

Table 7. Statistical summary of selected constituent concentrations in bottom-sediment samples from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998, and comparison to sediment-quality guidelines

[mg/kg, milligrams per kilogram; --, not determined; <, less than highest detection limit for samples from that reservoir]

Constituent	Concentrations in bottom-sediment cores (mg/kg)						Sediment-quality guidelines ¹	
	Kirwin Reservoir		Webster Reservoir		Waconda Lake		TEL	PEL
	Range	Median	Range	Median	Range	Median		
Trace metals								
Aluminum	13,500–54,300	33,400	18,300–54,200	31,300	15,000–50,900	26,100	--	--
Arsenic	4.6–10	8.0	8.0–15.1	11	5.4–13.1	10.2	7.24	41.6
Barium	216–362	303	224–333	285	155–372	276	--	--
Beryllium	<2.7	--	<3.1–4.8	--	<5.1	--	--	--
Boron	<21–37	27.5	<24–37	18	<41–47	--	--	--
Cadmium	<2.7–3.7	--	<3.0	--	<5.1	--	.68	4.21
Chromium	9–33	16	<6–26	13	<10–17	10	52.3	160
Copper	17–28	22	19–29	25	7–27	22	18.7	108
Iron	14,200–33,900	25,000	16,900–33,100	24,900	9,200–27,100	23,700	--	--
Lead	14–26	21	16–32	26	<14–25	18	30.2	112
Magnesium	4,370–10,500	7,460	5,740–10,900	7,890	2,260–7,260	5,910	--	--
Manganese	371–573	496	341–788	541	235–1,110	770	--	--
Mercury	<0.2	--	<0.2	--	<0.2	--	.13	.696
Nickel	<11–24	12	<12–30	14	<21	--	15.9	42.8
Selenium	<0.5–2.2	1.0	0.5–2.7	1.4	<0.6–3.4	1.1	--	--
Strontium	74–219	149	109–263	177	68–336	154	--	--
Vanadium	23–114	82	47–125	64	22–73	58	--	--
Zinc	59–118	93.5	76–119	98	35–137	102	124	271
Nutrients								
Nitrogen	1,200–1,980	1,700	30.0–1,910	1,640	704–3,210	2,050	--	--
Phosphorus	422–795	616	251–692	562	281–904	652	--	--
Organic carbon								
Total organic carbon	8,310–13,600	11,600	10,600–16,200	12,300	3,440–19,900	16,700	--	--

¹Sediment-quality guidelines from U.S. Environmental Protection Agency (1998):

TEL—threshold-effects level;

PEL—probable-effects level.