

Table 11. Results of analyses of sediment-quality constituents in bottom-sediment cores collected from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998

[mg/kg, milligrams per kilogram; <, less than; --, not determined]

Core-sample identification	Sample interval as measured from bottom to top of core (feet)	Aluminum (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Boron (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)
Kirwin Reservoir bottom-sediment cores (fig. 2A)										
KIR 1.3	7.54–8.00	33,200	7.3	294	<2.7	26	<2.7	13	20	23,700
	7.08–7.54	32,200	5.7	279	<2.2	25	<2.2	13	21	23,500
	5.83–7.08	34,100	8.4	284	<1.9	27	<1.9	15	21	24,000
	5.33–5.83	33,500	7.8	292	<2.5	28	<2.4	13	21	24,100
	4.67–5.33	36,900	8.1	283	<2.1	30	<2.1	16	21	24,700
	4.21–4.67	50,300	8.5	335	<2.6	37	<2.6	22	27	31,400
	3.92–4.21	29,700	7.5	305	<2.2	18	<2.2	10	25	25,700
	3.33–3.92	31,700	5.4	313	<2.4	<19	<2.4	12	25	27,300
	2.71–3.33	32,600	5.8	307	2.0	19	<1.9	13	25	27,000
	2.12–2.71	31,400	6.9	301	<2.6	<21	<2.6	15	25	26,800
1.50–2.12	31,800	8.3	327	<2.4	<19	<2.4	13	27	27,800	
0–1.50	13,500	4.6	255	<2.3	<18	<2.3	9	19	14,200	
KIR 2.2	3.75–4.25	35,300	7.4	283	<2.5	21	<2.5	17	20	21,600
	3.54–3.75	18,500	5.1	216	<1.9	<15	<1.9	13	17	14,900
	2.67–3.54	43,400	8.1	326	<2.7	28	<2.7	33	22	24,100
	2.37–2.67	50,900	7.9	333	<2.2	31	<2.2	20	22	22,800
	2.00–2.37	38,600	8.2	294	<2.3	27	<2.3	18	22	25,300
	1.83–2.00	35,800	8.7	287	<2.0	26	3.7	16	21	23,800
	1.46–1.83	39,600	10	311	<2.3	27	2.7	20	27	27,900
	1.21–1.46	47,700	8.7	336	2.4	35	<2.1	25	28	31,600
	1.00–1.21	43,000	9.4	310	<2.3	32	<2.3	21	24	28,400
	0.67–1.00	54,300	9.3	337	2.4	36	2.1	27	28	33,700
	0.33–0.67	49,900	8.2	362	2.5	33	<1.8	25	28	33,900
0–0.33	34,900	5.4	264	1.8	24	<1.6	17	20	24,600	
Webster Reservoir bottom-sediment cores (fig. 2B)										
WEB 1.2	6.45–6.66	18,300	10.3	224	<2.6	<20	<2.6	<5	20	16,900
	6.08–6.45	20,900	15.1	226	<2.5	<20	<2.5	6	20	18,300
	5.08–6.08	28,900	12.3	245	3.9	20	<2.4	8	22	22,500
	4.87–5.08	41,100	11.3	274	4.2	27	<2.2	18	25	27,000
	4.58–4.87	44,500	12.4	317	4.7	31	<2.5	17	25	27,600
	4.00–4.58	49,800	11.6	309	4.8	35	<2.4	22	29	30,900
	3.41–4.00	48,100	11.6	324	4.6	31	<2.2	21	27	31,900
	2.75–3.41	50,600	11.7	322	4.8	33	<2.5	22	27	32,100
	2.08–2.75	54,200	10.6	333	4.4	37	<2.0	26	28	33,100
	1.54–2.08	45,800	9.5	301	4.1	28	<1.9	21	27	30,500
	1.08–1.54	46,200	9.4	297	4.1	27	2.1	20	27	30,800
0–1.08	34,200	8.0	244	2.9	18	<1.5	13	19	20,600	
WEB 2.4	6.20–7.33	23,300	10	235	<3.1	<24	<3.0	<6	21	19,200
	5.58–6.20	20,700	12.9	226	<2.5	<20	<2.5	<5	20	18,400

Table 11. Results of analyses of sediment-quality constituents in bottom-sediment cores collected from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998—Continued

Core-sample identification	Sample interval as measured from bottom to top of core (feet)	Aluminum (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Boron (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)
Webster Reservoir bottom-sediment cores (fig. 2B)—Continued										
WEB 2.4	5.33–5.58	24,800	12.2	258	<2.6	<21	<2.6	5	22	21,300
	4.83–5.33	27,000	11.8	259	<2.6	<21	<2.6	7	21	21,900
	4.58–4.83	31,100	10.9	272	<2.3	<19	<2.3	13	26	24,500
	4.29–4.58	25,100	12.2	281	<2.2	<18	<2.3	7	25	21,700
	3.41–4.29	34,900	9.4	281	<2.0	23	<2.0	14	28	26,400
	2.91–3.41	26,600	11.2	295	<2.5	<20	<2.5	8	24	23,500
	1.83–2.91	30,000	8.3	302	<2.1	18	<2.1	13	26	25,200
	1.33–1.83	31,400	10.8	304	<2.3	21	<2.3	13	26	26,000
	0.83–1.33	28,600	8.2	299	<2.1	<17	<2.1	11	26	24,400
	0–0.83	31,800	9.0	289	<2.0	17	<1.9	13	25	25,900
WEB 3.3	2.46–2.75	--	9.2	--	--	--	--	--	--	--
	2.00–2.46	--	10.2	--	--	--	--	--	--	--
	1.62–2.00	--	9.7	--	--	--	--	--	--	--
	1.00–1.62	--	2.4	--	--	--	--	--	--	--
	0–1.00	--	.8	--	--	--	--	--	--	--
WEB 4.1	2.3–2.9	--	2.2	--	--	--	--	--	--	--
	1.6–2.3	--	1.5	--	--	--	--	--	--	--
	0.9–1.6	--	.9	--	--	--	--	--	--	--
	0.2–0.9	--	1.1	--	--	--	--	--	--	--
	0–0.2	--	2.9	--	--	--	--	--	--	--
WEB 5.2	3.9–4.4	--	8.2	--	--	--	--	--	--	--
	3.0–3.9	--	9.9	--	--	--	--	--	--	--
	1.9–3.0	--	10.2	--	--	--	--	--	--	--
	0.9–1.9	--	10.2	--	--	--	--	--	--	--
	0–0.9	--	8.8	--	--	--	--	--	--	--
WEB 6.1	2.2–2.8	--	1.9	--	--	--	--	--	--	--
	1.6–2.2	--	1.3	--	--	--	--	--	--	--
	1.1–1.6	--	1.4	--	--	--	--	--	--	--
	0.6–1.1	--	2.6	--	--	--	--	--	--	--
	0–0.6	--	1.9	--	--	--	--	--	--	--
WEB 7.2	1.6–1.8	--	7.5	--	--	--	--	--	--	--
	1.5–1.6	--	9.3	--	--	--	--	--	--	--
	1.0–1.5	--	9.2	--	--	--	--	--	--	--
	0.6–1.0	--	8.5	--	--	--	--	--	--	--
	0–0.6	--	2.7	--	--	--	--	--	--	--
WEB 10.1	0–1.6	--	4.1	--	--	--	--	--	--	--
WEB 11.3	0–1.4	--	3.0	--	--	--	--	--	--	--

Table 11. Results of analyses of sediment-quality constituents in bottom-sediment cores collected from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998—Continued

Core-sample identification	Sample interval as measured from bottom to top of core (feet)	Aluminum (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Boron (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)
Waconda Lake bottom-sediment cores (fig. 2C)										
WAC 1.3	6.17–6.75	29,300	12.1	276	<3.5	<28	<3.5	<7	23	25,100
	5.75–6.17	27,800	12.4	296	<3.7	47	<3.7	10	22	23,800
	5.04–5.75	25,800	12.0	272	<3.3	<27	<3.3	<7	22	23,700
	4.67–5.04	30,300	13.1	280	<3.8	<30	<3.7	15	25	26,500
	4.33–4.67	25,500	12.5	279	<2.8	<22	<2.8	10	25	24,100
	3.83–4.33	27,500	11.0	275	<3.2	<26	<3.2	13	25	24,900
	3.25–3.83	26,400	9.7	270	<3.0	<24	<3.0	14	24	24,000
	2.62–3.25	25,700	9.2	271	<2.6	<21	<2.6	13	23	23,000
	1.83–2.62	31,700	10.1	297	<2.9	<23	<2.9	17	25	27,100
	1.37–1.83	24,400	9.1	276	<2.5	<20	<2.4	10	23	22,300
	0.92–1.37	25,200	9.4	268	<2.5	20	<2.4	11	23	23,000
0–0.92	24,900	10.4	272	<3.0	<24	<3.0	11	24	22,800	
WAC 2.1	6.67–7.25	23,000	9.3	247	<3.0	<24	<3.0	7	15	21,400
	6.25–6.67	26,700	10.6	251	<3.0	<25	<3.0	9	17	23,000
	5.54–6.25	22,100	11.3	245	<3.5	<28	<3.5	<7	17	21,200
	5.17–5.54	24,600	12.5	268	<3.7	<29	<3.7	9	18	23,200
	4.83–5.17	25,700	12.5	266	<2.8	<23	<2.8	9	26	23,700
	4.33–4.83	26,300	12.3	320	<3.1	27	<3.1	10	25	24,400
	3.75–4.33	28,600	10.4	305	<2.7	24	<2.8	11	24	25,000
	3.12–3.75	27,100	10.3	305	<2.7	28	<2.7	11	23	24,000
	2.33–3.12	30,300	10.7	288	<2.6	22	<2.6	12	24	25,700
	1.87–2.33	32,500	11.9	306	<2.7	<22	<2.7	13	25	26,500
	1.42–1.87	25,400	10.1	267	<2.3	<18	<2.3	9	22	22,900
0–1.42	25,400	10.4	265	<3.0	<24	<3.0	11	25	23,500	
WAC 3.1	6.83–7.75	50,900	11.1	372	<5.1	<41	<5.1	<10	27	24,400
	6.50–6.83	26,100	8.4	286	<3.0	26	<3.0	6	15	22,800
	5.96–6.50	26,100	9.0	288	<3.6	<29	<3.6	8	19	24,400
	5.33–5.96	26,800	8.2	300	<3.5	30	<3.5	9	18	24,300
	4.75–5.33	23,300	7.9	261	<3.5	<28	<3.5	9	18	22,000
	4.17–4.75	23,300	8.1	327	<4.0	37	<4.0	11	21	22,400
	3.54–4.17	29,600	8.4	335	<3.1	34	<3.1	13	16	25,200
	2.67–3.54	28,700	7.4	339	<3.8	42	<3.8	11	19	24,100
	1.67–2.67	23,200	8.8	305	<2.6	26	<2.6	7	22	21,800
	1.21–1.67	18,700	7.4	255	<1.9	19	<1.9	6	19	18,400
	0.58–1.21	30,800	5.6	264	<1.7	16	<1.7	15	22	25,400
0–0.58	15,000	5.4	155	<1.4	<11	<1.4	4	7	9,200	

Table 11. Results of analyses of sediment-quality constituents in bottom-sediment cores collected from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998—Continued

Core-sample identification	Lead (mg/kg)	Magnesium (mg/kg)	Manganese (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Strontium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Total nitrogen (mg/kg)	Total phosphorus (mg/kg)	Total organic carbon (mg/kg)
Kirwin Reservoir bottom-sediment cores (fig. 2A)												
KIR 1.3	20	7,130	552	<0.2	<11	2.2	191	80	83	1,740	754	13,600
	19	6,970	473	<.2	<9	2.0	179	76	83	1,450	780	10,300
	21	7,200	498	<.2	9	2.0	162	78	87	1,740	795	10,300
	19	7,090	503	<.2	<10	1.0	157	82	87	1,710	755	10,200
	14	7,280	446	<.2	9	1.1	149	85	89	1,750	716	10,900
	23	9,590	509	<.2	12	2.2	169	106	112	1,830	630	12,900
	22	7,640	463	<.2	13	1.6	141	54	92	1,860	611	12,100
	26	8,000	553	<.2	11	1.9	135	53	95	1,980	719	13,000
	23	8,080	489	<.2	13	.6	104	55	93	1,800	625	12,700
	16	7,810	490	<.2	15	1.0	99	50	95	1,780	546	13,000
	16	8,250	492	<.2	12	1.0	98	53	96	1,780	621	12,500
21	5,060	492	<.2	10	<.5	74	23	59	1,720	603	12,100	
KIR 2.2	16	6,490	518	<.2	12	1.9	188	87	82	1,710	688	11,500
	16	4,370	496	<.2	<8	.5	149	42	76	1,360	631	9,290
	25	6,940	573	<.2	15	1.6	170	106	105	1,600	644	10,400
	20	6,590	567	<.2	19	.9	151	114	113	1,510	564	11,000
	17	7,550	471	<.2	<9	.6	146	88	94	1,360	589	10,100
	19	7,070	495	<.2	11	1.3	161	86	90	1,550	598	10,800
	25	8,050	553	<.2	12	1.6	219	96	108	1,690	598	11,600
	22	9,760	542	<.2	24	.6	168	99	114	1,350	502	12,200
	23	8,650	490	<.2	14	1.0	128	92	104	1,560	533	11,800
	24	10,300	538	<.2	14	1.2	91	103	118	1,380	422	12,000
	24	10,500	423	<.2	14	1.0	108	82	110	1,420	458	11,500
22	7,380	371	<.2	12	<.3	94	63	79	1,200	501	8,310	
Webster Reservoir bottom-sediment cores (fig. 2B)												
WEB 1.2	24	5,740	636	<.2	<10	2.5	237	47	76	1,690	682	12,300
	25	6,100	555	<.2	<10	1.5	202	48	79	1,400	639	10,600
	27	7,210	539	<.2	<10	1.6	192	70	92	1,190	640	11,500
	26	8,760	536	<.2	16	1.1	172	95	104	1,850	644	11,900
	26	9,100	682	<.2	13	1.9	218	112	104	1,910	692	12,300
	28	10,200	543	<.2	19	1.1	187	125	116	1,730	556	12,100
	17	10,500	516	<.2	17	1.1	143	97	116	1,690	582	13,100
	28	10,300	511	<.2	19	1.3	153	114	115	1,780	671	12,500
	16	10,900	495	<.2	30	1.3	152	119	119	1,460	557	12,900
	16	9,600	509	<.2	17	.7	130	96	110	1,400	487	12,000
	29	9,900	432	<.2	16	1.6	146	95	111	1,700	668	12,300
20	6,280	341	<.2	11	.5	109	62	79	1,740	486	11,800	
WEB 2.4	21	6,320	788	<.2	<12	2.5	263	59	88	521	463	16,200
	22	6,180	642	<.2	<10	2.7	248	51	80	30.0	251	13,400
	25	7,160	692	<.2	<10	1.7	224	57	90	1,710	692	12,300
	23	7,110	640	<.2	<10	1.6	209	60	91	1,720	633	13,400
	27	7,850	587	<.2	13	2.0	182	65	101	1,720	536	11,100
	31	6,820	626	<.2	14	2.0	207	60	88	1,540	556	12,100
	32	8,500	551	<.2	19	1.1	191	83	106	1,180	606	12,200
	26	7,110	543	<.2	<10	1.4	152	58	90	940	495	13,700

Table 11. Results of analyses of sediment-quality constituents in bottom-sediment cores collected from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998—Continued

Core-sample identification	Lead (mg/kg)	Magnesium (mg/kg)	Manganese (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Strontium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Total nitrogen (mg/kg)	Total phosphorus (mg/kg)	Total organic carbon (mg/kg)
Webster Reservoir bottom-sediment cores (fig. 2B)—Continued												
WEB 2.4	29	8,190	519	<0.2	15	0.9	124	53	98	1,020	467	13,600
	28	7,930	509	<.2	18	1.2	140	65	101	1,710	567	14,000
	28	7,660	505	<.2	17	1.1	139	53	97	1,450	520	12,800
	22	8,040	519	<.2	16	.6	133	57	98	1,600	463	13,100
WEB 3.3	--	--	--	--	--	4.0	278.5	--	--	--	98.9	--
	--	--	--	--	--	2.3	172.6	--	--	--	352	--
	--	--	--	--	--	2.0	134.8	--	--	--	403	--
	--	--	--	--	--	.6	67.6	--	--	--	219	--
	--	--	--	--	--	.4	18.9	--	--	--	69.4	--
WEB 4.1	--	--	--	--	--	.7	74.8	--	--	--	159	--
	--	--	--	--	--	.2	45.1	--	--	--	67.5	--
	--	--	--	--	--	<.2	41.1	--	--	--	54.8	--
	--	--	--	--	--	.2	57.8	--	--	--	57.9	--
	--	--	--	--	--	.8	198.9	--	--	--	91.1	--
WEB 5.2	--	--	--	--	--	2.1	185.9	--	--	--	314	--
	--	--	--	--	--	2.1	153.5	--	--	--	116	--
	--	--	--	--	--	2.3	155.0	--	--	--	58.7	--
	--	--	--	--	--	1.5	131.6	--	--	--	63.3	--
	--	--	--	--	--	1.3	118.5	--	--	--	118	--
WEB 6.1	--	--	--	--	--	<.2	114.6	--	--	--	97.8	--
	--	--	--	--	--	<.2	111.0	--	--	--	107	--
	--	--	--	--	--	<.2	120.2	--	--	--	609	--
	--	--	--	--	--	<.2	148.3	--	--	--	166	--
	--	--	--	--	--	<.2	131.9	--	--	--	246	--
WEB 7.2	--	--	--	--	--	.3	190.7	--	--	--	112	--
	--	--	--	--	--	3.9	374.0	--	--	--	351	--
	--	--	--	--	--	.7	265.1	--	--	--	384	--
	--	--	--	--	--	<.3	208.0	--	--	--	337	--
	--	--	--	--	--	<.3	171.5	--	--	--	<50	--
WEB 10.1	--	--	--	--	--	.4	214.8	--	--	--	311	--
WEB 11.3	--	--	--	--	--	0.3	108.8	--	--	--	370	--
Waconda Lake bottom-sediment cores (fig. 2C)												
WAC 1.3	<14	6,390	789	<.2	<14	1.7	197	66	119	2,180	719	17,300
	17	6,220	736	<.2	<15	3.0	199	65	137	2,520	771	18,100
	18	5,900	767	<.2	<13	1.1	216	60	103	2,340	744	16,700
	19	6,650	841	<.2	<15	.9	157	67	104	2,070	701	16,400
	20	5,980	987	<.2	13	.6	168	58	94	1,580	568	16,100
	19	6,270	863	<.2	<13	<.6	164	64	133	1,700	558	16,000
	16	5,970	749	<.2	<12	<.6	134	59	95	2,040	641	17,400
	17	5,800	745	<.2	11	.8	122	57	101	2,050	690	18,200

Table 11. Results of analyses of sediment-quality constituents in bottom-sediment cores collected from Kirwin Reservoir, Webster Reservoir, and Waconda Lake, May 1998—Continued

Core-sample identification	Lead (mg/kg)	Magnesium (mg/kg)	Manganese (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Strontium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Total nitrogen (mg/kg)	Total phosphorus (mg/kg)	Total organic carbon (mg/kg)
Waconda Lake bottom-sediment cores (fig. 2C)—Continued												
WAC 1.3	19	6,710	807	<0.2	14	0.8	139	69	110	2,210	658	19,600
	17	5,530	812	<.2	10	.9	145	57	112	1,720	618	18,000
	18	5,580	767	<.2	13	.6	147	57	125	2,370	785	18,400
	17	5,440	639	<.2	<12	.8	68	62	91	2,180	710	16,500
WAC 2.1	13	5,660	704	<.2	<12	2.3	195	54	76	2,280	451	16,600
	15	5,860	670	<.2	<12	2.0	192	62	82	2,020	281	14,900
	<14	5,200	861	<.2	<14	1.2	186	49	84	3,210	843	15,900
	22	5,810	777	<.2	<15	1.2	166	54	107	2,160	646	14,800
	16	5,840	903	<.2	12	1.2	172	57	91	2,380	740	17,600
	24	6,150	905	<.2	14	1.1	169	58	109	1,780	589	16,700
	18	6,260	774	<.2	15	.8	163	62	102	1,190	506	19,100
	18	6,010	745	<.2	16	.9	139	58	101	1,540	621	17,800
	21	6,430	791	<.2	18	.9	151	64	100	1,460	475	17,600
	19	6,660	871	<.2	15	1.3	169	73	124	1,880	589	17,200
	19	5,500	766	<.2	15	1.4	141	58	98	2,050	600	19,600
17	5,620	731	<.2	15	.6	134	56	128	1,890	680	19,400	
WAC 3.1	24	7,260	1,110	<.2	<21	3.1	336	64	108	2,630	885	16,100
	15	5,780	678	<.2	<12	3.4	93	61	92	2,550	904	13,700
	15	5,920	786	<.2	<14	2.9	150	59	96	2,220	812	15,700
	16	6,100	874	<.2	<14	3.2	162	60	98	2,180	771	14,800
	19	5,570	793	<.2	<14	1.6	84	54	80	2,100	726	14,800
	19	5,590	741	<.2	<16	1.4	99	52	111	2,150	673	16,100
	17	6,270	767	<.2	<12	1.9	142	64	117	1,610	483	16,000
	20	6,010	786	<.2	<15	1.1	171	66	131	1,760	544	17,900
	25	5,260	744	<.2	<10	2.3	157	52	125	1,800	565	19,900
	19	4,520	556	<.2	<8	.7	119	45	85	1,910	661	17,300
	16	6,680	372	<.2	13	<.4	102	51	88	1,620	533	10,300
7	2,260	235	<.2	6	.3	93	22	35	704	526	3,440	