

Table 13.--Summary of the Seasonal Kendall trend test results for selected water-quality data stored in U.S. Environmental Protection Agency Storage and Retrieval System and collected for selected previous investigations in the study area

[Only results with a probability less than 0.05 are shown. The alpha significance level was 0.05. The null hypothesis tested was that there is no trend. \* indicates that trend tests were made but trends were insignificant or data were questionable; <0.001 indicates probability level less than 0.001; --, insufficient data for analysis]

Water-quality zone or location identifier (table 9) Probability (P) Trend slope (Slope) Number of observations (N) Period of record (Record)	Dissolved oxygen	pH	Alkalinity	Turbidity	Total solids	Total volatile solids	Total non-volatile solids	Suspended solids	Volatile suspended solids	Non-volatile suspended solids	Total hardness	Salinity	Dissolved chloride	Total organic carbon	Total ammonia nitrogen	Total ammonia plus organic nitrogen	Total nitrite plus nitrate	Total phosphorus	Dissolved phosphorus	Biochemical oxygen demand	Fecal streptococci	Fecal coliform	Chlorophyll-a, corrected for phaeopigments	Chlorophyll-a	
																									Neuse River water-quality zones
N1																									
P	*	0.001	*	*	*	*	*	<0.001	*	<0.001	*	*	*	*	*	*	*	*	--	*	--	--	0.013	*	
Slope	--	.036	--	--	--	--	--	-.586	--	-.500	--	--	--	--	--	--	--	--	--	--	--	--	.950	--	
N	2,299	1,062	720	308	436	695	707	692	955	969	102	1,100	385	42	840	725	728	727	156	855	78	63	334	481	
Record	1956-88	1956-88	1969-87	1973-88	1970-88	1970-85	1970-85	1970-88	1970-86	1970-86	1973-88	1970-88	1973-88	1976-85	1970-88	1973-88	1972-88	1972-88	1970-74	1969-88	1969-80	1979-84	1981-88	1970-88	
N2																									
P	<0.001	.001	*	*	*	*	*	.006	*	.005	*	*	*	--	*	*	.002	*	--	.052	--	--	*	.001	
Slope	.100	.050	--	--	--	--	--	-.800	--	-1.00	--	--	--	--	--	--	-.012	--	--	.100	--	--	.738		
N	627	226	133	55	84	141	150	147	206	209	27	502	94	3	250	145	146	145	117	130	50	53	73	182	
Record	1956-88	1956-88	1969-85	1973-88	1979-86	1979-82	1979-82	1979-88	1979-86	1979-86	1973-88	1970-88	1973-88	1979	1970-88	1979-88	1979-88	1979-88	1970-74	1973-88	1973-80	1979-80	1981-88	1970-88	
N3																									
P	.004	*	*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Slope	-.250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
N	385	81	73	16	0	0	0	0	0	0	12	406	9	0	148	9	15	12	117	24	35	0	0	147	
Record	1956-75	1956-73	1969-73	1973	0	0	0	0	0	0	1973	1970-74	1973	0	1970-73	1973	1972-73	1972-73	1970-74	1969-73	1969-73	0	0	1970-73	
N4																									
P	<.001	.019	*	*	--	--	--	.009	*	.019	*	*	.010	--	*	.002	<.001	.014	--	*	.045	<.001	--	.009	
Slope	.119	.022	--	--	--	--	--	-1.29	--	-1.47	--	--	216.7	--	--	-.013	-.004	-.003	--	--	-.383	-.222	--	.332	
N	939	313	125	86	14	9	26	90	61	63	46	886	134	16	573	144	145	144	156	219	132	169	26	499	
Record	1956-88	1956-88	1969-87	1973-88	1977-82	1977-80	1977-80	1976-88	1976-86	1976-86	1973-88	1970-88	1973-88	1976-85	1970-88	1973-88	1973-88	1973-88	1970-74	1973-88	1969-85	1976-86	1983-88	1970-88	