-0.56	-0.70	0.65		0.31			-0.40	-0.43	0.39	-0.43		0.39		-0.36	0.47	0.49	-0.43	-0.34	0.45	1											
Dissolved oxygen (DO)			-0.27	-0.38	0.26				-0.41	-0.26		-0.41	0.58			-0.27	-0.31	-0.44	0.50	-0.33	-0.35		-0.39		0.31	-0.45	-0.43		0.40	1												
SC	0.75	0.72	0.84	0.76	-0.29	0.47	0.83	0.59	0.68	0.77	0.96	0.69	-0.29			-0.23	0.78	0.39	-0.31	0.80		0.45	0.78		0.74	0.55	-0.36	-0.59	-0.20	1												
Water temperature (Temp)		0.17	0.58	0.60	-0.39		0.51	0.37	0.64	0.56	0.46	0.53	-0.22	-0.45	-0.24	-0.25	0.75	0.24	-0.20	0.76	-0.19		0.26	0.69		0.65	0.58	-0.40	-0.38	-0.22	0.51	1										
pH	-0.58	-0.58	-0.25	-0.33	0.27	-0.43	-0.39		-0.18	-0.20	-0.48	-0.23	0.21	-0.30				-0.22	-0.31	0.28				-0.48	-0.20		-0.26	-0.36		0.32												
Hardness	0.96	0.92	0.47	0.45		0.57	0.59	0.27	0.34	0.46	0.75	0.40					0.43	0.38	-0.22	0.47	0.33	0.22	0.54	0.47	0.32		0.42	0.34	-0.17	-0.28		0.77	0.16	-0.61	1							
Well depth	0.31	0.32	0.72	0.81	-0.62	0.24	0.65	0.39	0.80	0.56	0.60	0.73	-0.52	-0.43	-0.28		0.83	0.29	-0.32	0.83	-0.18		0.25	0.78	-0.21	-0.39	0.70	0.68	-0.61	-0.67	-0.29	0.62	0.60	-0.23	0.31	1						
Casing depth	0.28	0.25	0.66	0.77	-0.55	0.19	0.63	0.34	0.80	0.56	0.55	0.71	-0.46	-0.50	-0.29		0.83	0.31	-0.35	0.84			0.24	0.78		-0.36	0.70	0.62	-0.60	-0.67	-0.29	0.57	0.62		0.27	0.93	1					
Depth to bedrock	0.22	0.19	0.18	0.22	0.22	0.29			0.22			0.31				</																										