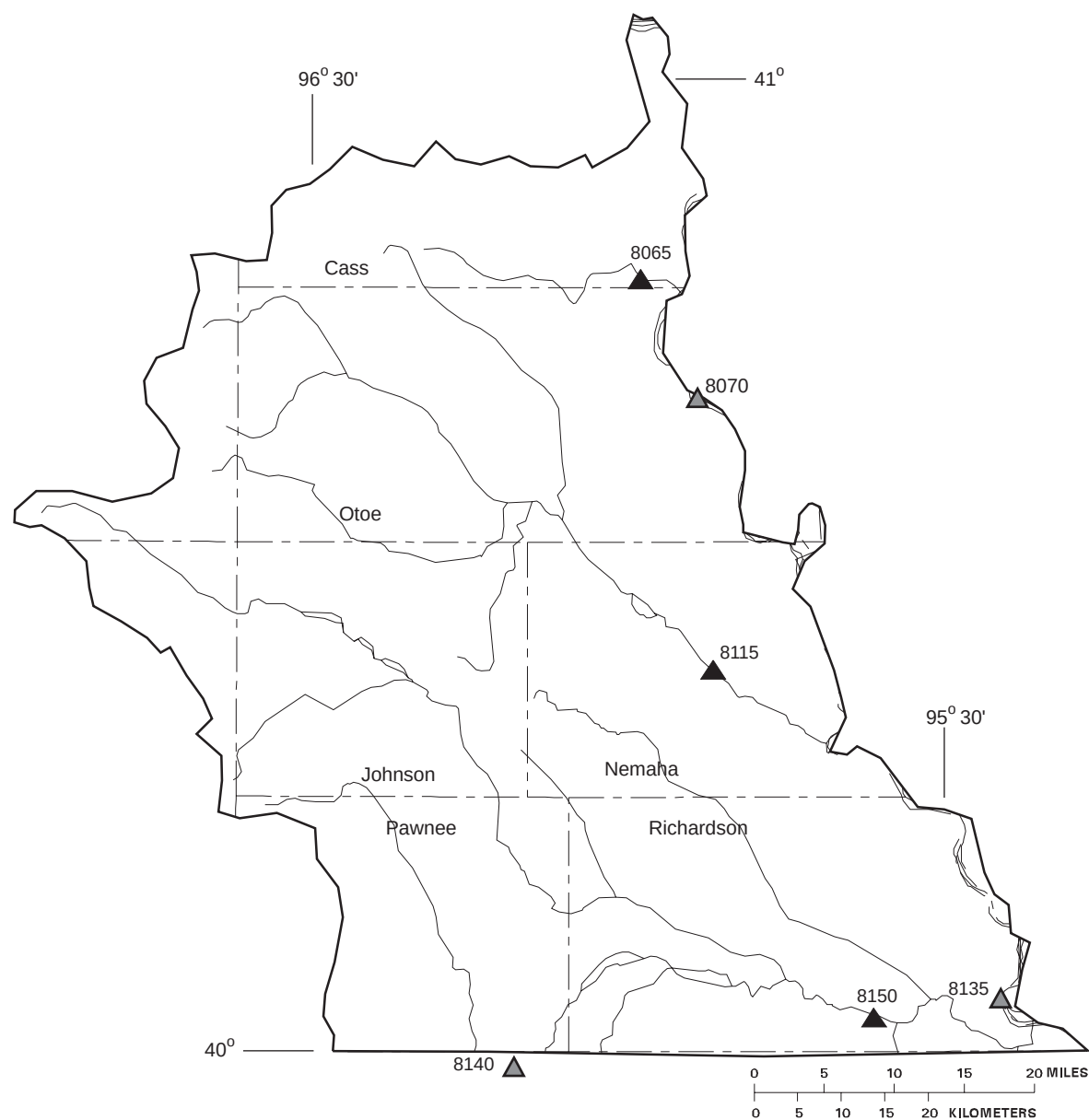
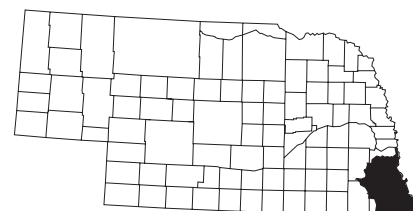




EXPLANATION

- Hydrologic boundary
- County line
- Streams
- Stream-flow gaging station
- Gaging station run by neighboring state

NOTE: To change abbreviated station number to complete station number, prefix with "06" and add zero's required to give eight digits.



SURFACE-WATER DISCHARGE RECORDS
MISSOURI RIVER BASIN
MISSOURI RIVER AND TRIBUTARIES

275

*Station number	Station name	Page
	WEEPING WATER CREEK BASIN	
8065	Weeping Water Creek at Union.....	276
	MISSOURI RIVER MAIN STEM	
8070	Missouri River at Nebraska City.....	278
	LITTLE NEMAHA RIVER BASIN	
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	BIG NEMAHA RIVER BASIN	
8140	Turkey Creek near Seneca, KS.....	284
8150	Big Nemaha River at Falls City.....	286

*NOTE: To change abbreviated station number to complete station number, prefix with "06" and add zeros required to give eight digits.

06806500 WEeping WATER CREEK AT UNION, NE

LOCATION.--Lat 40° 47' 35", long 95° 54' 40", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T.10 N., R.13 E., Cass County, Hydrologic unit 10240001, on left bank near downstream side of bridge on U.S. Highways 73 and 75, 1.5 mi southeast of Union, 2.8 mi downstream from South Branch Weeping Water Creek, and at mile 6.2.

DRAINAGE AREA.--241 mi².

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 926.72 ft above sea level. Prior to May 14, 1951, nonrecording gage at site 2 mi upstream at different datum. May 15, 1951 to Aug. 22, 1968 water-stage recorder for stages above 7.9 ft and nonrecording gage, Aug. 23, 1968 to Aug. 22, 1980 water-stage recorder on downstream side of bridge pier, Aug. 23, 1980 to Nov. 4, 1980 at present site, all at datum 3.00 ft higher. Nov. 5, 1980 to Aug. 23, 1984 at present site and datum. Aug. 24, 1984 to Mar. 5, 1986 on left bank 200 ft upstream at present datum. Data collection platform at station.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	30	26	26	28	25	25	34	29	18	9.6	2.8
2	75	26	25	25	27	26	24	32	31	18	9.5	3.5
3	115	26	24	28	27	26	24	31	34	17	9.2	2.3
4	139	25	25	26	28	27	25	33	32	16	8.9	1.8
5	126	26	24	27	24	e26	25	34	31	15	8.7	1.9
6	44	25	26	26	23	25	25	34	32	16	7.7	2.9
7	30	24	24	30	25	24	30	33	31	16	7.2	2.9
8	26	24	24	28	22	23	31	49	33	15	6.3	2.7
9	24	25	27	27	22	28	28	414	31	15	6.1	2.9
10	23	24	24	27	22	25	27	105	29	16	6.6	4.0
11	22	23	24	33	21	25	26	72	29	15	7.2	3.7
12	21	23	25	28	22	28	26	61	30	14	7.1	5.2
13	20	23	24	24	22	28	26	54	66	13	6.6	4.3
14	20	24	25	25	24	28	25	76	49	13	6.6	4.8
15	20	24	26	24	27	30	25	54	35	13	6.6	5.4
16	20	24	26	25	33	30	26	44	30	12	6.6	4.7
17	21	24	26	28	30	31	26	41	28	12	6.3	4.2
18	22	24	27	25	26	32	26	40	63	11	5.7	3.5
19	22	23	26	e26	28	33	27	100	183	10	4.6	3.7
20	21	23	25	e25	e26	41	27	110	24	10	5.1	3.4
21	20	23	24	25	e24	39	27	60	21	10	5.2	3.8
22	20	23	27	25	e22	33	26	50	22	9.4	5.2	4.2
23	20	24	25	26	e20	30	26	46	31	9.0	4.7	4.5
24	23	24	22	25	e22	28	27	44	33	8.9	4.6	3.9
25	27	23	24	27	e22	27	29	42	24	8.7	4.4	3.4
26	27	23	24	27	e24	26	28	41	21	8.6	3.3	3.3
27	26	24	23	27	24	26	29	38	20	8.4	2.9	3.5
28	26	25	24	27	24	26	28	e37	20	10	2.8	3.6
29	26	25	25	26	---	25	29	e34	19	9.3	3.4	3.3
30	30	25	26	26	---	24	36	32	18	9.1	2.8	3.3
31	34	---	28	27	---	24	---	30	---	8.9	2.7	---
TOTAL	1,101	729	775	821	689	869	809	1,905	1,079	385.3	184.2	107.4
MEAN	35.5	24.3	25.0	26.5	24.6	28.0	27.0	61.5	36.0	12.4	5.94	3.58
MAX	139	30	28	33	33	41	36	414	183	18	9.6	5.4
MIN	11	23	22	24	20	23	24	30	18	8.4	2.7	1.8
AC-FT	2,180	1,450	1,540	1,630	1,370	1,720	1,600	3,780	2,140	764	365	213

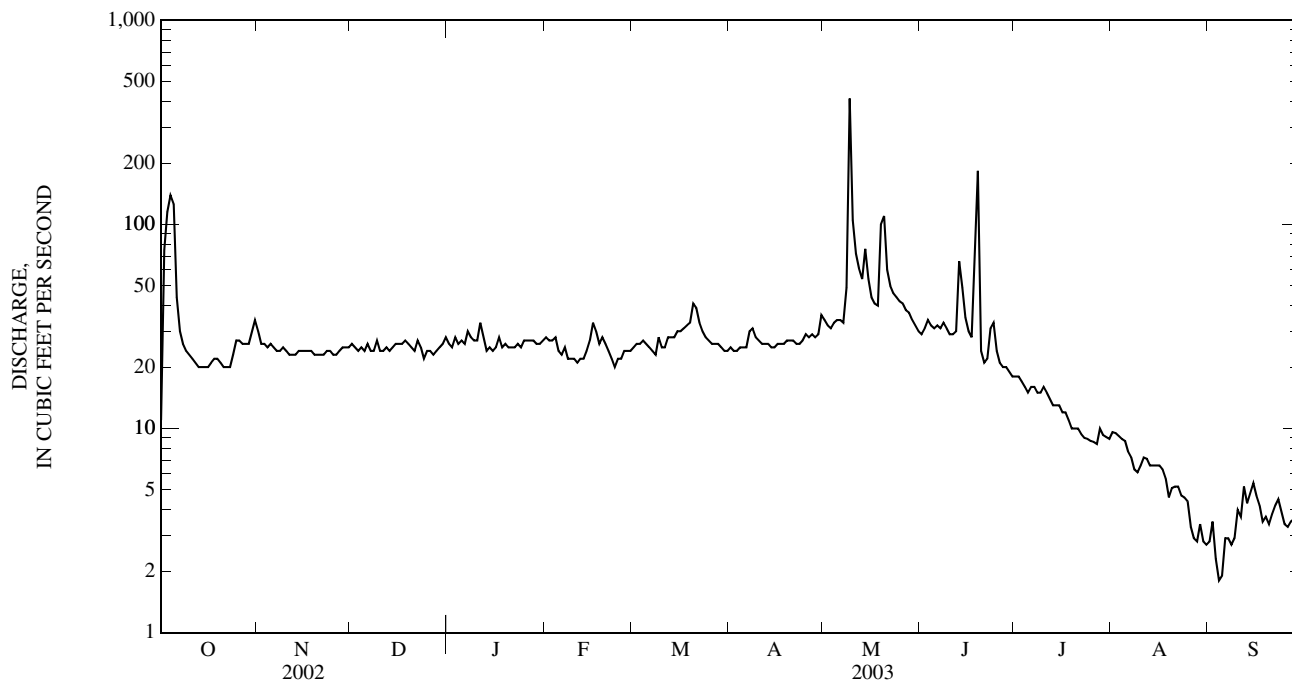
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	60.3	45.7	39.8	41.2	81.3	126	112	178	202	181	90.7	67.3
MAX	579	148	136	177	301	1,049	437	678	1,603	2,688	507	470
(WY)	(1987)	(1974)	(1987)	(1974)	(1971)	(1979)	(1999)	(1987)	(1984)	(1993)	(1987)	(1989)
MIN	0.55	1.26	2.09	2.01	4.16	7.57	4.60	3.15	2.39	1.49	0.70	2.21
(WY)	(1957)	(1957)	(1957)	(1957)	(1957)	(1956)	(1956)	(1956)	(1956)	(1954)	(1955)	(1976)

06806500 WEeping WATER CREEK AT UNION, NE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	17,148.1		9,453.9		102	
ANNUAL MEAN	47.0		25.9		433	
HIGHEST ANNUAL MEAN					19.9	
LOWEST ANNUAL MEAN					34,000	
HIGHEST DAILY MEAN	2,880	Aug 23	414	May 9	34,000	Jul 23, 1993
LOWEST DAILY MEAN	4.0	Aug 7	1.8	Sep 4	0.10	Sep 10, 1955
ANNUAL SEVEN-DAY MINIMUM	4.2	Aug 6	2.5	Sep 3	0.13	Sep 9, 1955
MAXIMUM PEAK FLOW			912	May 9	65,100	Jul 23, 1993
MAXIMUM PEAK STAGE			10.27	May 9	30.97	Jul 23, 1993
ANNUAL RUNOFF (AC-FT)	34,010		18,750		74,040	
10 PERCENT EXCEEDS	45		34		168	
50 PERCENT EXCEEDS	26		25		39	
90 PERCENT EXCEEDS	8.2		4.7		9.3	

e Estimated.



06807000 MISSOURI RIVER AT NEBRASKA CITY, NE

LOCATION.--Lat 40° 40' 55", long 95° 50' 48", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.8 N., R.14 E., Otoe County, Hydrologic Unit 10240001, on right bank 1.0 mi upstream from Highway 2 Bridge at Nebraska City, and at mile 562.6.

DRAINAGE AREA.--410,000 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1929 to current year. Gage-height records collected in this vicinity from August 1878 to December 1899 are contained in reports of Missouri River Commission.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 905.36 ft above NGVD of 1929, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. U. S. Army Corps of Engineers rain gage and satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft³/s Apr. 19, 1952; maximum gage height, 27.66 ft Apr. 18, 1952; minimum discharge, 1,600 ft³/s Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft Dec. 24, 1960, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34,600	35,600	23,600	19,700	18,800	16,800	32,100	42,900	35,600	45,600	30,100	26,600
2	36,800	35,200	22,300	19,600	18,600	20,300	32,600	42,100	35,500	44,500	30,500	26,300
3	36,600	34,800	20,600	19,500	19,600	21,900	32,400	41,400	35,200	43,300	29,900	26,300
4	37,800	34,200	20,800	19,900	20,000	22,400	32,300	39,700	34,800	42,100	29,800	27,300
5	40,000	34,000	20,900	20,500	20,200	22,100	32,600	51,700	34,700	40,800	29,500	29,300
6	38,000	33,500	18,800	20,700	20,200	21,300	32,600	62,900	35,400	41,800	29,600	30,900
7	36,500	33,400	17,500	20,700	19,700	19,600	33,100	52,500	35,000	48,500	29,800	31,500
8	35,900	33,400	19,100	20,100	21,700	17,400	33,300	47,500	36,000	50,000	30,300	31,700
9	36,300	33,300	20,000	20,100	22,700	19,100	32,800	47,000	36,200	44,800	29,800	32,200
10	36,400	33,000	19,800	21,000	21,200	21,500	32,500	45,900	36,800	43,700	29,800	32,800
11	35,800	32,900	19,600	20,900	20,900	19,800	32,500	45,100	42,700	49,800	30,200	34,000
12	36,500	32,700	20,200	18,800	19,400	17,900	33,100	44,500	47,100	54,600	30,000	37,000
13	36,100	32,500	20,700	e16,200	18,200	21,800	33,000	43,800	43,800	48,900	29,500	39,300
14	35,800	32,300	20,500	e16,000	18,900	25,500	33,300	44,100	40,900	44,100	28,800	39,000
15	36,000	32,700	20,400	18,000	20,500	28,100	33,300	44,000	38,500	41,900	27,200	37,600
16	35,700	32,800	20,400	17,600	22,200	30,500	33,400	43,400	37,100	39,600	25,300	36,000
17	35,900	32,400	20,700	15,700	23,100	27,700	32,400	42,900	36,200	38,000	24,400	34,700
18	35,900	31,600	20,800	e15,500	21,400	23,900	33,600	41,900	35,900	36,100	24,400	33,900
19	36,100	32,100	20,600	e15,600	21,700	25,200	34,000	41,400	36,300	34,900	26,100	33,300
20	36,500	32,400	20,600	e16,400	22,200	28,900	34,000	41,200	36,200	34,200	27,400	33,000
21	36,100	32,500	21,200	17,300	23,400	31,500	34,400	42,500	34,500	33,200	28,000	33,000
22	36,200	32,700	21,300	18,700	29,100	31,500	34,400	40,500	34,400	32,800	27,700	32,800
23	36,100	32,900	19,500	19,300	35,700	30,700	34,700	39,300	36,400	32,400	27,200	31,500
24	36,100	32,700	18,200	18,300	28,500	29,800	34,800	39,100	38,500	31,900	26,900	31,500
25	36,300	33,400	18,100	18,400	22,500	30,000	33,800	39,000	38,000	31,800	26,500	31,200
26	36,300	32,800	18,100	18,000	18,700	30,000	33,300	38,400	44,300	30,900	26,700	30,800
27	36,200	31,000	17,300	18,300	16,300	29,700	33,200	38,200	48,900	30,600	26,700	30,400
28	36,300	29,100	17,100	19,300	15,800	30,100	33,000	37,500	49,900	31,000	26,800	30,500
29	36,500	26,400	18,500	19,700	---	31,300	33,200	37,500	48,400	30,800	26,800	30,200
30	37,200	24,500	19,300	19,700	---	32,200	34,500	37,100	46,600	30,200	26,700	30,000
31	36,700	---	19,700	20,200	---	31,900	---	36,400	---	30,100	26,800	---
TOTAL	1,129,200	972,800	616,200	579,700	601,200	790,400	998,200	1,331,400	1,169,800	1,212,900	869,200	964,600
MEAN	36,430	32,430	19,880	18,700	21,470	25,500	33,270	42,950	38,990	39,130	28,040	32,150
MAX	40,000	35,600	23,600	21,000	35,700	32,200	34,800	62,900	49,900	54,600	30,500	39,300
MIN	34,600	24,500	17,100	15,500	15,800	16,800	32,100	36,400	34,400	30,100	24,400	26,300
AC-FT	2,240,000	1,930,000	1,222,000	1,150,000	1,192,000	1,568,000	1,980,000	2,641,000	2,320,000	2,406,000	1,724,000	1,913,000
CFSM	0.09	0.08	0.05	0.05	0.05	0.06	0.08	0.10	0.10	0.10	0.07	0.08
IN.	0.10	0.09	0.06	0.05	0.05	0.07	0.09	0.12	0.11	0.11	0.08	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

MEAN	42,700	38,900	25,510	21,480	26,470	37,660	47,540	47,610	51,910	46,100	42,360	42,320
MAX	76,760	79,410	52,410	39,970	48,630	66,730	98,960	90,280	117,500	116,700	71,540	73,410
(WY)	(1998)	(1998)	(1987)	(1987)	(1983)	(1983)	(1997)	(1997)	(1984)	(1993)	(1996)	(1997)
MIN	22,420	14,380	10,510	10,160	12,780	15,310	21,850	32,470	33,530	28,830	28,040	32,150
(WY)	(1962)	(1962)	(1956)	(1957)	(1957)	(1957)	(1957)	(1955)	(1958)	(2002)	(2003)	(2003)

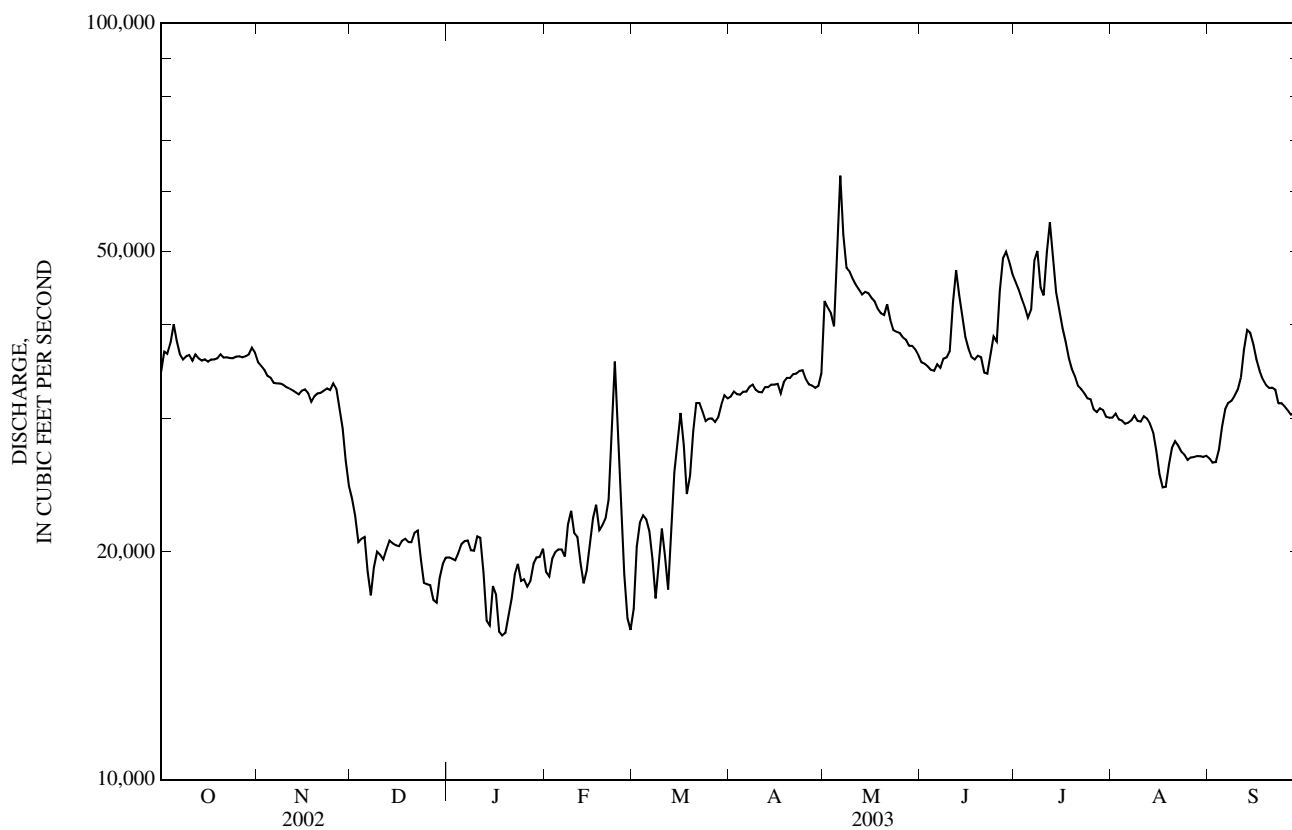
06807000 MISSOURI RIVER AT NEBRASKA CITY, NE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003a	
ANNUAL TOTAL	10,950,600		11,235,600			
ANNUAL MEAN	30,000		30,780		39,240	
HIGHEST ANNUAL MEAN					66,450	
LOWEST ANNUAL MEAN					25,370	
HIGHEST DAILY MEAN	51,200	Aug 23	62,900	May 6	188,000	Jul 25, 1993
LOWEST DAILY MEAN	17,100	Dec 28	15,500	Jan 18b	4,320	Jan 11, 1957
ANNUAL SEVEN-DAY MINIMUM	18,100	Dec 24	16,400	Jan 13	5,590	Nov 29, 1955
MAXIMUM PEAK FLOW			65,900	May 6	196,000	Jul 23, 1993
MAXIMUM PEAK STAGE			14.09	May 6	27.19	Jul 23, 1993
INSTANTANEOUS LOW FLOW			14,600	Jan 18		
ANNUAL RUNOFF (AC-FT)	21,720,000		22,290,000		28,430,000	
ANNUAL RUNOFF (CFSM)	0.073		0.075		0.096	
ANNUAL RUNOFF (INCHES)	0.99		1.02		1.30	
10 PERCENT EXCEEDS	36,200		42,000		61,400	
50 PERCENT EXCEEDS	32,400		32,200		37,000	
90 PERCENT EXCEEDS	20,600		19,300		18,000	

a Post regulation.

b Ice affected.

e Estimated.



LITTLE NEMAHA RIVER BASIN

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE

LOCATION.--Lat 40° 23'33", long 95° 48'46", in NE 1/4 NW 1/4 sec.23, T.5 N., R.14 E., Nemaha County, Hydrologic Unit 10240006, on left bank at upstream side of bridge on U.S. Highway 136, 1 mi downstream from Longs Creek and Willow Creek, 1 mi east of Auburn, and at mile 10.4.

DRAINAGE AREA.--792 mi².

PERIOD OF RECORD.--August 1949 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.87 ft above sea level. See WSP 2119 for history of changes prior to July 24, 1967. Data collection platform at station.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	75	61	67	e38	e50	53	91	60	207	31	24
2	49	60	60	65	e36	e60	52	69	75	173	28	23
3	85	58	56	70	e35	e80	49	59	79	150	23	20
4	229	54	51	70	e35	71	49	61	72	133	22	19
5	278	60	54	60	e36	e73	52	55	65	120	20	18
6	159	55	e61	50	e34	73	56	49	64	106	18	16
7	93	54	e63	50	e34	e89	76	50	64	96	17	16
8	69	54	62	52	e35	72	83	220	67	87	17	15
9	54	53	63	51	e34	101	72	2,200	63	78	17	19
10	46	53	60	46	e36	177	64	580	3,190	70	16	23
11	43	50	73	42	e41	86	60	275	988	62	17	27
12	41	50	64	e36	e46	50	56	186	5,370	56	21	28
13	37	52	61	e34	e49	51	54	147	5,220	48	16	29
14	39	55	59	e35	e44	48	53	132	1,480	40	15	27
15	38	54	61	e36	e40	49	51	129	777	37	13	22
16	39	56	64	e37	e37	50	57	112	474	32	12	21
17	46	53	65	e36	e48	45	58	97	357	38	13	20
18	44	55	60	e39	e54	44	60	87	374	33	11	22
19	40	53	54	e40	e63	52	68	969	1,020	30	156	26
20	39	56	49	e36	e56	81	66	1,200	386	32	177	26
21	40	55	45	e35	e54	98	59	359	268	30	37	26
22	38	56	e45	e34	e57	70	52	198	232	27	23	27
23	44	57	e45	e34	e46	55	51	150	4,370	25	19	25
24	55	55	e44	e35	e43	45	65	126	1,990	24	16	24
25	78	51	e45	e35	e43	38	66	112	1,050	23	14	22
26	67	56	e49	e35	e42	34	59	98	660	22	15	23
27	59	53	e56	e34	e44	46	52	89	430	19	16	23
28	63	61	e64	e35	e50	57	48	80	305	23	20	23
29	61	62	69	e36	---	57	53	73	262	24	21	24
30	81	59	67	e37	---	57	79	68	329	23	18	26
31	92	---	66	e36	---	56	---	62	---	24	21	---
TOTAL	2,185	1,675	1,796	1,338	1,210	2,015	1,773	8,183	30,141	1,892	880	684
MEAN	70.5	55.8	57.9	43.2	43.2	65.0	59.1	264	1,005	61.0	28.4	22.8
MAX	278	75	73	70	63	177	83	2,200	5,370	207	177	29
MIN	37	50	44	34	34	34	48	49	60	19	11	15
AC-FT	4,330	3,320	3,560	2,650	2,400	4,000	3,520	16,230	59,780	3,750	1,750	1,360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

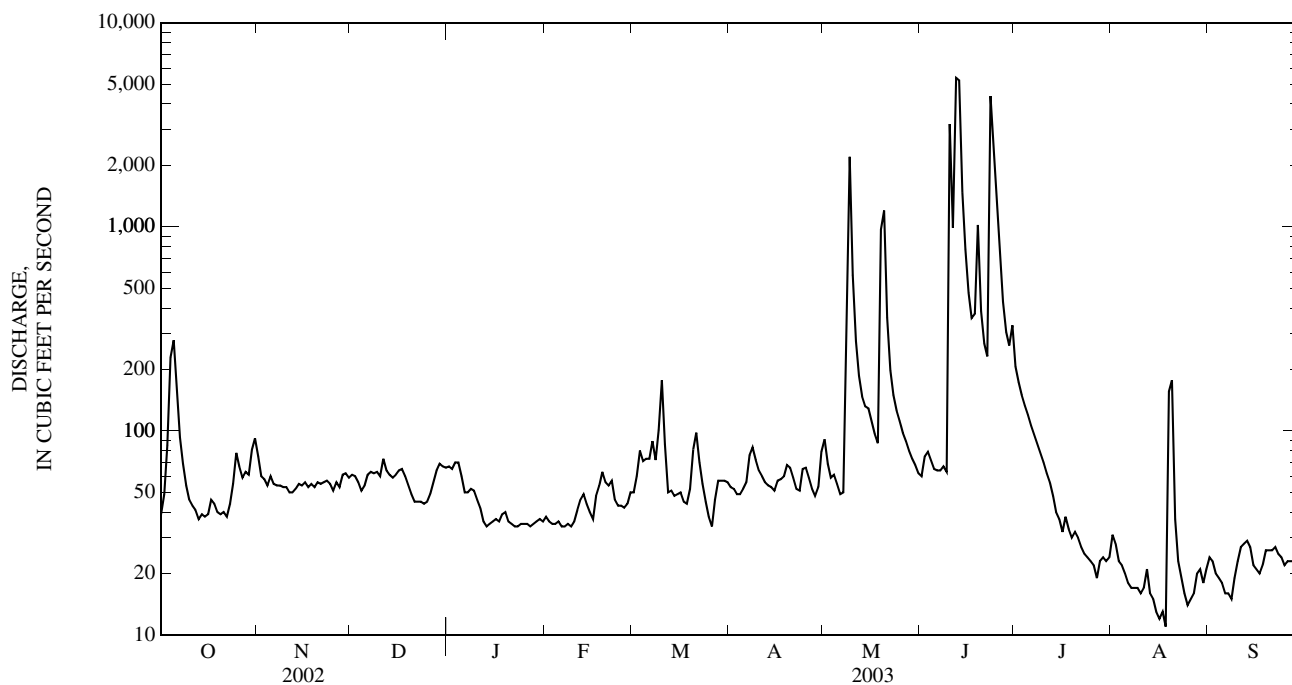
MEAN	214	133	112	115	221	442	361	597	560	573	218	230
MAX	2,003	493	509	562	747	2,870	1,589	2,949	3,524	9,419	1,256	1,546
(WY)	(1974)	(1999)	(1987)	(1974)	(1993)	(1979)	(1984)	(1996)	(1951)	(1993)	(1982)	(1977)
MIN	25.4	25.7	23.4	19.7	28.4	49.1	30.6	29.9	14.8	16.2	14.0	22.8
(WY)	(1992)	(1956)	(1957)	(1957)	(1956)	(1957)	(1956)	(1956)	(1977)	(1977)	(1955)	(2003)

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1950 - 2003	
ANNUAL TOTAL	34,241		53,772		315	
ANNUAL MEAN	93.8		147		1,389	
HIGHEST ANNUAL MEAN					64.4	
LOWEST ANNUAL MEAN					70,400	
HIGHEST DAILY MEAN	1,600	May 12	5,370	Jun 12		Jul 24, 1993
LOWEST DAILY MEAN	15	Aug 1	11	Aug 18	0.87	Jul 6, 1977
ANNUAL SEVEN-DAY MINIMUM	16	Jul 31	14	Aug 12	1.1	Jul 3, 1977
MAXIMUM PEAK FLOW			17,600	Jun 12	164,000	May 9, 1950
MAXIMUM PEAK STAGE			21.17	Jun 12	*27.65	May 9, 1950
ANNUAL RUNOFF (AC-FT)	67,920		106,700		228,500	
10 PERCENT EXCEEDS	123		165		468	
50 PERCENT EXCEEDS	63		53		98	
90 PERCENT EXCEEDS	27		22		34	

e Estimated.

* From floodmark.



06813500 MISSOURI RIVER AT RULO, NE

LOCATION.--Lat 40° 03'13", long 95° 25'19", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 4 sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and at mile 498.0.

DRAINAGE AREA.--414,900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of U.S. Geological Survey. Gage- height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission; September 1929 to September 1950 in files of Kansas City office of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft above NGVD of 1929. Oct. 1949 to Sept. 12, 1950, nonrecording gage at site 80 ft upstream and Sept. 13, 1950 to Apr. 19, 1983, recording gage on downstream end of middle pier, all at same datum.

REMARKS.--Records good, except those for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. U.S. Army Corps of Engineers satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily discharge, 4,420 ft³/s Jan. 13, 1957; minimum gage height, -0.19 ft Dec. 25, 1990, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34,900	37,000	24,700	20,500	20,600	16,900	32,500	38,700	38,600	46,200	31,700	27,800
2	36,200	36,500	24,000	20,600	19,600	18,200	32,500	48,800	38,100	45,100	31,800	27,400
3	37,900	36,100	22,700	20,500	19,400	20,900	32,600	44,600	38,300	44,000	31,600	27,200
4	38,300	35,700	21,500	20,400	20,200	22,100	32,300	43,100	37,700	43,100	31,300	27,400
5	40,900	35,000	21,500	20,700	20,600	22,100	32,400	45,000	37,500	42,100	31,100	28,600
6	41,200	34,500	21,400	21,300	20,700	22,100	32,900	60,200	37,600	41,300	30,900	30,300
7	39,000	34,400	19,900	21,300	20,700	21,500	33,400	60,700	37,500	44,500	30,900	31,500
8	37,800	34,300	18,900	21,200	20,600	19,600	33,900	51,700	37,400	51,700	31,200	31,900
9	37,400	34,400	19,900	20,700	22,200	17,900	34,200	58,300	38,200	48,300	31,100	32,100
10	37,700	34,100	20,600	20,700	22,700	19,700	33,600	53,200	42,800	44,400	30,500	32,400
11	37,300	33,900	20,500	21,100	21,700	21,400	33,400	49,100	42,300	46,300	30,400	32,800
12	37,000	33,900	20,300	20,800	21,400	20,000	33,700	48,100	52,200	54,500	30,600	34,500
13	37,100	33,900	20,800	19,000	20,000	18,900	34,000	47,100	62,800	53,000	30,400	37,600
14	36,500	33,500	21,000	16,900	19,200	22,500	34,500	47,200	47,700	46,200	30,100	38,500
15	36,200	33,400	20,900	16,700	19,900	26,500	35,000	47,400	42,100	43,400	29,200	37,700
16	36,400	33,500	20,700	18,300	21,100	29,700	35,100	47,400	40,000	41,700	27,900	36,400
17	36,400	33,500	20,700	18,000	22,900	31,700	34,600	46,800	38,500	39,800	26,500	35,000
18	36,400	32,800	21,000	16,600	23,400	27,700	34,200	45,800	37,800	38,500	25,900	34,200
19	36,100	32,500	21,200	16,000	22,300	24,800	35,000	45,000	38,300	36,800	26,600	34,000
20	36,600	33,000	21,000	16,000	22,600	26,400	35,000	47,100	38,300	35,900	29,700	33,300
21	36,800	33,000	21,100	16,400	23,100	29,900	34,800	45,900	37,300	35,100	29,200	33,200
22	36,500	33,000	21,500	17,700	24,900	32,200	35,000	44,900	36,100	34,400	29,200	33,500
23	36,900	33,300	21,300	19,000	32,800	32,000	35,200	43,100	38,900	34,000	28,800	32,600
24	36,800	33,400	20,000	19,400	35,200	31,300	35,300	42,000	43,300	33,300	28,300	31,800
25	36,700	33,700	19,000	18,900	28,000	30,600	35,100	41,900	41,400	33,000	27,900	31,500
26	36,900	33,900	19,000	18,800	22,800	31,100	34,700	41,200	41,800	32,800	27,600	31,300
27	36,800	33,100	19,000	18,700	18,900	30,700	34,700	40,500	47,900	32,000	27,700	31,000
28	36,600	31,100	18,500	18,900	17,200	30,300	34,800	40,000	50,400	32,000	27,700	30,800
29	36,600	29,100	18,500	19,800	---	31,000	35,300	39,400	50,900	32,300	27,700	31,000
30	37,300	26,500	19,600	20,200	---	32,400	36,000	39,400	48,400	32,000	27,700	30,800
31	37,900	---	20,300	20,400	---	32,900	---	38,900	---	31,700	27,800	---
TOTAL	1,153,100	1,006,000	641,000	595,500	624,700	795,000	1,025,700	1,432,500	1,260,100	1,249,400	909,000	968,100
MEAN	37,200	33,530	20,680	19,210	22,310	25,650	34,190	46,210	42,000	40,300	29,320	32,270
MAX	41,200	37,000	24,700	21,300	35,200	32,900	36,000	60,700	62,800	54,500	31,800	38,500
MIN	34,900	26,500	18,500	16,000	17,200	16,900	32,300	38,700	36,100	31,700	25,900	27,200
AC-FT	2,287,000	1,995,000	1,271,000	1,181,000	1,239,000	1,577,000	2,034,000	2,841,000	2,499,000	2,478,000	1,803,000	1,920,000
CFSM	0.09	0.08	0.05	0.05	0.05	0.06	0.08	0.11	0.10	0.10	0.07	0.08
IN.	0.10	0.09	0.06	0.05	0.06	0.07	0.09	0.13	0.11	0.11	0.08	0.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	44,640	80,050	(1998)	25,580	(1962)
	40,950	83,880	(1998)	17,000	(1962)
	27,220	57,380	(1998)	9,953	(1956)
	22,800	42,280	(1973)	10,800	(1957)
	28,470	53,140	(1997)	13,220	(1957)
	40,890	79,590	(1979)	15,380	(1957)
	51,040	106,100	(1997)	21,820	(1957)
	51,790	97,280	(1997)	33,790	(1956)
	56,420	130,600	(1984)	33,710	(1956)
	50,520	164,800	(1993)	29,650	(2002)
	44,590	78,730	(1996)	29,320	(2003)
	44,810	76,410	(1997)	32,270	(2003)

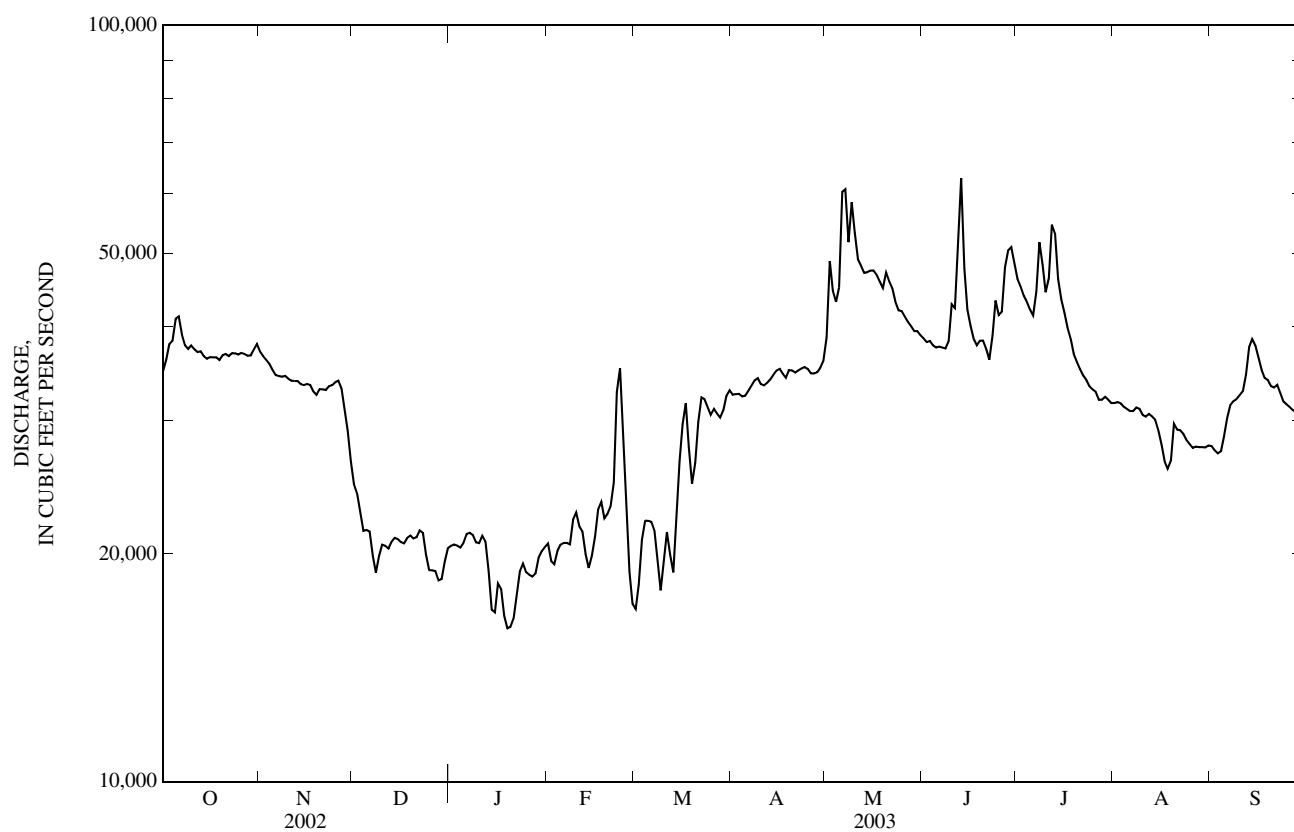
06813500 MISSOURI RIVER AT RULO, NE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003a	
ANNUAL TOTAL	11,295,000		11,660,100		42,040	
ANNUAL MEAN	30,950		31,950		71,880	
HIGHEST ANNUAL MEAN					26,340	
LOWEST ANNUAL MEAN					289,000	
HIGHEST DAILY MEAN	51,500	Aug 24	62,800	Jun 13	289,000	Jul 24, 1993
LOWEST DAILY MEAN	18,500	Dec 28	16,000	Jan 19 ^b	4,420	Jan 13, 1957
ANNUAL SEVEN-DAY MINIMUM	19,100	Dec 24	16,900	Jan 15	5,560	Nov 30, 1955
MAXIMUM PEAK FLOW			77,700	Jun 13	307,000	Jul 24, 1993
MAXIMUM PEAK STAGE			16.57	Jun 13	25.37	Jul 24, 1993
INSTANTANEOUS LOW FLOW			15,800	Jan 20		
ANNUAL RUNOFF (AC-FT)	22,400,000		23,130,000		30,460,000	
ANNUAL RUNOFF (CFSM)	0.075		0.077		0.10	
ANNUAL RUNOFF (INCHES)	1.01		1.05		1.38	
10 PERCENT EXCEEDS	37,100		44,400		66,500	
50 PERCENT EXCEEDS	33,100		32,800		38,500	
90 PERCENT EXCEEDS	21,400		19,900		19,000	

a Post regulation.

b Also Jan. 20.

c Estimated.



06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39° 56'52", long 96° 06'30", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, on left bank at downstream side of county highway bridge, 2.0 mi downstream from Clear Creek, 5.0 mi upstream from Big Nemaha River, and 8.0 mi northwest of Seneca.

DRAINAGE AREA.--276 mi².

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,037.53 ft above NGVD of 1929. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 9	0400	*3,680	*14.93	Jun 13	0359	3,110	13.76

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.57	24	5.5	6.4	e7.1	10	4.8	13	7.6	11	1.1	6.0
2	1.7	8.7	5.0	5.7	e6.3	9.7	4.5	11	11	9.1	1.6	5.2
3	5.8	6.1	4.2	6.4	e5.8	8.4	4.4	9.3	14	7.8	1.3	3.3
4	11	5.0	4.9	6.6	e5.4	9.7	5.1	8.6	12	6.9	1.2	2.1
5	7.2	5.0	5.8	6.6	e5.2	12	5.3	8.1	10	6.0	1.1	1.1
6	2.8	5.1	5.4	5.5	e5.0	11	7.5	8.4	34	5.4	0.96	0.58
7	1.0	4.9	4.8	5.6	e4.9	9.2	12	9.1	15	4.8	0.71	0.57
8	0.80	4.5	5.6	5.6	e5.3	9.2	13	368	11	4.4	0.57	0.98
9	0.69	4.2	6.1	5.2	e6.3	9.3	9.8	1,840	9.6	4.2	0.45	0.54
10	0.69	4.0	5.7	5.5	e7.2	8.7	6.5	288	444	4.5	0.28	4.4
11	0.63	3.8	5.3	6.3	e7.3	8.4	5.4	140	192	4.8	0.54	6.5
12	0.66	3.9	5.3	6.1	e7.0	8.9	4.6	71	227	4.1	0.46	4.9
13	0.54	3.4	5.9	6.1	e6.6	8.4	4.2	47	1,480	3.6	1.3	3.6
14	0.59	3.9	5.9	5.9	e6.6	8.3	3.9	38	224	3.4	0.82	2.0
15	0.56	4.2	5.5	5.8	e7.9	7.3	3.8	48	105	3.2	0.22	1.2
16	0.67	4.4	5.2	e5.0	e9.6	6.6	4.9	25	65	2.9	0.16	0.67
17	0.71	4.6	5.3	e5.1	e12	7.8	6.0	21	41	2.3	e0.12	0.40
18	1.0	4.3	5.1	e5.1	e13	12	5.7	18	29	2.1	e0.10	0.67
19	0.87	4.1	4.9	e5.0	e14	29	8.2	17	25	1.8	e0.11	e0.67
20	0.80	4.0	4.8	e5.0	e13	88	15	187	19	1.8	e11	0.67
21	0.75	4.0	5.6	e5.1	13	69	8.2	63	14	2.7	15	0.65
22	0.74	3.9	5.5	e5.0	9.9	27	5.5	30	13	3.7	5.9	0.77
23	0.92	4.3	5.5	e5.5	8.7	14	5.0	21	135	3.0	2.6	0.64
24	2.0	4.2	5.8	e6.2	e3.9	10	42	17	123	2.2	0.97	0.38
25	4.6	4.3	6.1	e7.0	e4.8	8.0	51	16	47	1.8	0.28	0.22
26	5.7	4.4	6.1	e7.1	8.9	7.1	26	14	26	1.4	0.19	0.16
27	4.5	4.6	6.1	e6.6	8.0	6.6	15	12	17	1.2	0.35	e0.14
28	3.5	5.2	6.3	e6.6	8.8	6.4	11	11	13	1.1	1.6	e0.11
29	3.0	5.0	6.0	e7.0	---	6.1	16	9.9	12	1.0	10	e0.10
30	20	6.9	5.7	e7.6	---	5.7	26	9.0	12	0.89	5.3	e0.11
31	79	---	6.8	e7.4	---	5.2	---	8.3	---	0.99	5.6	---
MEAN	5.29	5.30	5.54	5.99	7.91	14.4	11.3	109	113	3.68	2.32	1.64
MAX	79	24	6.8	7.6	14	88	51	1,840	1,480	11	15	6.5
MIN	0.54	3.4	4.2	5.0	3.9	5.2	3.8	8.1	7.6	0.89	0.10	0.10
AC-FT	325	315	341	368	439	887	675	6,720	6,720	226	143	98

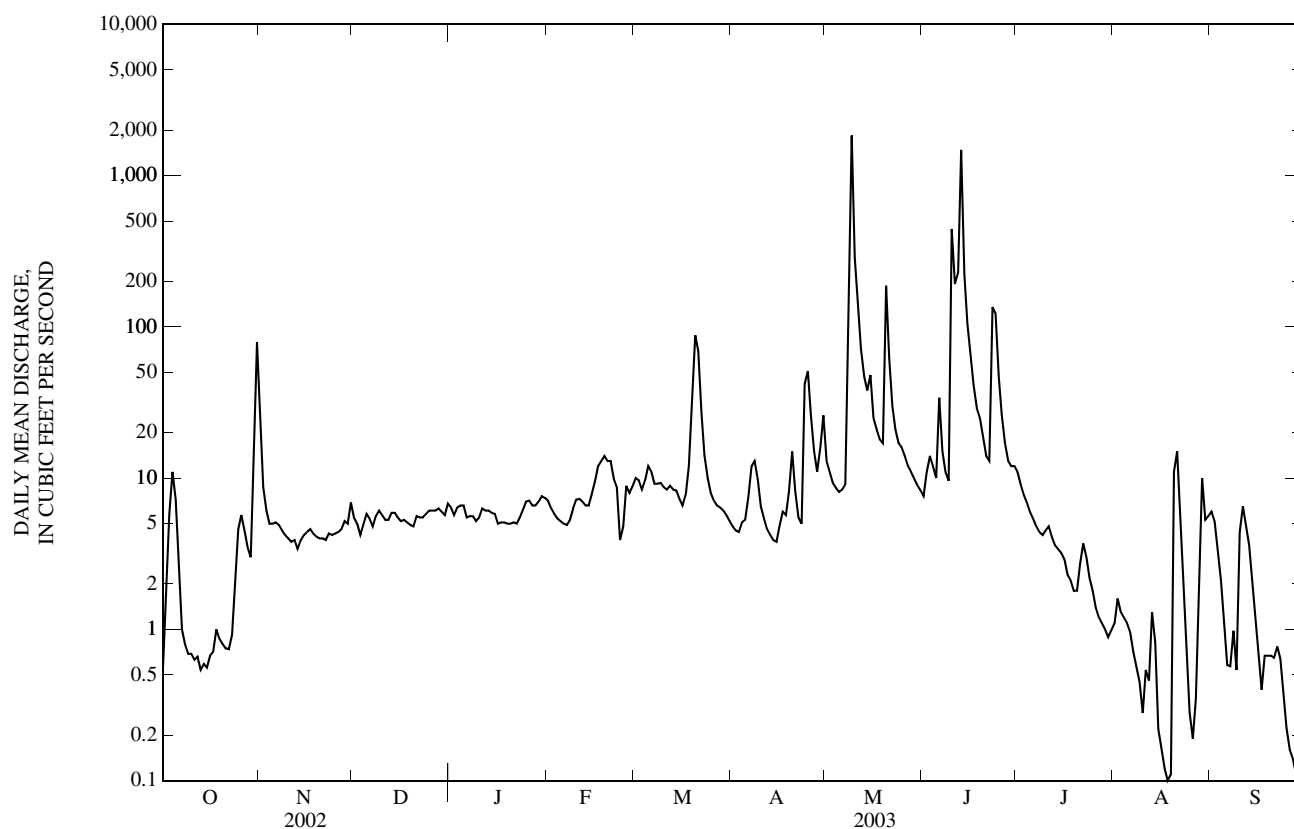
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	81.6	48.2	33.0	39.8	92.1	203	174	226	238	202	79.0	131
MAX	1,050	419	206	310	372	1,297	1,079	1,354	2,067	3,193	914	1,057
(WY)	(1974)	(1999)	(1974)	(1962)	(1982)	(1979)	(1984)	(1995)	(1951)	(1993)	(1954)	(1958)
MIN	0.000	0.000	0.000	0.000	0.018	0.065	0.28	2.43	2.75	0.92	1.48	0.000
(WY)	(1957)	(1957)	(1957)	(1957)	(1957)	(1957)	(1956)	(1989)	(1977)	(1989)	(1988)	(1956)

06814000 TURKEY CREEK NEAR SENECA, KS—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL MEAN	31.6		23.8		127	
HIGHEST ANNUAL MEAN					547	1993
LOWEST ANNUAL MEAN					3.24	1956
HIGHEST DAILY MEAN	1,390	May 12	1,840	May 9	16,700	Oct 11, 1973
LOWEST DAILY MEAN	0.52	Sep 24	0.10	Aug 18	0.00	Jul 28, 1956
ANNUAL SEVEN-DAY MINIMUM	0.59	Sep 23	0.17	Sep 24	0.00	Aug 21, 1956
MAXIMUM PEAK FLOW			3,680	May 9	21,400	Oct 11, 1973
MAXIMUM PEAK STAGE			14.93	May 9	24.77	Oct 11, 1973
INSTANTANEOUS LOW FLOW			0.10	Aug 16	0.00	Jul 28, 1956
ANNUAL RUNOFF (AC-FT)	22,840		17,250		92,340	
10 PERCENT EXCEEDS	49		24		200	
50 PERCENT EXCEEDS	11		5.6		21	
90 PERCENT EXCEEDS	0.82		0.67		2.0	

e Estimated



06815000 BIG NEMAHA RIVER AT FALLS CITY, NE

LOCATION.--Lat 40°02'08", long 95°35'45", in NE 1/4 SE 1/4 sec.22, T.1 N., R.16 E., Richardson County, Hydrologic Unit 10240008, on right bank near upstream side of bridge on U.S. Highway 73, 1 mi south of Falls City and 14.5 mi upstream from mouth.

DRAINAGE AREA.--1,339 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Nemaha River at Falls City.

REVISED RECORDS.--WSP 1086: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 858.24 ft above sea level. Prior to Oct. 16, 1952, nonrecording gage and Oct. 17, 1952 to Aug. 24, 1982 water-stage recorder for stages above 6.1 ft at site 150 ft downstream at datum 3.0 ft higher. Aug. 25, 1982 to Sept. 30, 1997 at present site, at datum 3.0 ft higher. Data collection platform at station.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	196	64	e72	e64	e60	49	176	49	277	60	53
2	60	177	65	e83	e70	e62	48	149	79	214	51	49
3	82	112	66	e90	e72	e64	49	121	83	177	39	46
4	150	84	64	e98	e67	e63	55	104	83	149	35	42
5	308	75	62	e83	e72	e59	59	100	72	128	33	31
6	169	71	53	e66	e74	e61	78	96	156	110	31	26
7	120	66	68	59	e77	e63	129	99	124	96	29	24
8	66	60	72	61	e75	e59	132	169	99	86	28	21
9	44	57	96	62	e77	e58	133	5,220	69	83	31	22
10	33	56	97	55	e78	e62	117	2,340	3,430	84	32	36
11	28	54	76	e57	e94	e64	102	964	1,650	78	38	40
12	25	52	72	e59	e103	68	88	535	4,250	91	55	35
13	21	51	70	e56	95	74	81	360	5,890	70	41	66
14	20	53	68	e55	e70	73	74	275	2,250	59	32	65
15	18	57	65	e53	e67	73	63	256	1,080	57	30	41
16	20	55	64	e53	e69	72	76	248	643	53	31	33
17	31	52	64	e52	e70	73	84	182	447	48	28	29
18	33	52	65	e57	e75	74	91	147	352	42	26	41
19	29	52	63	e55	102	97	121	138	305	41	25	49
20	27	53	61	e53	80	208	191	1,040	269	42	158	37
21	26	53	56	e53	74	260	243	662	242	47	133	26
22	27	53	e56	e52	63	312	189	360	216	51	64	28
23	35	54	e56	e51	58	202	117	223	2,640	45	34	25
24	60	55	e56	e52	e57	128	165	e180	2,990	41	23	24
25	100	56	e55	e52	e56	94	238	e150	1,500	37	25	22
26	173	57	e58	e51	e56	77	236	e130	994	35	25	23
27	110	60	e60	e52	e56	69	165	e112	675	36	31	23
28	100	62	e65	e54	e58	63	121	102	457	35	37	25
29	105	63	e72	e55	---	61	328	85	331	30	33	25
30	123	66	e75	e56	---	58	295	70	352	107	38	31
31	401	---	e62	e60	---	54	---	57	---	68	49	---
TOTAL	2,570	2,064	2,046	1,867	2,029	2,865	3,917	14,850	31,777	2,517	1,325	1,038
MEAN	82.9	68.8	66.0	60.2	72.5	92.4	131	479	1,059	81.2	42.7	34.6
MAX	401	196	97	98	103	312	328	5,220	5,890	277	158	66
MIN	18	51	53	51	56	54	48	57	49	30	23	21
AC-FT	5,100	4,090	4,060	3,700	4,020	5,680	7,770	29,450	63,030	4,990	2,630	2,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

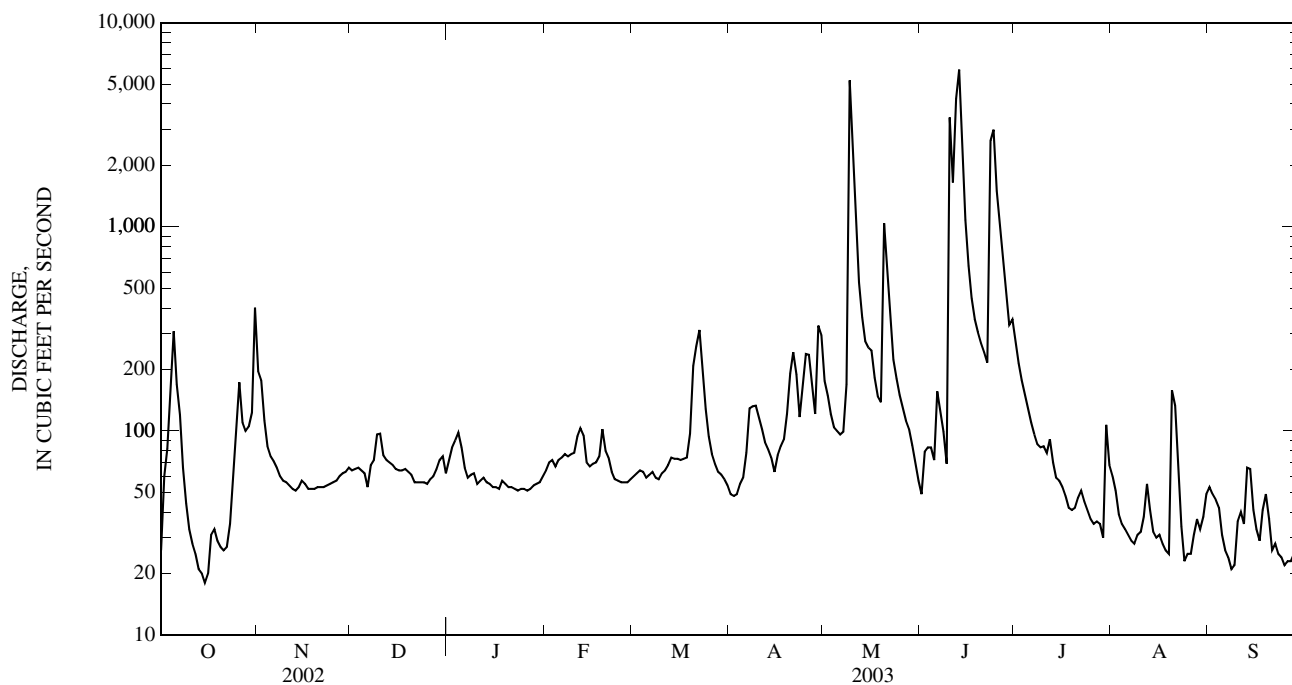
	MEAN	408	268	184	223	441	792	1,067	1,149	984	459	623
MAX	5,229	1,851	1,036	1,446	2,998	5,819	4,462	6,166	7,816	15,690	3,898	3,408
(WY)	(1974)	(1999)	(1974)	(1974)	(1949)	(1979)	(1984)	(1995)	(1951)	(1993)	(1954)	(1958)
MIN	21.0	28.1	24.1	19.9	42.2	42.5	32.3	44.5	46.4	20.7	29.8	16.6
(WY)	(1957)	(1957)	(1957)	(1957)	(1957)	(1956)	(1956)	(1989)	(1981)	(1977)	(1991)	(1956)

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	55,932.1		68,865		620	
ANNUAL MEAN	153		189		2,559	
HIGHEST ANNUAL MEAN					86.7	
LOWEST ANNUAL MEAN					57,600	
HIGHEST DAILY MEAN	2,640	May 12	5,890	Jun 13	1993	1956
LOWEST DAILY MEAN	7.1	Aug 9	18	Oct 15	Oct 11, 1973	Jul 9, 1977
ANNUAL SEVEN-DAY MINIMUM	11	Aug 5	23	Oct 11	Jul 4, 1977	Jul 4, 1977
MAXIMUM PEAK FLOW			16,700	Jun 12	71,600	Oct 11, 1973
MAXIMUM PEAK STAGE			19.12	Jun 12	*31.40	Oct 11, 1973
ANNUAL RUNOFF (AC-FT)	110,900		136,600		449,000	
10 PERCENT EXCEEDS	226		251		1,030	
50 PERCENT EXCEEDS	100		64		158	
90 PERCENT EXCEEDS	28		31		45	

e Estimated.

* Datum then in use.



BIG NEMAHA RIVER BASIN
06815000 BIG NEMAHA AT FALLS CITY, NE—Continued

WATER-QUALITY RECORDS

Pesticide Reconnaissance Study

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specif. conductance, wat unfiltered 25 degC (00095)	Temperature, water, deg C (00010)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	Aceto-chlor ESA, water, fltrd 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd 0.7u GF ug/L (61030)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor ESA, water, fltrd 0.7u GF ug/L (50009)
OCT 04...	1520	4.51	169	8.9	7.9	669	18.0	0.06	<0.05	0.11	0.14	<0.05	0.09

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ala-chlor OA, water, fltrd 0.7u GF ug/L (61031)	Ala-chlor, water, fltrd, ug/L (46342)	Ametryn water, fltrd, ug/L (38401)	Amino-methyl-phosphonic acid, wat flt ug/L (62649)	Atra-zine, water, fltrd, ug/L (39632)	Cyana-zine amide, water, fltrd, ug/L (61709)	Cyana-zine, water, fltrd, ug/L (04041)	Dimeth-enamid ESA, water, fltrd, ug/L (61951)	Dimeth-enamid OA, water, fltrd, ug/L (62482)	Dimeth-enamid water, fltrd, ug/L (61588)	Flufen-acet ESA, water, fltrd, ug/L (61952)	Flufe-nacet OA, water, fltrd, ug/L (62483)	Flufe-nacet, water, fltrd, ug/L (62481)
OCT 04...	0.05	<0.05	<0.05	0.3	0.13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Glufo-sinate, water, fltrd 0.7u GF ug/L (62721)	Glypho-sate, water, fltrd 0.7u GF ug/L (62722)	Metola-chlor ESA, water, fltrd 0.7u GF ug/L (61043)	Metola-chlor OA, water, fltrd 0.7u GF ug/L (61044)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Propa-chlor, water, fltrd, ug/L (04024)	Propa-zine, water, fltrd, ug/L (38535)	Sima-zine, water, fltrd, ug/L (04035)	Ter-butryn, water, fltrd, ug/L (38888)
OCT 04...	<0.1	<0.1	0.09	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Remark codes used in this table:
< -- Less than

06815000 BIG NEMAHA AT FALLS CITY, NE—Continued

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