

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS

Middle Arkansas Basin
 Little Arkansas Subbasin

LOCATION.--Lat 38°01'43", long 97°32'25" referenced to North American Datum of 1927, in SW ¼ SE ¼ SE ¼ sec.21, T.23 S., R.2 W., Harvey County, KS, Hydrologic Unit 11030012, on left bank at downstream side of State Highway 50, 3.4 mi upstream of Black Kettle Creek, 2 mi north and 1.3 mi west of Halstead, and at mile 41.4.

DRAINAGE AREA.--759 mi² of which 74 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,370.55 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec 13	1500	2,940	17.36
Feb 19	0400	1,510	13.48
Mar 4	1500	2,610	16.56
Apr 12	0900	2,250	15.63
May 28	0200	2,610	16.57
Jun 28	1600	1,440	13.25
Sep 15	0100	*3,500	*18.63

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8.1	7.7	13	65	37	97	40	65	145	216	23	15
2	8.2	8.1	13	57	41	130	39	59	105	131	22	13
3	8.3	9.2	13	50	41	956	41	e50	84	86	22	12
4	8.3	9.2	13	46	39	2,430	40	e43	72	64	19	11
5	8.7	8.9	13	45	38	1,450	39	e38	65	53	16	13
6	8.8	8.7	14	54	33	439	37	40	129	41	16	15
7	8.3	9.2	14	77	41	226	36	48	533	34	19	16
8	8.5	9.3	13	187	43	155	46	120	385	30	24	16
9	8.9	9.8	13	347	46	120	106	653	166	28	47	18
10	53	11	13	319	42	105	384	700	94	28	89	20
11	69	12	294	254	38	91	1,180	696	74	28	615	18
12	34	12	1,740	184	48	89	2,030	290	63	32	537	359
13	21	13	2,830	129	44	92	789	146	55	32	196	2,010
14	16	12	1,950	97	46	86	288	100	45	29	99	3,330
15	26	13	665	76	39	83	164	80	40	27	65	2,810
16	57	14	405	67	39	76	122	69	70	24	56	732
17	54	11	373	49	129	76	101	62	64	22	48	293
18	108	11	270	e45	831	74	88	58	207	51	38	164
19	382	11	146	e42	1,360	69	91	55	307	141	27	99
20	273	11	106	e38	558	64	137	52	203	101	22	73
21	92	11	91	e36	224	61	108	48	136	79	19	61
22	46	11	123	e33	118	64	84	45	81	46	18	49
23	24	11	208	e31	104	55	80	42	62	29	16	39
24	16	11	306	e30	80	51	77	73	49	23	16	33
25	12	12	223	33	96	47	74	164	39	19	17	30
26	11	12	132	39	144	43	181	464	32	21	18	27
27	10	12	103	34	218	42	130	2,200	480	25	18	24
28	9.4	12	98	40	160	41	89	2,330	1,380	20	29	23
29	8.9	12	93	40	118	41	73	1,330	992	21	25	23
30	8.8	12	88	35	---	42	67	482	466	29	21	22
31	8.1	---	77	43	---	43	---	232	---	27	17	---
Mean	45.7	10.9	337	84.6	165	240	225	349	221	49.6	71.4	346
Max	382	14	2,830	347	1,360	2,430	2,030	2,330	1,380	216	615	3,330
Min	8.1	7.7	13	30	33	41	36	38	32	19	16	11
Ac-ft	2,810	649	20,730	5,200	9,510	14,750	13,410	21,490	13,140	3,050	4,390	20,560

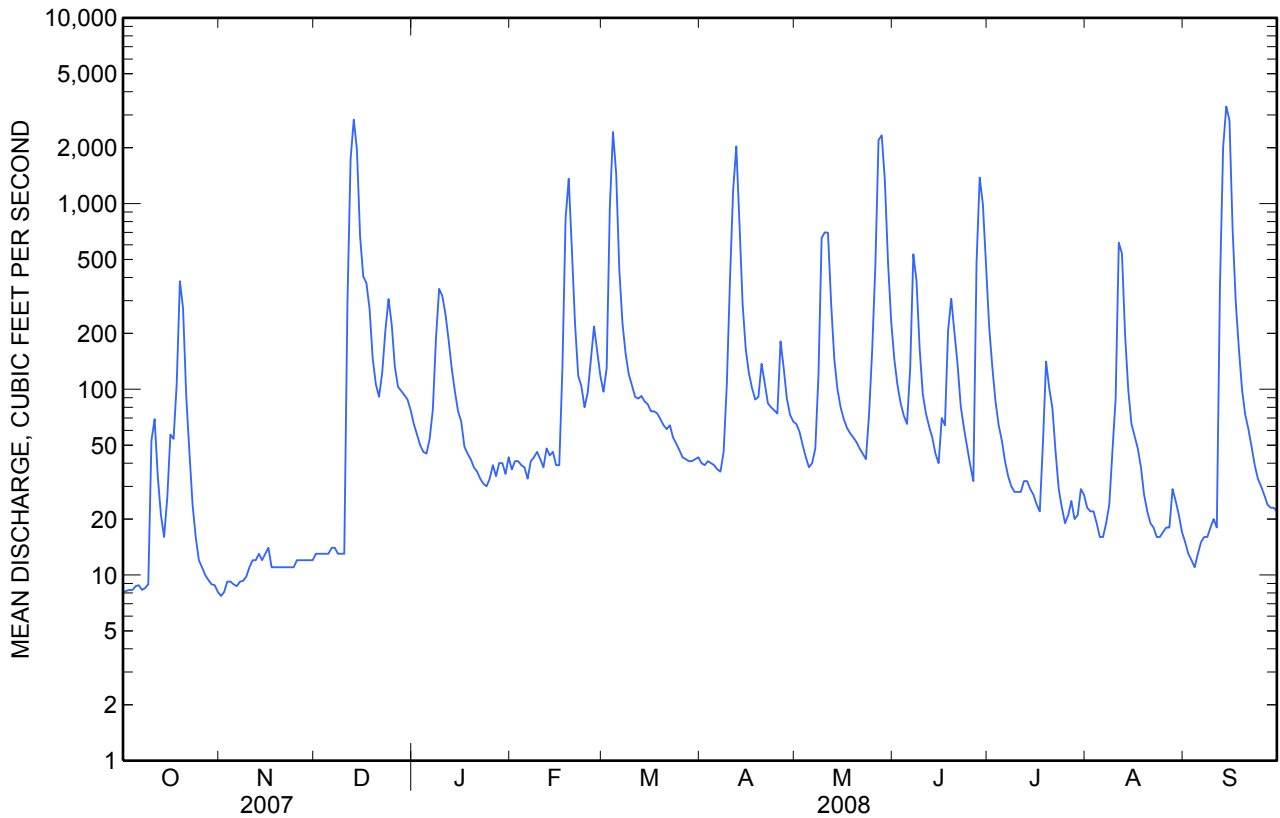
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	170	179	66.0	44.8	154	399	235	410	398	233	150	118
Max	795	1,818	337	122	636	1,551	815	2,430	1,030	876	620	360
(WY)	(2004)	(1999)	(2008)	(1999)	(2001)	(2000)	(1999)	(2007)	(2001)	(1999)	(1999)	(1997)
Min	1.53	2.94	4.25	6.57	11.2	11.9	13.5	24.3	41.1	7.75	3.87	2.05
(WY)	(2007)	(2007)	(2007)	(2007)	(2006)	(2006)	(2006)	(2006)	(1998)	(2003)	(2006)	(2006)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1996 - 2008	
Annual mean	387		179		213	
Highest annual mean					528	1999
Lowest annual mean					15.5	2006
Highest daily mean	10,800	May 25	3,330	Sep 14	10,800	May 25, 2007
Lowest daily mean	5.1	Jan 1	7.7	Nov 1	0.17	Jul 26, 2006
Annual seven-day minimum	5.2	Jan 6	8.4	Oct 1	1.0	Oct 5, 2006
Maximum peak flow			3,500	Sep 15	11,000	May 25, 2007
Maximum peak stage			18.63	Sep 15	27.22	May 25, 2007
Instantaneous low flow			7.3	Nov 1	0.13	Jul 26, 2006
Annual runoff (ac-ft)	280,100		129,700		154,500	
10 percent exceeds	722		383		359	
50 percent exceeds	28		48		26	
90 percent exceeds	8.7		12		8.7	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1998 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1998 to current year.

pH: May 1998 to current year.

WATER TEMPERATURE: May 1998 to current year.

DISSOLVED OXYGEN (Lumin): February 2007 to current year.

TURBIDITY (YSI 6136 sensor): July 2004 to September 2004, December 2006 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records good. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards and were made using Yellow Springs Instrument (YSI) 6026 and 6136 sensors.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,290 microsiemens/cm, May 11, 2002; minimum, 57 microsiemens/cm, Oct. 9, 2003.

pH: Maximum, 9.6 standard units, July 27, 2006; minimum, 6.1 standard units, Oct. 1, 2006.

WATER TEMPERATURE: Maximum, 35.2°C, July 24, 2006; minimum, 0.0°C, Jan. 3, 1999.

DISSOLVED OXYGEN (Lumin): Maximum, 19.1 mg/L, June 24, 2007; minimum, 1.7 mg/L, June 28, 2008.

TURBIDITY (YSI 6136 sensor): Maximum, 1,300 FNU, May 26, 2005; minimum, 3.8 FNU, Feb. 6, 2007.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,720 microsiemens/cm, Apr. 10; minimum, 152 microsiemens/cm, Dec. 13.

pH: Maximum, 8.8 standard units, May 2, July 26, 27; minimum, 6.7 standard units, June 27, 28.

WATER TEMPERATURE: Maximum, 30.9°C, Aug. 5; minimum, 0.0°C, on many days.

DISSOLVED OXYGEN (Lumin): Maximum, 16.1 mg/L, May 3; minimum, 1.7 mg/L, June 28.

TURBIDITY (YSI 6136 sensor): Maximum, 1,080 FNU, Oct. 18; minimum, 3.9 FNU, Feb. 12.

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**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	923	837	892	551	525	538	1,120	1,080	1,110	1,080	982	1,030
2	926	860	905	571	551	561	1,160	1,080	1,120	1,100	1,050	1,080
3	969	899	949	593	571	583	1,180	1,160	1,180	1,140	1,060	1,100
4	985	949	967	610	593	603	1,200	1,180	1,190	1,130	1,090	1,110
5	976	954	969	625	610	617	1,210	1,200	1,200	1,190	1,130	1,170
6	973	932	958	643	625	635	1,210	1,200	1,210	1,230	1,140	1,200
7	936	890	918	658	643	651	1,260	1,210	1,230	1,210	1,160	1,190
8	896	849	868	676	658	668	1,290	1,260	1,270	---	877	---
9	852	839	845	691	676	683	1,300	1,290	1,300	1,290	635	872
10	906	846	863	719	691	---	1,330	1,270	1,290	646	504	545
11	1,160	636	992	---	719	---	1,350	233	1,020	538	497	521
12	636	432	479	---	---	---	481	154	251	540	498	511
13	516	440	484	828	---	---	312	152	213	616	540	575
14	521	484	510	849	828	839	240	212	228	635	616	627
15	491	466	482	861	849	855	327	240	279	665	635	651
16	654	491	553	880	861	868	319	286	299	699	665	688
17	1,190	505	722	902	880	891	389	318	363	754	699	735
18	1,500	304	862	905	897	901	463	389	428	808	754	785
19	790	246	372	918	898	904	556	420	492	896	767	832
20	406	296	359	947	918	932	616	460	557	943	896	924
21	424	356	391	970	947	959	660	616	635	1,070	943	1,010
22	361	346	355	986	970	978	786	660	712	1,160	1,070	1,110
23	360	356	357	1,010	986	992	1,030	532	673	1,190	1,160	1,180
24	389	360	375	1,000	990	994	895	448	642	1,270	1,180	1,220
25	409	389	401	1,050	1,000	1,020	632	393	533	1,320	1,260	1,290
26	423	409	417	1,070	1,050	1,060	629	514	608	1,350	1,260	1,310
27	440	423	430	1,090	1,070	1,080	665	600	635	1,390	1,350	1,380
28	465	440	451	1,110	1,090	1,100	705	631	654	1,400	1,380	1,390
29	485	465	472	1,130	1,110	1,120	849	705	740	1,450	1,400	1,420
30	506	485	495	1,120	1,110	1,120	976	849	895	1,450	1,420	1,440
31	525	506	515	---	---	---	1,030	976	1,010	1,460	1,420	1,440
Month	1,500	246	633	---	---	---	1,350	152	773	---	497	---

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**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1,500	1,420	1,450	955	924	944	1,460	1,450	1,460	1,180	1,110	1,150
2	1,540	1,440	1,470	945	434	852	1,450	1,410	1,430	1,230	1,180	1,200
3	1,550	1,490	1,520	879	234	431	1,500	1,440	1,480	1,290	1,230	1,260
4	1,510	1,470	1,480	368	249	297	1,510	1,470	1,500	1,310	1,290	1,300
5	1,470	1,460	1,460	323	285	297	1,500	1,470	1,490	1,360	1,310	1,340
6	1,460	1,390	1,420	449	323	385	1,530	1,480	1,510	1,390	1,350	1,380
7	1,410	1,360	1,390	554	449	507	1,520	1,490	1,510	1,410	1,360	1,380
8	1,420	1,320	1,370	657	554	602	1,500	1,330	1,390	1,460	1,040	1,390
9	1,460	1,320	1,400	756	657	703	1,550	1,170	1,450	1,110	605	805
10	1,520	1,340	1,470	811	756	791	1,720	884	1,200	923	491	755
11	1,520	1,440	1,500	900	811	839	938	426	524	493	443	470
12	1,480	1,340	1,430	977	900	940	474	360	389	530	493	511
13	1,390	1,330	1,350	1,040	954	989	472	410	434	690	530	619
14	1,480	1,340	1,420	981	953	968	533	449	493	809	690	755
15	1,510	1,420	1,470	1,060	967	1,010	623	533	579	906	807	859
16	1,490	1,380	1,460	1,130	1,040	1,080	702	623	664	1,010	906	957
17	1,380	928	1,150	1,150	1,110	1,130	773	702	739	1,100	1,010	1,050
18	1,150	297	539	1,210	1,140	1,180	835	773	802	1,170	1,100	1,140
19	446	311	387	1,290	1,210	1,260	949	835	889	1,240	1,170	1,200
20	464	351	418	1,320	1,290	1,310	1,250	949	1,100	---	1,240	---
21	504	431	461	1,290	1,280	1,280	1,240	915	1,030	---	---	---
22	607	504	545	1,360	1,290	1,330	1,010	941	961	1,330	1,300	1,310
23	690	607	659	1,350	1,210	1,240	1,080	848	1,020	1,350	1,320	1,340
24	702	651	664	1,290	1,220	1,260	1,100	902	1,040	1,400	1,150	1,320
25	841	702	797	1,300	1,280	1,290	1,200	1,090	1,140	1,390	699	962
26	910	722	828	1,330	1,300	1,320	1,560	1,120	1,330	919	294	562
27	1,030	735	924	1,370	1,330	1,360	1,120	866	943	310	225	257
28	1,030	862	928	1,390	1,370	1,380	927	897	915	291	219	242
29	937	875	915	1,400	1,370	1,390	1,010	920	958	429	255	327
30	---	---	---	1,430	1,400	1,420	1,110	1,010	1,070	416	336	372
31	---	---	---	1,460	1,430	1,450	---	---	---	502	416	454
Month	1,550	297	1,110	1,460	234	1,010	1,720	360	1,050	---	---	---

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	604	499	546	353	313	333	707	427	601	848	739	795
2	675	602	---	389	353	378	518	391	450	761	745	754
3	760	675	721	439	388	407	566	404	502	868	759	822
4	828	760	792	492	437	461	644	566	609	884	860	874
5	895	828	860	547	489	517	787	597	---	934	857	900
6	1,050	717	934	596	547	576	878	787	843	954	908	932
7	745	310	404	631	596	620	901	866	881	1,060	942	1,010
8	896	425	573	692	627	664	943	799	894	1,140	1,060	1,100
9	444	393	411	732	692	717	816	453	641	1,200	1,140	1,180
10	534	444	500	757	732	746	890	508	760	1,220	1,110	1,190
11	606	534	570	802	750	783	947	283	508	1,120	1,090	1,100
12	674	601	638	847	788	817	303	255	279	1,110	211	712
13	743	674	707	857	811	838	329	278	306	264	191	222
14	---	743	---	874	851	863	354	322	340	221	165	191
15	---	---	---	935	874	911	---	354	---	231	180	208
16	891	768	---	963	915	945	---	---	---	279	231	255
17	940	877	911	1,040	963	1,010	---	---	---	318	279	298
18	982	306	706	1,060	886	981	592	---	---	371	318	344
19	498	249	368	1,090	375	622	639	576	600	435	371	405
20	1,190	351	569	644	405	536	699	639	680	504	435	471
21	1,190	767	868	1,120	338	597	706	694	701	557	504	529
22	774	663	696	1,190	---	---	712	698	706	605	557	582
23	663	635	648	---	---	---	715	701	707	641	605	623
24	714	650	674	---	758	---	761	712	731	680	641	659
25	714	660	689	758	667	724	787	753	772	739	680	718
26	704	671	688	755	666	703	829	767	801	758	734	747
27	711	185	429	784	578	685	826	795	806	---	732	---
28	354	185	235	770	662	744	825	763	785	---	---	---
29	376	301	340	755	705	730	922	825	870	908	---	---
30	317	285	298	721	705	713	1,070	922	1,010	955	908	932
31	---	---	---	720	528	689	1,050	848	954	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

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PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	8.4	8.1	8.2	7.7	7.6	7.7	7.9	7.8	7.9	7.8	7.8	7.8
2	8.4	8.2	8.3	7.7	7.6	7.7	8.0	7.8	7.9	7.8	7.8	7.8
3	8.3	8.1	8.2	7.7	7.7	7.7	8.0	7.9	8.0	7.8	7.7	7.8
4	8.3	8.2	8.2	7.7	7.5	7.7	8.0	7.8	7.9	7.7	7.7	7.7
5	8.3	8.0	8.2	7.8	7.7	7.8	8.0	7.9	8.0	7.7	7.7	7.7
6	8.2	8.0	8.1	7.8	7.8	7.8	8.0	7.9	7.9	7.7	7.7	7.7
7	8.2	8.0	8.1	7.9	7.8	7.8	7.9	7.9	7.9	7.8	7.7	7.8
8	8.2	8.0	8.1	7.9	7.7	7.8	7.9	7.9	7.9	7.8	7.7	7.8
9	8.0	7.8	7.9	7.9	7.7	7.8	8.0	7.9	8.0	7.8	7.7	7.8
10	8.1	7.9	8.0	8.0	7.8	7.9	8.0	8.0	8.0	7.7	7.6	7.6
11	8.0	7.7	8.0	8.0	7.9	7.9	8.0	7.5	8.0	7.7	7.6	7.7
12	7.7	7.6	7.6	8.0	7.9	8.0	7.6	7.2	7.3	7.7	7.6	7.7
13	7.6	7.5	7.6	8.2	8.0	8.0	7.3	7.1	7.2	7.7	7.7	7.7
14	7.7	7.6	7.6	8.3	8.1	8.2	7.2	7.1	7.1	7.7	7.6	7.7
15	7.7	7.6	7.6	8.3	8.1	8.2	7.3	7.2	7.2	7.7	7.6	7.6
16	7.7	7.6	7.6	8.2	8.0	8.1	7.4	7.3	7.3	7.7	7.6	7.7
17	7.8	7.5	7.6	8.1	7.9	8.0	7.4	7.3	7.3	7.7	7.6	7.7
18	7.8	7.2	7.6	8.2	7.9	8.0	7.4	7.3	7.4	7.7	7.7	7.7
19	7.4	7.2	7.2	8.1	7.8	8.0	7.5	7.4	7.5	7.7	7.6	7.7
20	7.5	7.2	7.4	8.1	7.9	8.0	7.6	7.5	7.6	7.7	7.6	7.7
21	7.5	7.5	7.5	8.1	8.0	8.0	7.7	7.6	7.6	7.7	7.7	7.7
22	7.5	7.3	7.5	8.1	8.0	8.1	7.8	7.7	7.7	7.7	7.7	7.7
23	7.4	7.3	7.3	8.1	8.0	8.0	7.8	7.5	7.6	7.7	7.7	7.7
24	---	7.3	---	8.1	8.0	8.0	7.7	7.6	7.6	7.7	7.7	7.7
25	7.5	---	---	8.1	8.0	8.0	7.7	7.6	7.6	7.8	7.7	7.7
26	7.6	7.5	7.5	8.0	7.9	8.0	7.7	7.7	7.7	7.8	7.7	7.8
27	7.6	7.5	7.6	8.0	7.9	7.9	7.7	7.7	7.7	7.8	7.8	7.8
28	7.6	7.5	7.6	8.0	7.9	7.9	7.8	7.7	7.7	7.9	7.8	7.8
29	7.6	7.4	7.6	8.0	7.9	8.0	7.8	7.7	7.7	8.0	7.9	7.9
30	7.6	7.5	7.6	8.0	7.9	7.9	7.8	7.8	7.8	8.0	7.9	8.0
31	7.7	7.6	7.7	---	---	---	7.8	7.8	7.8	8.0	8.0	8.0
Max	---	---	---	8.3	8.1	8.2	8.0	8.0	8.0	8.0	8.0	8.0
Min	---	---	---	7.7	7.5	7.7	7.2	7.1	7.1	7.7	7.6	7.6

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	8.0	7.9	8.0	7.9	7.9	7.9	8.3	8.1	8.2	8.5	8.0	8.2
2	8.0	8.0	8.0	7.9	7.6	7.9	8.4	8.2	8.3	8.8	8.2	8.4
3	8.0	8.0	8.0	7.8	7.2	7.3	8.3	8.1	8.2	8.7	8.3	8.6
4	8.0	7.9	8.0	7.3	7.2	7.3	8.3	8.1	8.2	8.7	8.4	8.6
5	8.0	8.0	8.0	7.3	7.2	7.2	8.4	8.1	8.3	8.6	8.4	8.5
6	8.0	8.0	8.0	7.6	7.3	7.5	8.4	8.2	8.3	8.5	8.2	8.4
7	8.0	8.0	8.0	7.7	7.6	7.6	8.4	8.2	8.3	8.5	8.2	8.3
8	8.0	7.9	8.0	7.7	7.7	7.7	8.3	8.1	8.2	8.4	7.9	8.3
9	8.0	8.0	8.0	7.8	7.7	7.7	8.2	7.9	8.2	7.9	7.6	7.8
10	8.1	8.0	8.0	7.8	7.8	7.8	7.9	7.7	7.9	7.8	7.6	7.7
11	8.1	8.0	8.1	7.8	7.8	7.8	7.8	7.3	7.4	7.7	7.5	7.6
12	8.1	8.0	8.1	7.9	7.8	7.9	7.5	7.4	7.4	7.8	7.7	7.8
13	8.1	8.0	8.1	8.0	7.9	7.9	7.6	7.5	7.5	7.9	7.8	7.8
14	8.2	8.0	8.1	8.0	7.9	7.9	7.7	7.6	7.6	7.9	7.8	7.9
15	8.2	8.0	8.1	8.1	7.9	8.0	7.8	7.7	7.7	7.9	7.8	7.9
16	8.2	8.1	8.2	8.2	8.0	8.0	7.9	7.8	7.8	8.0	7.8	7.9
17	8.2	8.0	8.1	8.1	8.0	8.0	7.9	7.8	7.8	8.0	7.9	8.0
18	8.0	7.3	7.5	8.3	8.0	8.1	8.0	7.9	8.0	8.1	8.0	8.0
19	7.5	7.3	7.5	8.4	8.0	8.2	8.2	8.0	8.1	8.2	8.0	8.0
20	7.5	7.4	7.5	8.3	8.1	8.2	8.2	8.0	8.1	8.3	8.0	8.1
21	7.7	7.5	7.6	8.2	8.1	8.2	8.2	8.0	8.1	8.3	8.1	8.2
22	7.7	7.7	7.7	8.4	8.1	8.2	8.1	8.0	8.0	8.3	8.1	8.2
23	7.8	7.7	7.8	8.4	8.1	8.3	8.1	7.8	8.0	8.3	8.1	8.2
24	7.8	7.7	7.7	8.4	8.1	8.3	8.1	7.9	8.0	8.2	8.0	8.1
25	7.9	7.8	7.9	8.4	8.1	8.3	8.4	8.0	8.1	8.1	7.6	7.7
26	7.9	7.8	7.9	8.4	8.2	8.3	8.3	8.0	8.1	7.7	7.3	7.4
27	7.9	7.8	7.9	8.4	8.1	8.3	8.0	7.9	7.9	7.3	7.0	7.2
28	8.0	7.9	8.0	8.4	8.1	8.2	8.0	7.9	8.0	7.3	7.1	7.2
29	7.9	7.9	7.9	8.3	8.1	8.2	8.1	7.9	8.0	7.5	7.2	7.4
30	---	---	---	8.3	8.1	8.2	8.2	7.9	8.0	7.5	7.4	7.5
31	---	---	---	8.3	8.0	8.2	---	---	---	7.6	7.5	7.6
Max	8.2	8.1	8.2	8.4	8.2	8.3	8.4	8.2	8.3	8.8	8.4	8.6
Min	7.5	7.3	7.5	7.3	7.2	7.2	7.5	7.3	7.4	7.3	7.0	7.2

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	7.7	7.6	7.6	7.5	7.3	7.4	8.5	7.9	8.2	8.4	8.0	8.2
2	7.8	7.7	7.7	7.6	7.4	7.5	8.5	7.9	8.2	8.4	8.0	8.1
3	7.8	7.7	7.8	7.7	7.5	7.6	8.4	7.8	8.1	8.6	8.2	8.4
4	7.8	7.7	7.8	7.7	7.5	7.7	8.4	8.0	8.3	8.6	8.3	8.4
5	8.0	7.8	7.9	7.8	7.6	7.7	8.4	8.1	8.3	8.5	8.2	8.4
6	8.0	7.6	8.0	8.0	7.8	7.8	8.4	8.2	8.3	8.4	8.1	8.2
7	7.6	7.2	7.2	8.2	7.8	7.9	8.4	8.0	8.2	8.3	8.1	8.1
8	7.8	7.5	7.6	8.3	7.9	8.1	8.3	7.9	8.1	8.3	8.2	8.2
9	7.6	7.5	7.6	8.5	8.0	8.2	8.3	7.4	7.9	8.4	8.2	8.3
10	7.8	7.6	7.7	8.5	8.0	8.3	7.9	7.5	7.7	8.4	8.1	8.2
11	7.8	7.7	7.7	8.7	8.0	8.3	7.7	7.0	7.2	8.2	8.0	8.1
12	7.9	7.7	7.8	8.7	8.2	8.5	7.3	7.1	7.2	8.1	7.2	7.9
13	8.0	7.8	7.9	8.6	8.2	8.4	7.5	7.3	7.4	7.2	7.0	7.1
14	8.1	7.9	8.0	8.5	8.1	8.3	7.6	7.4	7.5	7.1	7.0	7.0
15	8.3	7.9	8.1	8.6	8.1	8.3	7.6	7.4	7.5	7.2	7.0	7.1
16	8.3	8.0	8.1	8.6	8.1	8.4	7.8	7.6	7.6	7.5	7.2	7.4
17	8.5	8.1	8.2	8.5	8.2	8.4	7.9	7.6	7.7	7.6	7.4	7.6
18	8.3	7.4	8.0	8.5	8.2	8.3	7.9	7.6	7.8	7.7	7.5	7.6
19	7.5	7.3	7.4	8.2	7.5	7.6	7.9	7.5	7.7	7.8	7.6	7.7
20	7.8	7.4	7.5	7.6	7.4	7.5	8.0	7.7	7.8	7.8	7.7	7.8
21	7.9	7.8	7.8	8.1	7.4	7.5	8.1	7.7	8.0	7.9	7.7	7.8
22	7.9	7.7	7.8	8.1	7.9	8.0	8.1	7.8	8.0	7.9	7.7	7.8
23	7.9	7.8	7.9	8.3	7.8	8.0	8.4	8.0	8.1	7.9	7.8	7.9
24	7.9	7.8	7.9	8.6	8.0	8.2	8.4	8.2	8.4	8.0	7.8	7.9
25	8.0	7.8	7.9	8.7	8.2	8.5	8.5	8.3	8.4	8.1	7.8	8.0
26	8.2	7.9	7.9	8.8	8.3	8.6	8.5	8.1	8.2	8.2	7.8	8.0
27	8.2	6.7	7.5	8.8	8.0	8.4	8.3	8.0	8.1	8.3	7.9	8.1
28	6.9	6.7	6.8	8.7	8.2	8.5	8.4	8.0	8.1	8.4	8.0	8.2
29	7.3	6.9	7.0	8.6	8.2	8.4	8.4	8.2	8.3	8.6	8.2	8.3
30	7.4	7.2	7.2	8.4	8.0	8.2	8.5	8.1	8.3	8.6	8.4	8.5
31	---	---	---	8.4	8.0	8.2	8.5	8.1	8.3	---	---	---
Max	8.5	8.1	8.2	8.8	8.3	8.6	8.5	8.3	8.4	8.6	8.4	8.5
Min	6.9	6.7	6.8	7.5	7.3	7.4	7.3	7.0	7.2	7.1	7.0	7.0

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	20.4	18.2	19.6	11.7	9.8	10.7	9.0	4.0	5.8	0.5	0.0	0.1
2	22.2	19.7	20.7	11.5	9.4	10.5	9.0	5.2	7.7	0.5	0.0	0.1
3	20.7	18.6	19.9	11.0	9.3	10.3	5.2	3.6	4.4	0.5	0.0	0.2
4	22.1	19.3	20.6	11.9	9.5	10.8	6.2	4.3	5.2	0.6	0.1	0.3
5	23.3	21.1	22.3	11.7	10.3	11.2	6.2	4.5	5.8	2.1	0.3	1.1
6	23.3	22.1	22.6	10.3	8.4	9.2	4.5	3.7	3.9	2.3	1.0	1.8
7	24.2	22.4	23.3	8.8	7.2	8.2	4.4	3.9	4.2	2.4	1.0	1.7
8	23.3	20.0	21.5	10.0	7.8	8.9	4.1	2.5	3.5	1.6	0.5	1.1
9	20.4	18.1	19.4	10.8	8.6	9.8	2.5	1.2	1.5	0.9	0.0	0.4
10	21.0	17.6	19.1	11.4	9.6	10.6	2.9	1.1	1.8	1.3	0.6	0.9
11	18.5	16.5	17.4	14.7	11.4	13.2	3.1	0.1	2.0	1.3	0.3	0.8
12	17.1	15.2	15.9	14.4	12.3	13.8	0.1	0.0	0.1	1.8	0.7	1.1
13	18.3	15.6	16.9	12.3	10.3	11.2	0.2	0.0	0.1	2.0	0.8	1.3
14	18.3	16.8	17.3	11.3	9.0	10.4	0.2	0.0	0.1	2.2	0.7	1.3
15	17.1	15.7	16.2	9.0	7.4	8.2	0.1	0.0	0.0	2.6	0.5	1.5
16	16.8	14.7	15.8	9.0	6.9	8.0	0.1	0.0	0.0	2.0	0.4	1.2
17	15.9	15.2	15.5	9.8	7.6	8.8	0.2	0.0	0.1	0.9	0.0	0.3
18	15.4	14.2	14.7	11.1	8.7	9.9	0.4	0.0	0.1	0.7	0.0	0.3
19	15.0	14.0	14.5	13.1	10.6	11.8	0.5	0.0	0.2	0.5	0.0	0.2
20	15.1	13.7	14.4	13.9	11.8	13.0	1.0	0.0	0.4	0.6	0.0	0.2
21	15.4	14.0	14.8	11.8	6.3	8.9	1.6	0.1	0.8	0.2	0.1	0.2
22	14.0	13.1	13.5	6.3	4.6	5.3	0.7	0.0	0.2	0.6	0.0	0.2
23	13.4	11.2	12.5	4.8	3.7	4.4	0.1	0.0	0.0	0.8	0.1	0.3
24	13.4	11.9	---	6.3	4.2	5.2	0.2	0.0	0.1	0.7	0.0	0.2
25	12.4	10.8	11.7	6.1	4.8	5.5	0.7	0.0	0.2	1.0	0.1	0.4
26	12.1	10.4	11.3	6.3	4.8	5.5	0.5	0.0	0.2	1.8	0.3	1.1
27	12.0	10.7	11.3	6.1	4.4	5.3	0.4	0.1	0.3	3.4	0.7	2.1
28	12.0	10.1	11.1	6.3	5.2	5.9	0.3	0.0	0.1	4.8	2.9	3.9
29	13.2	10.7	11.9	5.2	3.7	4.4	0.3	0.0	0.1	4.4	1.1	2.0
30	14.0	11.9	13.0	4.3	3.6	4.0	0.4	0.0	0.1	3.4	0.6	1.9
31	13.3	11.7	12.7	---	---	---	0.7	0.0	0.3	3.5	0.4	1.3
Month	24.2	10.1	---	14.7	3.6	8.8	9.0	0.0	1.6	4.8	0.0	1.0

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1.4	0.0	0.6	9.2	4.5	6.6	12.5	8.4	10.4	21.1	16.2	18.4
2	2.5	0.5	1.6	9.7	6.3	8.2	13.6	9.0	11.4	19.6	15.9	17.6
3	3.5	1.1	2.3	7.7	3.9	5.3	13.4	11.1	12.0	18.4	13.8	16.2
4	4.5	1.7	3.2	3.9	3.0	3.3	14.6	10.2	12.2	18.6	13.5	16.3
5	4.2	1.3	2.7	4.0	3.3	3.8	14.4	10.7	12.9	19.4	14.7	17.0
6	2.2	0.1	1.2	4.7	3.5	4.1	15.8	11.3	13.7	19.7	16.8	18.2
7	4.0	1.4	2.7	4.8	3.3	4.0	14.9	11.6	12.7	19.3	17.4	18.0
8	3.8	1.5	2.8	4.2	2.5	3.2	12.3	8.7	10.2	19.5	16.5	17.8
9	4.6	1.4	3.1	5.9	2.5	3.9	11.3	8.3	9.7	18.2	16.9	17.6
10	4.2	1.7	2.8	7.5	3.8	5.3	9.4	8.1	8.7	18.4	17.4	17.8
11	3.5	1.1	2.3	9.2	4.8	6.6	10.3	9.4	10	17.6	16.4	17.1
12	3.5	1.7	2.6	10.2	6.2	8.0	9.9	9.1	9.5	17.7	15.7	16.7
13	4.5	1.2	2.9	10.4	7.9	9.1	9.7	8.3	9.0	17.7	16.6	17.1
14	4.3	2.6	3.5	10.6	8.6	9.6	10.9	8.6	9.7	19.2	15.9	17.2
15	3.6	1.2	2.5	10.6	8.5	9.4	13.4	10.0	11.3	20.8	16.1	18.3
16	3.6	2.9	3.3	9.4	7.8	8.4	15.7	11.5	13.4	21.4	16.6	18.8
17	4.4	2.0	3.0	8.1	7.3	7.5	14.7	13.5	14.3	22.7	17.1	19.8
18	2.7	1.8	2.1	9.6	6.9	8.0	14.9	12.1	13.4	23.4	17.7	20.6
19	2.4	2.0	2.2	11.5	6.8	9.0	17.0	11.2	13.8	24.0	19.0	21.5
20	2.8	2.2	2.4	12.9	8.2	10.4	17.3	13.7	15.2	23.4	19.7	21.9
21	2.2	0.4	1.3	13.3	9.7	11.5	19.7	14.8	17.1	23.2	19.2	21.4
22	2.1	0.2	0.9	12.4	10.5	11.4	21.0	15.7	18.0	23.4	19.9	21.6
23	1.5	0.3	0.9	12.3	8.7	10.6	18.9	16.8	17.4	23.0	20.9	22.1
24	2.6	0.3	1.3	12.0	8.4	10.3	18.2	16.3	17.1	22.7	20.4	21.4
25	4.2	1.3	2.6	13.2	9.0	11.2	18.6	15.9	17.3	23.6	20.5	21.9
26	4.2	2.1	2.9	12.6	9.7	11.2	17.0	15.2	16.3	22.4	20.5	21.2
27	3.7	1.9	2.8	12.5	10.5	11.4	16.8	14.3	15.3	20.6	19.5	19.9
28	4.4	3.1	3.7	11.0	9.4	10.1	17.7	13.2	15.1	20.6	20.0	20.4
29	6.3	3.5	4.6	10.8	9.0	9.8	18.1	12.8	15.3	21.1	20.1	20.5
30	---	---	---	10.3	9.6	9.9	19.1	14.1	16.5	23.5	20.9	22.1
31	---	---	---	11.7	10.2	10.8	---	---	---	24.2	22.6	23.4
Month	6.3	0.0	2.4	13.3	2.5	8.1	21.0	8.1	13.3	24.2	13.5	19.3

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	25.7	23.0	24.0	26.1	23.3	24.6	29.7	25.8	28.0	27.0	24.7	25.9
2	26.9	23.4	24.8	27.2	24.6	25.6	30.3	27.5	29.1	26.8	23.7	25.4
3	28.5	23.8	25.9	26.5	24.2	25.2	30.2	27.2	28.9	23.7	19.2	21.1
4	28.8	24.0	26.3	27.4	22.4	24.7	30.2	27.4	29.0	21.6	18.0	19.7
5	26.9	24.0	25.2	28.1	22.8	25.4	30.9	27.4	29.3	20.4	18.2	19.2
6	26.4	21.9	23.7	28.1	24.1	26.3	30.1	27.6	28.8	18.2	17.3	17.7
7	23.6	21.5	22.5	28.7	24.3	26.7	28.0	25.6	26.4	20.6	17.7	18.9
8	24.2	23.3	23.7	28.0	25.0	26.0	28.0	24.2	26.0	20.6	17.8	19.4
9	25.0	22.4	23.5	26.7	24.1	25.5	27.4	22.9	24.4	20.8	16.8	18.5
10	25.2	22.4	23.6	26.7	24.2	25.6	24.7	22.9	23.7	20.8	19.1	19.9
11	26.9	22.4	24.4	27.8	24.7	26.3	23.2	22.2	22.7	20.6	20.4	20.5
12	27.8	22.9	25.1	27.4	22.9	24.4	24.0	22.4	23.2	20.9	19.9	20.4
13	27.6	23.7	25.7	26.9	21.4	24.0	25.6	22.9	24.1	21.2	20.7	20.9
14	27.2	22.8	25.3	26.7	22.5	24.9	25.5	23.5	24.4	21.2	19.7	20.8
15	27.7	23.8	25.9	27.4	23.1	25.4	26.1	22.5	24.1	19.7	18.4	19.2
16	27.1	22.7	24.0	27.5	24.3	26.2	25.6	22.1	23.8	19.1	17.9	18.5
17	26.6	22.1	24.1	28.3	25.0	26.8	24.8	22.2	23.6	19.5	17.9	18.7
18	26.0	20.5	23.1	28.0	25.0	26.2	24.7	22.4	23.5	19.9	18.4	19.1
19	24.0	21.4	23.1	26.1	24.1	25.3	24.6	22.1	23.5	20.8	18.4	19.4
20	25.2	22.4	23.7	28.5	24.8	26.2	24.2	22.0	23.3	21.4	18.0	19.6
21	26.2	23.3	24.6	30.3	25.2	27.4	24.5	22.8	23.7	21.7	18.6	20.1
22	28.5	23.5	25.6	30.4	25.3	27.8	26.9	23.3	25.0	22.2	19.5	20.9
23	27.6	23.2	25.4	30.7	26.4	28.7	27.8	25.6	26.7	22.9	19.7	21.5
24	26.6	24.0	25.0	30.3	27.0	28.9	27.0	23.8	24.9	23.6	20.6	22.2
25	28.3	23.5	25.9	29.6	27.2	28.2	25.6	22.4	24.0	23.6	20.7	22.4
26	28.6	23.9	26.6	28.1	26.2	27.1	25.4	22.6	24.2	23.3	20.6	22.2
27	28.1	20.9	23.2	29.5	25.0	27.2	26.1	24.0	25.0	23.1	20.6	22.1
28	24.4	22.3	23.7	29.4	26.9	28.0	28.3	23.6	26.1	23.0	20.9	22.1
29	24.6	23.5	23.9	27.5	25.4	26.0	27.2	23.8	25.6	22.5	20.3	21.3
30	24.7	22.6	23.7	27.2	24.5	25.7	27.3	23.6	25.7	20.3	18.0	19.2
31	---	---	---	28.8	24.7	26.8	26.9	24.6	25.9	---	---	---
Month	28.8	20.5	24.5	30.7	21.4	26.2	30.9	22.0	25.4	27.0	16.8	20.6

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	12.0	7.6	9.7	8.2	7.9	8.0	11.2	9.4	10.5	12.6	12.5	12.5
2	12.4	8.6	10.2	8.4	8.2	8.3	10.5	8.6	9.5	12.7	12.4	12.6
3	10.5	7.3	9.0	8.6	8.2	8.3	11.2	10.4	10.8	12.6	12.2	12.5
4	10.4	8.8	9.7	8.6	8.3	8.4	10.9	10.3	10.6	12.3	11.8	12.2
5	9.3	7.0	8.4	9.0	8.0	8.5	10.8	9.8	10.4	12.0	11.6	11.9
6	8.3	6.5	7.5	9.4	8.5	8.9	10.7	10.4	10.5	11.9	11.6	11.8
7	8.1	6.1	7.3	10.1	9.2	9.7	10.4	10.0	10.2	12.2	11.8	12.0
8	7.9	6.1	7.1	9.9	9.3	9.7	10.8	10.1	10.4	12.9	12.2	12.6
9	8.3	6.2	7.2	10.3	9.1	9.8	11.9	10.8	11.4	13.2	12.8	13.0
10	7.9	6.5	7.3	10.9	9.3	10.1	12.1	11.5	11.8	12.8	12.7	12.8
11	7.9	7.2	7.6	10.8	9.4	10.2	12.6	11.4	11.8	13.0	12.8	12.9
12	7.5	7.2	7.4	10.4	8.5	9.4	12.6	12.2	12.5	12.9	12.8	12.8
13	7.4	6.9	7.2	13.2	9.3	11.1	12.3	12.0	12.2	12.8	12.6	12.7
14	7.2	6.8	7.0	12.6	10.1	11.6	12.4	12.0	12.2	12.8	12.6	12.7
15	7.4	6.8	7.1	13.4	11.0	12.3	12.7	12.4	12.6	12.7	12.2	12.5
16	7.8	7.3	7.5	13.4	11.1	12.4	12.9	12.6	12.8	12.4	12.3	12.4
17	7.9	7.8	7.8	12.8	10.6	11.9	12.8	12.5	12.6	12.5	12.2	12.4
18	8.2	7.4	7.7	13.5	10.7	12.2	12.5	12.4	12.4	12.6	12.2	12.4
19	8.1	7.5	7.7	12.5	10.3	11.4	12.4	12.3	12.4	12.6	12.5	12.6
20	8.4	7.8	8.2	11.1	9.1	10.2	12.4	12.2	12.3	12.6	12.3	12.5
21	8.3	8.2	8.2	11.2	9.3	10.2	12.3	12.1	12.2	12.5	12.3	12.4
22	8.3	8.2	8.3	12.4	10.4	11.4	12.7	12.2	12.4	12.5	12.2	12.4
23	8.6	8.2	8.4	12.6	10.9	11.8	12.8	12.6	12.7	12.3	12.1	12.2
24	---	8.1	---	12.7	10.9	11.8	12.9	12.6	12.8	12.4	12.1	12.3
25	8.4	---	---	12.3	10.7	11.6	12.7	12.6	12.7	12.2	11.8	12.1
26	8.3	8.1	8.2	12.0	10.5	11.3	12.7	12.6	12.6	12.2	11.8	12.0
27	8.3	8.0	8.2	11.6	10.5	11.1	12.7	12.6	12.6	12.2	11.6	11.9
28	8.3	8.1	8.2	11.2	10.2	10.8	12.8	12.5	12.7	11.9	11.4	11.7
29	8.2	8.0	8.1	11.6	10.4	11.0	12.8	12.4	12.6	12.4	11.4	12.0
30	8.0	7.8	7.9	11.5	10.6	11.1	12.7	12.3	12.6	12.4	11.6	12.1
31	8.3	7.7	8.0	---	---	---	12.5	12.3	12.4	12.9	11.5	12.3
Month	---	---	---	13.5	7.9	10.5	12.9	8.6	11.9	13.2	11.4	12.4

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	12.7	12.1	12.4	11.6	10.8	11.3	12.6	9.2	10.8	14.0	7.5	10.2
2	13.1	12.0	12.5	10.8	10.5	10.6	13.2	9.2	11.1	14.7	7.3	10.7
3	12.8	12.1	12.4	11.4	10.4	11.0	11.8	8.8	10.3	16.1	7.8	11.7
4	12.7	11.8	12.2	11.4	11.1	11.3	12.8	8.8	10.6	16.0	8.4	12.1
5	12.3	11.7	11.9	11.4	11.2	11.3	12.5	8.7	10.5	15.3	8.6	11.8
6	13.0	12.0	12.4	11.6	11.3	11.5	12.7	8.6	10.5	13.2	8.2	10.4
7	13.1	11.9	12.4	11.8	11.6	11.7	11.4	8.5	10.1	10.5	7.4	8.8
8	13.1	12.0	12.5	12.0	11.8	11.9	10.7	8.7	9.6	11.2	7.3	8.8
9	13.4	12.2	12.6	12.1	11.7	11.9	11.1	8.8	9.9	7.4	6.1	6.5
10	13.8	12.0	12.8	11.7	11.3	11.6	9.3	8.8	9.0	6.5	6.2	6.4
11	14.1	12.2	13.0	11.4	10.8	11.2	8.8	7.8	8.1	7.0	6.2	6.6
12	14.1	12.1	13.0	11.3	10.4	10.9	8.7	7.8	8.1	7.4	7.0	7.3
13	14.0	12.3	13.0	11.1	10.2	10.5	9.1	8.6	8.9	7.4	7.2	7.3
14	13.8	12.0	12.8	11.1	9.9	10.4	9.3	9.0	9.2	7.6	7.3	7.4
15	14.7	12.1	13.3	11.8	9.9	10.6	9.1	8.8	8.9	7.8	7.2	7.4
16	14.1	11.9	13.0	12.1	10.1	10.9	8.8	8.2	8.6	8.2	7.1	7.5
17	12.8	11.9	12.4	11.3	10.4	10.8	8.2	7.8	8.0	8.8	6.9	7.6
18	12.3	11.7	12.0	13.0	10.5	11.5	9.5	7.8	8.6	9.6	6.7	7.9
19	11.9	11.6	11.8	13.7	9.9	11.5	10.8	8.5	9.4	10.8	6.5	8.3
20	12.2	11.8	12.0	12.6	9.6	10.8	10.0	8.5	9.1	11.8	6.5	8.8
21	12.7	12.2	12.4	11.6	9.2	10.2	8.9	7.7	8.4	11.8	6.5	8.9
22	12.8	12.5	12.7	12.8	9.1	10.7	9.8	7.5	8.3	11.7	6.4	8.7
23	12.7	12.5	12.6	13.0	9.1	10.9	8.3	7.2	7.7	11.3	6.4	8.6
24	12.7	12.5	12.6	13.3	9.4	11.2	9.6	7.1	8.1	8.4	6.1	7.1
25	12.6	12.1	12.4	14.4	9.3	11.7	11.8	7.2	9.2	6.8	5.8	6.1
26	12.4	12.2	12.2	13.7	9.2	11.4	9.0	7.8	8.3	6.2	5.3	5.7
27	12.6	12.3	12.5	11.6	8.8	10.3	8.3	7.7	7.9	6.2	4.6	5.0
28	12.3	11.9	12.1	13.0	8.9	10.7	9.1	7.9	8.3	5.1	4.7	4.8
29	11.9	11.6	11.8	12.6	9.2	10.9	9.8	7.9	8.7	5.9	5.1	5.6
30	---	---	---	11.6	9.3	10.4	11.2	7.7	9.2	5.9	5.7	5.8
31	---	---	---	12.4	9.0	10.6	---	---	---	6.1	5.7	5.9
Month	14.7	11.6	12.5	14.4	8.8	11.0	13.2	7.1	9.1	16.1	4.6	7.9

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	6.0	5.8	5.9	5.5	5.1	5.4	12.2	4.9	8.1	9.9	5.3	7.6
2	5.9	5.7	5.8	5.5	5.3	5.4	10.5	4.7	7.5	9.1	5.2	7.2
3	5.9	5.5	5.7	5.6	5.2	5.4	10.4	4.6	7.4	7.8	5.7	6.7
4	6.3	5.5	5.8	7.0	5.5	6.1	10.8	4.7	7.7	9.1	6.3	7.6
5	6.7	5.6	6.0	7.8	5.6	6.5	9.8	4.6	7.3	8.1	6.0	7.0
6	7.3	5.2	6.3	9.1	5.5	7.1	8.5	4.2	6.6	7.2	6.4	6.7
7	5.2	3.9	4.4	9.9	5.5	7.4	7.6	4.6	6.0	8.7	5.9	7.2
8	5.6	5.0	5.3	9.2	5.4	7.1	11.1	4.9	7.7	8.0	5.9	7.0
9	6.0	5.6	5.9	11.5	5.6	8.3	9.1	5.4	6.2	10.5	6.6	8.3
10	5.9	5.8	5.8	11.6	5.6	8.6	7.4	5.4	6.1	9.0	6.2	7.7
11	6.2	5.8	6.0	12.3	5.9	8.9	6.4	4.8	5.1	8.3	6.2	7.0
12	6.5	5.8	6.0	10.0	5.8	7.6	5.8	5.0	5.4	7.0	5.3	6.5
13	7.4	5.6	6.3	13.3	6.2	9.1	6.2	5.8	6.0	5.3	4.9	5.0
14	9.0	5.7	7.1	11.6	5.7	8.3	6.0	5.8	5.9	5.2	4.8	4.9
15	12.2	5.8	8.5	11.6	5.9	8.6	6.0	5.8	5.9	6.0	5.2	5.5
16	8.6	6.1	6.9	10.2	5.7	8.0	6.7	5.8	6.2	6.9	6.0	6.5
17	12.8	6.2	8.7	10.6	5.6	8.1	6.9	6.0	6.3	7.2	6.8	7.0
18	8.2	5.6	6.8	9.0	5.4	6.9	7.3	---	---	7.2	7.0	7.1
19	5.8	5.3	5.6	6.4	5.1	5.4	7.8	5.9	6.8	7.2	6.9	7.0
20	6.2	5.6	6.0	5.6	5.0	5.2	8.7	5.9	7.2	7.1	6.7	6.9
21	6.6	6.0	6.2	8.0	5.0	6.1	9.5	5.8	7.6	7.1	6.7	6.9
22	6.4	5.9	6.1	9.2	5.4	7.0	9.8	6.1	7.9	7.2	6.6	6.8
23	6.8	5.8	6.2	10.9	4.9	7.4	10.8	5.6	8.2	7.5	6.4	6.8
24	6.8	5.5	6.1	13.1	5.1	8.6	8.8	5.3	7.1	8.0	6.3	6.9
25	7.9	5.6	6.6	12.3	5.5	8.8	11.6	6.1	8.6	8.6	6.2	7.2
26	9.6	5.6	7.2	13.0	5.4	8.8	10.1	5.8	8.0	9.1	6.1	7.4
27	7.6	3.2	5.6	11.6	5.1	8.2	9.3	5.4	7.3	9.7	6.2	7.7
28	3.2	1.7	2.2	11.7	5.4	8.8	9.7	5.4	7.3	10.7	6.3	8.2
29	4.1	1.9	3.1	9.4	5.3	7.1	10.6	5.4	7.6	10.6	6.3	8.3
30	5.1	4.1	4.7	9.6	5.0	7.2	10.0	5.5	7.6	11.4	7.0	8.9
31	---	---	---	11.4	5.0	7.8	10.1	5.3	7.7	---	---	---
Month	12.8	1.7	6.0	13.3	4.9	7.4	12.2	---	---	11.4	4.8	7.0

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	32	20	27	53	37	46	19	8.3	12	34	17	22
2	32	25	28	39	33	36	22	9.4	16	22	15	18
3	37	20	27	36	29	33	11	7.6	9.6	18	14	16
4	30	23	26	38	28	32	13	9.0	11	14	12	13
5	33	21	27	37	29	33	16	10	13	13	10	11
6	34	20	26	30	18	23	12	9.2	11	11	9.2	10
7	30	19	24	19	15	17	10	7.8	9.3	14	9.8	11
8	37	20	27	19	14	16	9.6	7.5	8.5	110	14	48
9	26	17	21	21	15	18	9.5	6.7	7.8	130	110	120
10	53	19	30	24	19	21	8.9	6.3	7.5	110	93	110
11	140	34	60	---	---	---	410	6.6	110	97	81	87
12	200	140	190	---	---	---	400	180	250	87	76	81
13	170	120	140	---	---	---	250	140	180	79	68	75
14	170	110	120	13	9.0	11	160	---	---	71	63	67
15	180	130	150	12	7.8	9.2	---	81	---	64	52	58
16	140	88	110	14	8.3	10	81	66	73	54	43	49
17	140	78	100	14	10	12	66	58	62	46	36	40
18	1,080	78	410	17	11	14	64	52	58	39	30	34
19	1,000	540	750	22	14	18	58	44	51	32	18	26
20	540	380	440	28	20	22	45	39	42	26	16	20
21	380	310	340	21	10	16	45	36	39	17	9.8	13
22	320	270	300	10	8.6	9.5	45	37	40	12	7.5	9.2
23	270	240	250	9.6	7.0	8.0	94	40	64	15	6.4	8.8
24	240	---	---	9.2	6.3	7.4	90	58	79	8.9	5.1	6.4
25	---	170	---	8.5	5.9	7.3	85	60	72	7.0	4.5	5.2
26	180	150	160	9.3	6.3	8.0	67	54	60	6.8	4.2	5.1
27	150	130	140	10	6.8	8.1	54	44	49	13	4.4	5.1
28	130	96	110	13	8.8	11	47	38	42	13	5.6	6.9
29	97	83	92	12	8.3	9.8	40	27	37	7.5	5.3	6.2
30	83	69	76	11	8.7	9.8	29	23	26	9.6	5.2	6.6
31	69	53	60	---	---	---	23	20	22	9.6	4.7	6.5
Month	---	---	---	---	---	---	---	---	---	130	4.2	32

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	5.1	4.5	4.8	48	41	43	19	16	17	43	34	38
2	5.5	4.9	5.3	770	40	190	20	17	19	37	28	32
3	5.6	5.1	5.3	980	240	750	21	17	19	---	---	---
4	6.9	4.9	5.5	960	830	940	23	18	20	---	---	---
5	7.0	5.5	6.0	950	600	730	22	19	20	---	---	---
6	6.2	5.1	5.9	610	430	510	22	19	20	32	23	28
7	6.0	4.9	5.4	430	320	370	22	17	18	31	24	28
8	6.6	4.1	4.8	330	200	---	34	18	27	260	27	45
9	8.2	4.6	5.8	200	100	140	150	22	34	470	170	350
10	8.8	5.2	6.2	100	74	88	210	130	170	400	250	320
11	7.8	4.3	5.3	74	50	60	730	200	580	400	220	290
12	8.2	3.9	4.9	---	---	---	640	340	480	220	130	180
13	7.2	4.0	5.0	---	---	---	350	260	310	130	92	100
14	9.2	5.0	6.4	---	---	---	260	180	220	92	62	72
15	9.3	4.7	5.7	43	34	38	180	110	140	62	44	52
16	18	5.2	8.1	36	30	32	110	60	81	44	34	40
17	130	18	65	52	27	36	60	41	49	36	28	32
18	780	130	550	33	24	26	44	36	39	31	24	28
19	630	350	450	28	24	26	38	32	34	30	17	24
20	350	240	290	43	25	---	52	38	47	28	16	22
21	240	180	210	---	---	---	53	41	46	24	13	18
22	180	130	160	40	30	33	56	42	46	23	13	18
23	130	90	110	30	25	28	160	39	71	21	13	17
24	110	61	88	25	22	23	100	45	56	71	14	43
25	61	38	45	24	21	22	52	38	43	430	44	170
26	170	52	83	23	20	21	94	46	78	860	360	540
27	160	96	130	24	20	23	100	77	93	840	410	580
28	96	76	84	20	18	20	77	58	66	420	260	340
29	78	48	65	19	14	17	61	48	53	270	210	240
30	---	---	---	14	14	14	51	39	43	270	180	230
31	---	---	---	18	14	17	---	---	---	180	130	160
Month	780	3.9	83	---	---	---	730	16	98	---	---	---

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	130	99	120	150	110	130	34	24	30	38	29	33
2	100	72	---	120	100	110	51	30	38	40	26	33
3	74	52	---	100	83	---	45	33	39	36	29	33
4	54	46	50	86	72	---	39	29	34	32	24	28
5	49	43	45	74	59	69	42	22	31	32	27	30
6	510	41	91	64	47	56	34	24	29	34	29	31
7	740	270	440	61	37	46	39	28	32	30	19	23
8	390	220	280	44	29	---	33	25	29	29	20	23
9	260	150	200	38	22	30	140	26	71	24	20	22
10	150	93	110	31	18	26	140	38	56	29	22	26
11	93	66	81	33	17	24	480	140	420	32	26	29
12	77	51	63	33	22	29	440	220	300	540	31	150
13	55	42	51	31	19	26	220	150	170	540	340	400
14	45	38	42	34	22	29	200	130	150	400	250	310
15	43	29	36	36	20	29	160	110	140	250	170	200
16	180	33	72	42	22	32	110	94	100	190	160	180
17	62	39	47	38	21	31	110	96	100	170	150	160
18	700	44	190	88	26	50	110	75	95	150	120	130
19	700	290	400	350	76	180	94	70	80	120	90	100
20	330	83	220	160	86	110	71	50	62	96	73	83
21	100	77	89	150	46	110	58	46	53	80	65	73
22	97	77	86	47	28	39	52	43	48	73	65	69
23	94	72	82	42	20	32	47	35	42	72	60	66
24	75	55	67	35	18	28	39	28	34	62	49	57
25	67	45	---	37	19	28	33	18	26	55	41	49
26	60	31	---	35	15	27	28	18	22	48	38	43
27	1,040	38	410	50	26	34	26	20	24	45	29	38
28	590	250	390	44	17	27	31	22	28	44	28	35
29	280	190	220	42	24	30	34	22	29	36	25	32
30	280	150	200	37	25	32	33	21	27	26	22	24
31	---	---	---	32	22	28	35	25	30	---	---	---
Month	1,040	29	---	350	15	---	480	18	76	540	19	84