Table 9. Statistical summary of concentrations, and comparison to sediment-quality guidelines, for selected constituents in bottom-sediment samples from Tuttle Creek Lake, northeast Kansas, August and September 1999

[mg/kg, milligrams per kilogram; %, percent; µg/g, micrograms per gram; µg/kg, micrograms per kilogram; TEL, threshold-effects level; PEL, probable-effects level; <, less than; --, no value assigned]

Constituent and unit of measurement	Number of detections/ number of analyses	Concentration			Sediment-quality guidelines[1]	
		Minimum	Median	Maximum	TEL	PEL
Nutrients						
Total ammonia plus organic nitrogen, mg/kg	26/26	600	800	5,200	--	--
Total phosphorus, mg/kg	59/59	198	419	952	--	--
Carbon						
Carbon (inorganic), %	41/41	.06	.20	.58	--	--
Carbon (organic), %	41/41	.84	1.7	2.0	--	--
Carbon (total), %	41/41	.93	2.0	2.2	--	--
Metals and trace elements						
Aluminum, %	41/41	5.4	8.6	10	--	--
Antimony, µg/g	41/41	.79	1.2	7.1	--	--
Arsenic, µg/g	41/41	6.9	14	18	7.24	41.6
Barium, µg/g	41/41	570	660	980	--	--
Beryllium, µg/g	41/41	1.5	2.6	3.5	--	--
Bismuth, µg/g	0/41	<1.0	<1.0	<1.0	--	--
Cadmium, µg/g	41/41	.26	.44	.61	.676	4.21
Calcium, %	41/41	.98	1.4	2.3	--	--
Cerium, µg/g	41/41	48	80	92	--	--
Chromium, µg/g	41/41	48	81	120	52.3	160
Cobalt, µg/g	41/41	8.4	12	14	--	--
Copper, µg/g	41/41	20	34	44	18.7	108
Europium, µg/g	41/41	1.0	1.5	1.8	--	--
Gallium, µg/g	41/41	13	20	23	--	--
Gold, µg/g	0/41	<1.0	<1.0	<1.0	--	--
Holmium, µg/g	35/41	<1.0	1.1	1.3	--	--
Iron, %	41/41	2.2	4.9	5.7	--	--
Lanthanum, µg/g	41/41	27	44	51	--	--
Lead, µg/g	41/41	16	25	160	30.2	112
Lithium, µg/g	41/41	29	52	57	--	--
Magnesium, %	41/41	.67	1.2	1.4	--	--
Manganese, µg/g	41/41	440	710	1,100	--	--
Mercury, µg/g	40/41	< .02	.04	1.4	.130	.696
Molybdenum, µg/g	41/41	.58	1.1	1.9	--	--
Neodymium, µg/g	41/41	21	37	41	--	--
Nickel, µg/g	41/41	19	38	77	15.9	42.8
Niobium, µg/g	41/41	8.8	17	20	--	--
Potassium, %	41/41	1.8	2.1	2.3	--	--
Scandium, µg/g	41/41	6.5	13	17	--	--
Selenium, µg/g	41/41	.34	.81	1.5	--	--

1 **Sediment Deposition and Occurrence of Selected Nutrients and Other Chemical Constituents in Bottom Sediment, Tuttle Creek Lake, Northeast Kansas, 1962–99**

Table 9. Statistical summary of concentrations, and comparison to sediment-quality guidelines, for selected constituents in bottom-sediment samples from Tuttle Creek Lake, northeast Kansas, August and September 1999—Continued

Constituent and unit of measurement	Number of detections/ number of analyses	Concentration			Sediment-quality guidelines[1]	
		Minimum	Median	Maximum	TEL	PEL
Metals and trace elements—Continued						
Silver, µg/g	41/41	0.40	0.73	1.2	0.733	1.77
Sodium, %	41/41	.19	.32	1.1	--	--
Strontium, µg/g	41/41	120	140	250	--	--
Sulfur, %	16/41	<.05	<.05	.10	--	--
Tantalum, µg/g	39/41	<1.0	1.6	3.3	--	--
Thallium, µg/g	15/41	<.1	<.1	1.0	--	--
Thorium, µg/g	41/41	10	15	17	--	--
Tin, µg/g	41/41	2.0	3.5	7.7	--	--
Titanium, %	41/41	.28	.36	.41	--	--
Uranium, µg/g	41/41	2.5	3.1	3.5	--	--
Vanadium, µg/g	41/41	73	140	160	--	--
Ytterbium, µg/g	41/41	1.7	2.7	6.3	--	--
Yttrium, µg/g	41/41	18	28	33	--	--
Zinc, µg/g	41/41	65	120	150	124	271
Organochlorine compounds						
Aldrin, µg/kg	2/34	<.2	<.2	.6	--	--
Chlordane, µg/kg	0/34	<3	<3	<3	2.26	4.79
DDD, µg/kg	10/34	<.5	<.5	1.4	1.22	7.81
DDE, µg/kg	30/34	<.2	.4	5.2	2.07	374
DDT, µg/kg	0/34	<.5	<.5	<.5	1.19	4.77
Dieldrin, µg/kg	10/34	<.2	<.2	.4	.715	4.30
Endosulfan, µg/kg	0/34	<.2	<.2	<.2	--	--
Endrin, µg/kg	0/34	<.2	<.2	<.2	--	--
Gross polychlorinated biphenyls (PCBs), µg/kg	0/34	<5	<5	<5	21.6	189
Heptachlor, µg/kg	0/34	<.2	<.2	<.2	--	--
Heptachlor epoxide, µg/kg	0/34	<.2	<.2	<.2	--	--
Lindane, µg/kg	0/34	<.2	<.2	<.2	--	--
Methoxychlor, µg/kg	0/34	<2.5	<2.5	<2.5	--	--
Mirex, µg/kg	0/34	<.2	<.2	<.2	--	--
Toxaphene, µg/kg	0/34	<50	<50	<50	--	--

[1]Guidelines from U.S. Environmental Protection Agency (1997). TEL and PEL values for organochlorine compounds converted from milligrams per kilogram to micrograms per kilogram.