

CROW RIVER BASIN

05276005 NORTH FORK CROW RIVER ABOVE PAYNESVILLE, MN

LOCATION.--Lat. 45°22'38", long 94°47'00", in SW¼NW¼ sec. 13, T. 122 N., R. 33 W., Kandiyohi County, Hydrologic Unit 07010204, on left bank at downstream end of bridge on County Highway 6, 0.8 mile south of State Highway 55, 1 mile west of Kandiyohi/Stearns County line, and 2.5 miles west of Paynesville.

DRAINAGE AREA.-- 232 mi².

PERIOD OF RECORD.-- April 1996 to current year.

GAGE.-- Water-stage recorder. Elevation of gage is 1190 ft above sea level (from topographic map).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	8.7	68	e39	e21	e21	e20	923	144	70
158	114	76							
2	8.2	69	e39	e22	e21	e19	1690	140	63
303	99	102							
3	7.3	64	e38	22	e20	e19	1990	136	58
279	91	97							
4	6.4	57	e37	e22	20	e19	1920	126	53
330	87	84							
5	6.7	53	e36	e21	20	e19	1980	120	49
340	78	74							
6	6.7	53	e36	e21	20	e18	2090	111	44
282	76	65							
7	6.6	53	e35	e20	20	e19	1830	109	39
245	72	62							
8	7.1	49	e34	e20	e20	e19	1630	122	36
263	67	64							
9	7.0	46	e34	e20	e20	e20	1510	123	33
231	63	74							
10	7.0	36	e33	e20	e20	e20	1320	121	30
230	61	69							
11	6.9	32	e33	e20	e20	e21	1090	116	27
226	57	62							
12	6.9	e30	e31	e20	e19	21	928	106	26
192	53	56							

13	7.1	e29	e30	e19	e19	e20	779	101	24
159	50	52							
14	7.0	e29	e28	e19	e19	e20	666	100	21
157	50	49							
15	7.4	29	e26	e19	e19	e19	593	95	21
173	58	49							
16	8.1	44	e25	e19	e19	e19	539	90	21
177	66	57							
17	25	86	e25	e19	e19	e20	489	85	20
141	62	66							
18	45	81	e24	e18	e20	e20	439	84	21
101	57	70							
19	47	67	e23	e18	e20	e20	392	84	23
93	85	67							
20	41	59	e23	e18	e20	e20	350	80	22
116	105	59							
21	36	53	23	e19	e20	20	319	75	20
139	110	53							
22	33	e48	e22	e19	e21	22	292	71	18
169	109	50							
23	35	e45	e22	e19	e21	26	267	71	17
210	101	48							
24	33	e42	e22	e19	e21	26	244	80	19
246	91	46							
25	32	e41	e21	e19	e21	25	223	87	19
367	82	42							
26	30	39	e21	e19	e21	27	206	82	17
318	75	40							
27	28	38	e21	e19	e20	46	191	74	15
243	68	38							
28	29	38	e21	e20	e20	91	177	71	15
207	61	38							
29	35	e39	e20	e20	---	159	166	77	155
193	61	35							
30	61	e39	e21	e20	---	239	155	81	175
170	67	34							
31	e77	---	e21	e20	---	357	---	76	---
134	77	---							
TOTAL	702.1	1456	864	611	561	1430	25388	3038	1171
6592	2353	1778							
MEAN	22.6	48.5	27.9	19.7	20.0	46.1	846	98.0	39.0
213	75.9	59.3							
MAX	77	86	39	22	21	357	2090	144	175
367	114	102							
MIN	6.4	29	20	18	19	18	155	71	15
93	50	34							
AC-FT	1390	2890	1710	1210	1110	2840	50360	6030	2320
13080	4670	3530							

o e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
MEAN	22.6	48.5	27.9	19.7	20.0	46.1	846	182	63.2
120	42.1	32.0							
MAX	22.6	48.5	27.9	19.7	20.0	46.1	846	265	87.3
213	75.9	59.3							
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996
1997	1997	1997							
MIN	22.6	48.5	27.9	19.7	20.0	46.1	846	98.0	39.0
27.1	8.25	4.68							
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997
1996	1996	1996							
<i>SUMMARY STATISTICS</i>			<i>FOR 1997 WATER YEAR</i>			<i>WATER YEARS 1996 - 1997</i>			
ANNUAL TOTAL				45944.1					
ANNUAL MEAN				126			126		
HIGHEST ANNUAL MEAN							126		
LOWEST ANNUAL MEAN							126		
HIGHEST DAILY MEAN				2090	Apr	6	2090	Apr	6
LOWEST DAILY MEAN				6.4	Oct	4	2.4	Sep	15
ANNUAL SEVEN-DAY MINIMUM				6.8	Oct	4	2.6	Sep	13
INSTANTANEOUS PEAK FLOW				2150	Apr	6	2150	Apr	6
INSTANTANEOUS PEAK STAGE				14.34	Apr	6	14.34	Apr	6
INSTANTANEOUS LOW FLOW				5.4	Oct	4	2.0	Sep	1
ANNUAL RUNOFF (AC-FT)				91130			91160		
10 PERCENT EXCEEDS				241			279		
50 PERCENT EXCEEDS				42			38		
90 PERCENT EXCEEDS				19			7.8		

(National Water-Quality Assessment Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1996 to current year.

PERIOD OF DAILY RECORD:

WATER TEMPERATURES.-- May 1996 to current year.

SPECIFIC CONDUCTANCE.-- May 1996 to current year.

INSTRUMENTATION.-- Water-quality monitor since May 1996, provides continuous recordings. Sensor located at gage.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Temperature and conductance at the sensor was compared with the average for the river by cross section at least monthly. Variation of temperature was within 0.5°C; variation of conductance was within 32% (corrections

applied).

EXTREMES FOR PERIOD OF DAILY RECORD:

TEMPERATURE.-- Maximum, 31.5 °C, Aug. 6, 1996; minimum 0.0 °C, many days during winter of 1997.

SPECIFIC CONDUCTANCE.-- Maximum, 855 µs/cm, Oct 31, 1996; minimum, 196 µs/cm, Apr. 4, 1997.

EXTREMES FOR CURRENT YEAR:

TEMPERATURE.-- Maximum, 29.5 °C, June 27; minimum 0.0 °C, many days during winter.

SPECIFIC CONDUCTANCE.-- Maximum, 855 µm/cm, Oct. 31; minimum, 196 µm/cm, Apr. 4.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MAX	MIN	MEAN							
		OCTOBER		NOVEMBER					
DECEMBER			JANUARY						
1	21.0	13.0	16.0	.5	.0	.0	.0	.0	.0
.0	.0	.0							
2	16.0	9.5	12.5	1.0	.0	.0	.0	.0	.0
.0	.0	.0							
3	14.5	6.5	10.0	2.5	.0	1.0	.0	.0	.0
.0	.0	.0							
4	13.0	7.0	9.5	2.5	.5	1.5	.0	.0	.0
.0	.0	.0							
5	19.5	9.5	13.5	4.5	2.5	3.0	.0	.0	.0
.0	.0	.0							
6	15.0	10.5	13.0	5.0	3.5	4.5	.0	.0	.0
.0	.0	.0							
7	16.5	8.0	11.5	5.0	2.0	3.5	.0	.0	.0
.0	.0	.0							
8	14.5	7.5	11.0	3.5	2.0	2.5	.0	.0	.0
.0	.0	.0							
9	14.0	8.5	10.5	2.0	.0	1.0	.0	.0	.0
.0	.0	.0							
10	14.5	5.5	9.5	1.0	.0	.0	.0	.0	.0
.0	.0	.0							
11	14.0	5.5	9.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
12	16.0	7.5	11.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
13	17.5	9.0	12.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							

14	16.5	9.5	12.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
15	17.5	10.5	14.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
16	15.0	10.5	12.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
17	11.0	6.5	9.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
18	8.0	4.5	6.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
19	9.0	4.5	6.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
20	9.5	7.0	8.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
21	10.5	7.5	8.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
22	7.5	6.0	7.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
23	8.5	5.5	6.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
24	7.5	5.5	6.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
25	8.5	5.5	7.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
26	11.5	8.5	9.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
27	10.0	6.5	8.5	.0	.0	.0	.0	.0	.0
.0	.0	.0							
28	9.0	5.0	7.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
29	7.5	6.5	7.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
30	7.0	1.0	3.0	.0	.0	.0	.0	.0	.0
.0	.0	.0							
31	1.0	.0	.0	---	---	---	.0	.0	.0
.0	.0	.0							
MONTH	21.0	.0	9.3	5.0	.0	.6	.0	.0	.0
.0	.0	.0							

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MAX	MIN	MEAN							
		FEBRUARY			MARCH				
APRIL			MAY						
1	.0	.0	.0	.0	.0	.0	.5	.0	.0
12.5	7.0	9.5							
2	.0	.0	.0	.0	.0	.0	.5	.0	.5
11.0	9.5	10.5							
3	.0	.0	.0	.0	.0	.0	3.0	.0	1.5
12.5	7.5	10.0							

4	.0	.0	.0	.0	.0	.0	5.5	3.0	4.5
15.0	9.0	12.0							
5	.0	.0	.0	.0	.0	.0	6.5	5.5	6.0
15.0	12.0	13.0							
6	.0	.0	.0	.0	.0	.0	6.0	.0	3.0
16.5	10.5	13.5							
7	.0	.0	.0	.0	.0	.0	.0	.0	.0
15.0	12.0	13.0							
8	.0	.0	.0	.0	.0	.0	.5	.0	.0
12.0	8.0	10.0							
9	.0	.0	.0	.0	.0	.0	1.5	.0	.5
13.0	6.5	10.0							
10	.0	.0	.0	.0	.0	.0	1.0	.0	.5
15.5	9.5	13.0							
11	.0	.0	.0	.0	.0	.0	2.5	.0	1.0
14.5	9.0	12.0							
12	.0	.0	.0	.0	.0	.0	4.0	.5	2.0
11.0	7.0	9.0							
13	.0	.0	.0	.0	.0	.0	6.5	2.0	4.0
9.5	7.5	8.0							
14	.0	.0	.0	.0	.0	.0	8.5	4.0	6.5
9.5	7.0	8.0							
15	.0	.0	.0	.0	.0	.0	7.5	5.5	6.5
12.0	5.5	9.0							
16	.0	.0	.0	.0	.0	.0	6.5	3.0	5.0
16.0	9.0	12.5							
17	.0	.0	.0	.0	.0	.0	8.5	4.0	6.0
19.0	12.5	15.5							
18	.0	.0	.0	.0	.0	.0	9.0	7.0	7.5
19.5	15.5	17.0							
19	.0	.0	.0	.0	.0	.0	12.0	7.0	9.5
16.0	12.0	13.5							
20	.0	.0	.0	.0	.0	.0	13.0	9.5	11.5
16.5	10.0	13.0							
21	.0	.0	.0	.0	.0	.0	13.5	10.5	12.0
18.0	11.5	15.0							
22	.0	.0	.0	.0	.0	.0	13.0	9.0	11.0
15.5	13.5	14.0							
23	.0	.0	.0	.0	.0	.0	12.5	10.0	11.5
13.5	12.5	13.0							
24	.0	.0	.0	.0	.0	.0	12.0	9.0	10.5
14.5	13.0	13.5							
25	.0	.0	.0	.0	.0	.0	12.5	9.0	11.0
18.0	11.5	14.5							
26	.0	.0	.0	.5	.0	.0	12.5	10.0	11.0
16.5	12.0	14.5							
27	.0	.0	.0	.5	.0	.0	14.5	10.5	12.5
16.5	12.0	14.5							
28	.0	.0	.0	.0	.0	.0	15.0	10.5	13.0
15.0	13.0	14.0							
29	---	---	---	.5	.0	.0	14.5	12.0	13.0

14.0	12.0	13.0							
30	---	---	---	.0	.0	.0	12.0	9.0	10.0
19.5	11.5	15.5							
31	---	---	---	.5	.0	.0	---	---	---
22.5	15.5	19.0							
MONTH	.0	.0	.0	.5	.0	.0	15.0	.0	6.4
22.5	5.5	12.7							

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MAX	MIN	MEAN							
		JUNE			JULY				
AUGUST			SEPTEMBER						
1	23.5	18.0	20.5	24.5	21.5	22.5	25.0	19.5	22.0
25.0	21.0	22.5							
2	23.0	18.5	20.5	21.5	18.0	19.5	26.5	21.5	23.5
22.0	19.0	20.5							
3	21.5	19.0	20.5	18.0	16.0	17.0	27.0	22.0	24.5
21.0	17.0	19.0							
4	25.0	18.5	21.5	18.5	15.0	16.5	26.5	22.5	24.5
19.5	17.0	18.0							
5	25.0	19.5	22.5	19.0	16.0	17.5	25.5	21.0	23.5
22.5	17.0	19.5							
6	25.0	19.0	22.0	20.0	16.5	18.0	26.0	21.5	24.0
---	---	---							---
7	24.5	19.0	22.0	18.5	15.5	16.5	26.5	21.0	24.0
---	---	---							---
8	25.0	18.5	21.5	17.0	15.0	16.0	26.0	21.5	23.5
22.0	19.0	20.5							
9	25.5	19.0	22.5	19.0	15.5	17.0	23.0	20.5	21.5
21.0	18.0	19.5							
10	26.0	20.0	23.0	20.5	17.0	19.0	22.5	18.0	20.0
20.5	16.0	18.5							
11	25.0	20.5	23.0	23.5	19.0	21.0	22.0	18.0	20.0
21.0	16.5	18.5							
12	25.0	19.5	22.5	25.0	22.0	23.5	22.0	19.5	20.5
19.5	1.0	18.0							
13	26.5	19.5	23.0	27.0	23.0	24.5	22.5	17.0	20.0
20.0	17.5	18.5							
14	27.0	19.0	23.0	25.0	22.5	23.5	20.0	17.5	18.0
21.0	16.5	18.5							
15	24.5	20.5	22.0	26.0	21.5	23.5	21.5	17.0	19.0
21.5	19.0	20.0							
16	25.0	18.0	21.0	27.5	23.0	25.0	22.5	18.0	20.5
20.0	18.0	19.5							
17	21.5	18.5	20.0	28.5	24.0	26.5	20.5	18.0	19.0
20.0	16.0	18.0							
18	20.0	18.0	19.0	27.0	25.0	26.0	20.5	17.0	18.5
21.5	16.5	19.0							
19	25.5	17.0	21.0	25.5	22.5	24.0	18.5	17.0	17.5

20.0	16.5	18.5								
20	26.5	21.5	23.0	26.0	22.5	24.0	20.0	16.5	18.0	
17.5	13.5	15.5								
21	27.0	20.0	23.5	25.0	22.5	23.5	21.0	16.5	19.0	
16.5	12.0	14.5								
22	25.0	21.0	23.0	23.0	20.5	21.5	21.0	17.5	19.0	
14.5	13.0	14.0								
23	29.0	20.0	24.5	23.0	20.0	21.5	22.5	18.0	20.0	
16.5	11.5	14.0								
24	27.5	23.0	24.5	22.0	21.0	21.5	22.5	19.5	21.0	
17.0	11.5	14.5								
25	26.0	20.5	23.0	24.5	21.0	22.5	24.0	19.5	21.5	
19.0	13.5	16.0								
26	28.0	19.5	23.5	26.0	23.0	24.5	25.5	21.0	23.0	
18.0	14.5	16.5								
27	29.5	21.5	25.5	26.0	23.5	24.5	26.0	22.0	23.5	
20.5	16.0	17.5								
28	24.5	20.0	22.5	25.0	22.5	23.5	25.0	20.5	23.0	
17.5	14.5	16.0								
29	20.0	17.5	19.0	24.0	21.5	23.0	23.0	20.5	22.0	
15.0	12.0	13.5								
30	23.0	18.5	21.0	24.0	20.5	22.5	24.5	21.0	22.5	
16.5	11.5	14.0								
31	---	---	---	22.0	20.0	21.0	24.5	20.0	22.0	---
---	---	---								
MONTH	29.5	17.0	22.1	28.5	15.0	21.6	27.0	16.5	21.2	---
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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
MAX	MIN	MEAN								
OCTOBER			NOVEMBER							
DECEMBER			JANUARY							
1	627	457	543	702	649	678	678	671	674	
685	674	679								
2	626	483	561	713	685	699	683	671	678	
674	664	669								
3	657	466	572	711	677	696	687	682	685	
664	658	661								
4	630	465	562	685	672	681	692	684	689	
658	653	655								
5	587	370	503	674	666	670	692	689	690	
655	652	654								
6	549	451	510	666	655	659	689	681	685	
655	653	654								

7	582	387	506	658	648	653	686	680	683
660	655	657							
8	584	410	509	650	594	645	689	682	686
662	660	661							
9	566	399	498	642	637	640	692	686	690
662	658	660							
10	604	365	511	657	638	649	695	690	693
663	657	660							
11	594	379	502	679	655	667	695	684	690
666	662	665							
12	551	369	473	689	675	680	686	676	682
666	665	665							
13	529	342	450	693	675	683	687	676	683
667	665	666							
14	507	342	441	713	677	702	699	682	695
667	665	665							
15	482	335	420	710	704	707	701	696	699
666	662	664							
16	476	375	432	704	606	667	706	699	704
665	661	662							
17	477	417	443	618	592	606	711	704	707
673	664	667							
18	531	472	502	636	616	628	728	709	723
673	670	672							
19	567	515	536	673	634	655	739	725	731
673	668	671							
20	583	548	567	693	673	688	740	737	739
668	662	665							
21	605	540	580	688	683	685	737	722	727
664	657	662							
22	605	573	593	687	683	685	724	719	721
660	655	657							
23	606	525	577	687	683	685	721	717	719
657	626	656							
24	603	543	584	684	678	681	719	710	714
659	653	656							
25	602	520	560	688	680	684	719	714	716
654	653	654							
26	536	489	512	690	683	685	718	714	717
658	654	656							
27	526	464	499	696	683	691	718	711	714
659	657	658							
28	537	443	500	699	695	697	711	700	705
662	659	660							
29	500	432	472	696	686	691	706	699	702
663	662	662							
30	590	437	523	688	675	682	707	699	704
663	662	663							
31	855	583	661	---	---	---	699	685	691
663	659	661							
MONTH	855	335	519	713	592	674	740	671	701

685 626 662

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MAX	MIN	MEAN							
	FEBRUARY			MARCH					
APRIL			MAY						
1	660	656	658	678	668	673	269	209	236
566	557	561							
2	656	653	654	669	665	667	214	200	207
568	562	566							
3	654	652	653	671	662	666	233	199	213
574	567	570							
4	654	653	654	670	660	664	245	196	229
579	569	574							
5	653	649	651	669	660	661	255	228	247
583	574	580							
6	651	649	650	666	654	660	275	234	262
822	581	605							
7	651	649	650	660	654	656	295	275	287
743	579	600							
8	660	651	654	658	656	657	317	287	304
594	589	592							
9	662	655	660	659	655	657	322	303	317
595	590	592							
10	666	661	664	658	653	655	341	322	331
742	591	600							
11	670	666	668	656	648	653	367	341	354
596	584	591							
12	672	669	671	650	645	648	395	367	379
590	586	588							
13	673	671	672	651	646	647	423	395	409
593	582	588							
14	673	672	673	649	645	647	441	423	433
594	583	588							
15	674	672	673	650	645	647	449	441	446
591	583	587							
16	676	674	675	660	650	654	450	446	448
595	584	589							
17	675	674	675	668	660	664	457	448	452
597	581	589							
18	674	670	673	674	668	671	467	457	462
598	581	590							
19	671	667	669	675	669	673	480	467	473
593	578	586							
20	669	665	667	669	655	662	493	480	487
594	585	589							

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

		DIS-	SPE-	SPE-	PH	PH		BARO-		
		CHARGE,	SPE-	CIFIC	WATER	WATER		METRIC		
		INST.	CIFIC	CON-	WHOLE	WHOLE		PRES-		
		CUBIC	CON-	DUCT-	FIELD	LAB	TEMPER-	SURE	OXYGEN,	
(PER-		FEET	DUCT-	ANCE	(STAND-	(STAND-	ATURE	(MM	DIS-	
CENT	TIME	PER	ANCE	LAB	ARD	ARD	WATER	OF	SOLVED	
DATE		SECOND	(US/CM)	(US/CM)	UNITS)	UNITS)	(DEG C)	HG)	(MG/L)	
SATUR-		(00061)	(00095)	(90095)	(00400)	(00403)	(00010)	(00025)	(00300)	
ATION)										
(00301)										
OCT										
03...	1035	6.7	599	616	8.3	8.2	8.0	746	12.5	108
NOV										
01...	1055	57	688	719	7.9	7.9	0.0	733	12.5	90
DEC										
02...	1122	39	678	706	7.4	7.6	0.0	731	10.4	74
JAN										
15...	1145	43	664	692	7.2	7.5	0.0	734	6.6	47
FEB										
11...	1200	20	668	682	7.2	7.7	0.0	737	6.7	48
MAR										
06...	1120	18	658	678	7.2	7.7	0.0	743	8.1	57
APR										
02...	1240	1670	201	213	7.4	7.6	0.5	745	10.7	76
09...	1138	1600	320	343	7.4	7.5	0.5	747	9.7	68
MAY										
05...	1150	127	578	590	8.3	8.1	13.0	727	11.2	112
30...	1200	83	605	600	8.3	8.3	14.5	735	11.8	120
JUN										
17...	1110	20	592	583	8.4	8.3	19.5	738	11.2	126
30...	1145	190	494	474	7.8	7.8	20.0	732	6.4	73
JUL										
08...	1120	266	539	522	7.8	8.0	15.5	735	7.0	72
23...	1218	213	490	487	7.8	8.0	21.0	736	6.6	77
AUG										
05...	1142	78	585	567	8.4	8.4	23.0	740	11.1	133
SEP										
03...	1347	99	583	581	8.2	8.3	19.5	--	7.7	86
17...	1115	66	607	587	8.1	8.1	17.0	731	9.6	101

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

		ALKA-	BICAR-	CAR-	NITRO-	NITRO-	NITRO-	NITRO-
		LINITY	BONATE	BONATE	GEN,	GEN,	GEN,AM-	GEN,AM-
		WAT DIS	LINITY	WATER	WATER	AMMONIA	NITRITE	MONIA +
		NESS	LINITY	WATER	WATER	AMMONIA	NITRITE	MONIA +

NO2+NO3 DIS- SOLVED DATE (MG/L N) (00631) OCT 03... 0.610 NOV 01... 0.800 DEC 02... 1.20 JAN 15... 1.20 FEB 11... 1.50 MAR 06... 1.40 APR 02... 1.20 09... 1.90 MAY 05... 0.496 30... 0.620 JUN 17... 0.612 30... 3.56 JUL 08... 1.10 23... 0.500 AUG 05... 0.641 SEP 03... 0.776 17...	TOTAL (MG/L CACO3) (00900)	TOT IT FIELD MG/L CACO3 (39086)	LAB (MG/L CACO3) (90410)	DIS IT FIELD MG/L HCO3 (00453)	DIS IT FIELD MG/L CO3 (00452)	DIS- SOLVED (MG/L AS N) (00608)	DIS- SOLVED (MG/L AS N) (00613)	ORGANIC DIS. (MG/L AS N) (00623)	ORGANIC TOTAL (MG/L AS N) (00625)	AS
	310	261	270	318	0	<0.015	0.020	0.30	0.40	
	350	263	259	321	0	0.050	0.020	0.50	0.90	
	370	249	307	304	0	0.150	0.030	0.50	0.90	
	340	308	316	376	0	0.210	0.030	0.70	0.60	
	360	316	317	386	0	0.180	0.020	0.60	0.50	
	330	310	316	378	0	0.180	<0.010	0.60	0.60	
	94	80	81	98	0	0.650	0.050	1.4	2.0	
	160	130	137	159	0	0.280	0.050	1.1	1.4	
	320	257	266	314	0	<0.015	<0.010	0.46	0.61	
	320	269	279	328	0	<0.015	0.012	0.45	0.60	
	300	243	243	287	5	<0.015	0.024	0.42	0.55	
	240	178	184	217	0	0.198	0.112	1.1	1.1	
	260	231	243	282	0	0.032	0.020	0.82	0.97	
	230	207	225	253	0	<0.015	<0.010	1.0	1.3	
	300	246	282	295	2	0.015	0.017	0.66	0.92	
	280	263	275	321	0	<0.015	0.014	0.71	0.83	
	330	286	278	349	0	<0.015	0.012	0.53	0.71	

0.618

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SODIUM SIUM, DIS- SOLVED DATE (MG/L K) (00935) OCT 03... NOV 01... DEC 02... JAN 15... FEB 11... MAR 06... APR 02... 09... MAY 05... 30... JUN 17... 30... JUL 08... 23... AUG 05... SEP 03... 17...	POTAS- PHOS- PHORUS DIS- TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00689)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	MAGNE- SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	AD- SORP- TION RATIO (00931)	AS (00935)
	<0.010	<0.010	0.010	4.6	0.40	78	29	7.2	0.2	3.3
	0.100	0.050	0.050	6.6	1.4	92	30	7.1	0.2	4.4
	0.030	<0.010	0.010	5.2	0.70	95	33	7.0	0.2	3.1
	0.040	0.020	0.020	5.0	--	85	30	6.3	0.1	2.9
	<0.010	0.020	0.010	4.7	--	90	32	6.8	0.2	2.8
	<0.010	<0.010	0.020	4.8	0.20	85	29	6.5	0.2	2.8
	0.510	0.400	0.360	7.2	1.5	25	7.7	1.9	0.1	4.0
	0.220	0.170	0.160	8.7	1.1	42	13	2.7	0.1	4.5
	0.095	<0.010	<0.010	6.4	0.60	81	28	5.7	0.1	2.9
	<0.010	<0.010	<0.010	6.2	0.60	83	28	6.0	0.1	2.3
	<0.010	<0.010	<0.010	5.3	0.10	72	29	7.1	0.2	2.7
	0.243	0.202	0.177	9.7	2.9	63	21	5.4	0.2	4.0
	0.150	0.104	0.106	9.4	1.0	67	23	5.0	0.1	2.7
	0.244	0.213	0.166	14	1.3	60	20	4.0	0.1	3.7
	0.089	0.061	0.058	9.8	0.50	77	27	5.2	0.1	2.1
	0.105	0.067	0.074	8.8	0.60	71	26	5.6	0.1	3.3
	0.030	0.032	0.029	6.9	0.80	86	28	6.2	0.1	2.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SED. SUSP. SIEVE DIAM. FINER DATE THAN	SOLIDS, SOLIDS,										
	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SULFATE DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	% E54 E62	
.062 MM (70331)	(00940)	(00945)	(00950)	(00955)	(01046)	(01056)	(70300)	(70301)	(80154)		
OCT 03...	17	51	0.20	15	8.0	60	378	360	37	77	
NOV 01...	18	110	0.20	16	25	89	466	439	86	58	
DEC 02...	18	56	0.20	19	22	120	429	386	49	36	
JAN 15...	14	44	0.20	20	10	140	426	393	48	36	
FEB 11...	14	40	0.20	22	13	150	417	405	51	34	
MAR 06...	15	39	0.20	20	9.0	130	412	390	76	27	
APR 02...	4.7	10	0.10	6.8	43	57	130	116	53	82	
09...	7.9	20	0.16	11	38	5.6	208	189	23	63	
MAY 05...	13	40	<0.10	7.0	56	49	356	335	38	48	
30...	14	36	0.14	8.7	48	45	366	341	12	97	
JUN 17...	15	45	0.14	9.2	4.3	22	372	330	68	55	
30...	13	40	0.20	17	23	51	315	287	53	98	
JUL 08...	12	28	0.17	21	32	33	351	303	39	79	
23...	10	21	0.23	25	36	33	338	271	20	94	
AUG 05...	12	22	0.24	23	12	35	383	319	125	31	
SEP 03...	14	24	0.22	20	13	27	369	325	E54	E62	
17...	14	24	0.17	22	13	38	374	357	49	42	