

**Table 10.** Estimated mean annual net loads and yields of constituents deposited in bottom sediment of Tuttle Creek Lake, northeast Kansas

[Mean annual net loads and yields have been rounded to three significant figures. mg/kg, milligrams per kilogram; kg/yr, kilograms per year; (kg/ha)/yr, kilograms per hectare per year; (lb/mi<sup>2</sup>)/yr, pounds per square mile per year; <, less than; --, not calculated or not available]

Constituent	Median concentration (mg/kg)	Mean annual net load <sup>1</sup> (kg/yr)	Mean annual net yield <sup>2</sup>		Bioaccumulation index <sup>3</sup>
			[(kg/ha)/yr]	[(lb/mi <sup>2</sup> )/yr]	
<b>Nutrients</b>					
Total ammonia plus organic nitrogen	800	2,880,000	1.15	657	--
Total phosphorus	419	1,510,000	.61	348	--
<b>Carbon</b>					
Carbon (inorganic)	2,000	7,200,000	2.89	1,650	--
Carbon (organic)	17,400	62,600,000	25.1	14,300	--
Carbon (total)	20,000	72,000,000	28.9	16,500	--
<b>Metals and trace elements</b>					
Aluminum	86,000	310,000,000	124	71,000	--
Antimony	1.2	4,320	.002	1.14	moderate
Arsenic	14	50,400	.02	11.4	moderate
Barium	660	2,380,000	.95	542	low
Beryllium	2.6	9,360	.004	2.28	low
Bismuth	<1.0	--	--	--	low
Cadmium	.44	1,580	.0006	.34	moderate
Calcium	14,000	50,400,000	20.2	11,500	--
Cerium	80	288,000	.12	68.5	--
Chromium	81	292,000	.12	68.5	moderate
Cobalt	12	43,200	.02	11.4	high
Copper	34	122,000	.05	28.6	high
Europium	1.5	5,400	.002	1.14	--
Gallium	20	72,000	.03	17.1	low
Gold	<1.0	--	--	--	low
Holmium	1.1	3,960	.002	1.14	--
Iron	49,000	176,000,000	70.6	40,300	low
Lanthanum	44	158,000	.06	34.3	--
Lead	25	90,000	.04	22.8	moderate
Lithium	52	187,000	.07	40.0	slight
Magnesium	12,000	43,200,000	17.3	9,880	--
Manganese	710	2,560,000	1.03	588	low
Mercury	.04	144	.00006	.034	high
Molybdenum	1.1	3,960	.002	1.14	high
Neodymium	37	133,000	.05	28.6	--
Nickel	38	137,000	.05	28.6	moderate
Niobium	17	61,200	.02	11.4	--
Potassium	21,000	75,600,000	30.3	17,300	--
Scandium	13	46,800	.02	11.4	--
Selenium	.81	2,920	.001	.571	high
Silver	.73	2,630	.001	.571	moderate
Sodium	3,200	11,500,000	4.61	2,630	--

**Table 10.** Estimated mean annual net loads and yields of constituents deposited in bottom sediment of Tuttle Creek Lake, northeast Kansas—Continued

Constituent	Median concentration (mg/kg)	Mean annual net load <sup>1</sup> (kg/yr)	Mean annual net yield <sup>2</sup>		Bioaccumulation index <sup>3</sup>
			[(kg/ha)/yr]	[(lb/mi <sup>2</sup> )/yr]	
<b>Metals and trace elements—Continued</b>					
Strontium	140	504,000	0.20	114	moderate
Sulfur	< 500	--	--	--	--
Tantalum	1.6	5,760	.002	1.14	--
Thallium	< .1	--	--	--	low
Thorium	15	54,000	.02	11.4	--
Tin	3.5	12,600	.005	2.86	--
Titanium	3,600	13,000,000	5.21	2,970	moderate
Uranium	3.1	11,200	.004	2.28	--
Vanadium	140	504,000	.20	114	low
Ytterbium	2.7	9,720	.004	2.28	--
Yttrium	28	101,000	.04	22.8	--
Zinc	120	432,000	.17	97.1	high
<b>Organochlorine compounds</b>					
Aldrin	< 0.0002	--	--	--	--
Chlordane	< .003	--	--	--	--
DDD	< .0005	--	--	--	--
DDE	.0004	1.44	.0000006	.0003	--
DDT	< .0005	--	--	--	--
Dieldrin	< .0002	--	--	--	--
Endosulfan	< .0002	--	--	--	--
Endrin	< .0002	--	--	--	--
Gross polychlori- nated biphenyls (PCBs)	< .005	--	--	--	--
Heptachlor	< .0002	--	--	--	--
Heptachlor epoxide	< .0002	--	--	--	--
Lindane	< .0002	--	--	--	--
Methoxychlor	< .0025	--	--	--	--
Mirex	< .0002	--	--	--	--
Toxaphene	< .05	--	--	--	--

<sup>1</sup>Mean annual net load was computed as median concentration multiplied by the mean annual sediment load deposited in Tuttle Creek Lake (3,600 million kilograms) divided by 1 million.

<sup>2</sup>Mean annual net yield in kilograms per hectare per year was computed as the mean annual net load divided by the area of the Tuttle Creek Lake Basin (2,493,652 hectares). Mean annual net yield in pounds per square mile per year was computed as the mean annual net yield in kilograms per hectare per year multiplied by 571.

<sup>3</sup>Bioaccumulation index information for metals and trace elements from Pais and Jones (1997).