

## Elm Creek Gauging Station Data

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES  
 Station No 05287890 Elm Creek Nr Champlin, MN Source Agency USGS State 27 County 053  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

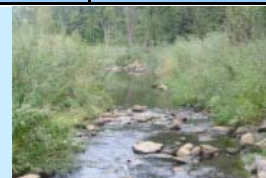
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	115	e15	e4.0	1.6	e7.5	86	35	33	57	5.4	e4.1
2	20	115	e13	e3.9	1.7	e6.0	80	32	29	54	5.1	3.9
3	17	113	e13	e3.9	1.7	e7.0	76	29	25	53	5.0	e3.7
4	15	110	e12	e3.9	1.6	8.4	69	25	23	51	5.1	e5.7
5	12	105	12	e3.9	2.2	7.0	63	22	26	48	4.4	e7.4
6	9.6	99	11	e3.6	3.8	11	59	22	25	45	4.2	e9.2
7	7.6	93	11	e3.2	3.6	28	54	20	24	42	3.9	e10
8	7.2	88	11	e3.1	2.5	e31	50	19	33	39	4.0	e11
9	6.7	84	10	e3.0	2.9	e25	46	21	42	36	4.2	10
10	6.2	80	11	e2.6	e2.8	e28	44	24	54	32	4.3	9.9
11	6.2	76	11	e2.2	2.6	e32	44	24	65	29	3.9	8.8
12	5.8	72	e10	e2.2	2.2	e29	48	22	69	26	3.8	8.8
13	5.7	68	e9.4	e1.5	3.0	e26	48	27	73	23	3.4	15
14	5.5	65	e8.1	e1.3	8.8	e22	45	33	80	20	3.3	27
15	6.0	62	e7.8	e1.4	e17	e15	42	36	80	18	3.1	29
16	6.2	57	e7.4	e1.5	e19	12	44	35	76	16	3.4	25
17	6.0	48	e7.1	1.6	e17	e11	58	36	70	14	4.6	22
18	5.7	40	e7.4	1.9	e15	e8.1	66	45	64	12	4.1	18
19	5.6	35	e6.5	1.7	e14	7.9	75	64	58	11	4.1	e16
20	5.5	35	e6.3	1.6	e13	6.4	82	74	62	12	3.8	e15
21	5.2	32	e6.6	e3.0	e12	7.4	83	83	81	11	3.4	e15
22	5.3	30	e5.3	e2.2	e12	8.7	79	89	74	8.6	3.1	e50
23	6.9	29	e4.0	1.6	e11	11	72	87	66	9.0	3.0	85
24	7.2	26	e3.6	1.5	e10	13	65	78	62	9.6	2.9	86
25	7.2	23	e4.5	1.5	e9.3	15	58	70	59	8.7	4.6	89
26	27	22	e3.9	1.6	e8.6	15	54	64	57	9.0	7.4	91
27	37	21	e3.9	1.7	e7.9	18	50	59	55	8.4	6.9	89
28	58	e17	e3.9	1.8	e7.2	25	45	53	56	7.7	6.4	87
29	103	e16	e3.9	1.7	---	39	41	49	56	7.0	5.9	83
30	118	e15	e4.4	1.7	---	66	37	43	58	6.1	6.1	75
31	117	---	e4.1	1.8	---	90	---	38	---	5.6	5.0	---



## Elm Creek Gauging Station Data, continued

Statistics for Water Year October 2004 to September 2005													
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
TOTAL	670.3	1,791	248.1	72.1	214.0	636.4	1,763	1,358	1,635	728.7	137.8	1,009.5	
MEAN	21.6	59.7	8.00	2.33	7.64	20.5	58.8	43.8	54.5	23.5	4.45	33.6	
MAX	118	115	15	4.0	19	90	86	89	81	57	7.4	91	
MIN	5.2	15	3.6	1.3	1.6	6.0	37	19	23	5.6	2.9	3.7	
AC-FT	1,330	3,550	492	143	424	1,260	3,500	2,690	3,240	1,450	273	2,000	
CFSM	0.25	0.69	0.09	0.03	0.09	0.24	0.68	0.51	0.63	0.27	0.05	0.39	
IN.	0.29	0.77	0.11	0.03	0.09	0.28	0.76	0.59	0.71	0.32	0.06	0.44	
Statistics of monthly mean data for water years 1979-2005, by Water Year (WY)													
MEAN	30.2	22.6	11.0	5.07	9.30	60.4	103	70.9	54.6	41.9	30.9	29.0	
MAX	240	67.4	41.3	22.0	99.1	185	414	203	196	157	151	170	
(WY)	(1986)	(1994)	(1992)	(1992)	(1984)	(1985)	(2001)	(2002)	(2004)	(1993)	(2002)	(1991)	
MIN	1.13	1.03	0.92	0.74	0.91	3.86	5.31	3.54	1.34	0.76	1.44	1.08	
(WY)	(1990)	(1990)	(1990)	(1991)	(1990)	(2001)	(1987)	(2000)	(1988)	(1988)	(1989)	(1988)	
Summary Statistics				2004 Calendar Year		2005 Water Year		Water Years 1979-2005					
ANNUAL TOTAL				13,870.51		10,263.9							
ANNUAL MEAN				37.9		28.1		39.1					
HIGHEST ANNUAL MEAN								82.2					
LOWEST ANNUAL MEAN								4.54					
HIGHEST DAILY MEAN				346		Jun 3		118		Oct 30		815	
LOWEST DAILY MEAN				0.50		Jan 29		1.3		Jan 14		0.31	
ANNUAL SEVEN-DAY MINIMUM				0.62		Jan 26		1.6		Jan 13		0.35	
MAXIMUM PEAK FLOW								118		Oct 30		875	
MAXIMUM PEAK STAGE								6.46		Oct 30		10.02	
INSTANTANEOUS LOW FLOW								a1.3		Jan 14		0.29	
ANNUAL RUNOFF (AC-FT)				27,510				20,360				28,350	
ANNUAL RUNOFF (CFSM)				0.441				0.327				0.455	
ANNUAL RUNOFF (INCHES)				6.00				4.44				6.18	
10 PERCENT EXCEEDS				106				75				108	
50 PERCENT EXCEEDS				12				15				12	
90 PERCENT EXCEEDS				0.80				3.1				1.9	

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## USGS Automatic Event Samples for Water Year 2005

DATE & TIME	Sp Cond mS/cm	pH	TSS mg/L	COD mg/L	Ammonia mg/L	Nitrite mg/L	Total N mg/L	Dissolved NO <sub>2</sub> +NO <sub>3</sub> mg/L	Total P mg/L	Dissolved P mg/L	Dissolved Chloride mg/L
Oct 28, 2004 04:34 to Oct 30, 2004 10:34	439	7.9	10	40	E.04	0.012	1.2	0.42	0.21	0.11	46.7
Apr 16, 2005 15:52 to Apr 19, 2005 09:52	530	7.9	25	40	0.05	<.008	1.4	0.07	0.2	0.08	63.6
Jun 08, 2005 11:47 to Jun 10, 2005 08:47	565	7.8	<10	40	0.05	0.014	1.3	0.2	0.24	0.17	64.8
Jun 10, 2005 13:10 to Jun 13, 2005 10:10	554	7.8	25	40	E.04	0.013	1.4	0.21	0.31	0.2	62.2
Jun 20, 2005 15:00 to Jun 21, 2005 00:00	458	7.6	208	60	0.09	0.016	2	0.88	0.51	0.22	46.9
Aug 26, 2005 04:52 to Aug 26, 2005 16:53	568	8.1	15	40	0.23	0.089	1.8	0.36	0.36	0.17	54.5
Sep 22, 2005 12:58 to Sep 25, 2005 09:58	448	7.7	<10	40	<.04	0.018	1.6	0.27	0.29	0.16	52.4

E = Estimated

Sp Cond = Specific Conductivity

TSS = Total Suspended Sediments

COD = Chemical Oxygen Demand

Data are provisional and are subject to change



**Elm Creek Near Champlin (USGS Station 05287890)  
Manual Water Quality Samples for Water Year 2005**

DATE	Sample Start Time	Disch Inst cfs	Water Temp. °C	Air Temp. °C	Barom Press mm Hg	DO mg/L	DO % Satur	COD mg/L	Sp cond mS/cm	pH
Oct 06, 2004	10:00	9	11.1		746	8.8	80	50	515	7.7
Nov 17, 2004	09:20	50	5	6	744	11.2	88	40	497	7.8
Dec 15, 2004	09:30	8.1	0.1	0	741	13.7	94	30	698	7.8
Jan 20, 2005	10:45	1.6	0.1		741	10.7	74	20	733	7.8
Feb 07, 2005	11:05	3.3	0.1		746	9.9	68	30	844	7.4
Mar 14, 2005	10:20	24	0		744	6.4	44	50	658	7.2
Mar 31, 2005	11:20	86	1.3	13	742	9.6	68	40	320	7.3
Apr 22, 2005	10:05	78	12.3	13	739	8.7	81	40	543	7.8
May 10, 2005	10:00	26	15.2	17.5	738	7.9	79	40	601	7.7
Jul 12, 2005	10:10	26	23.8	26	747	2.8	33	60	595	7.4
Aug 02, 2005	10:10	5.2	23	27	742	3.4	40	40	604	7.3
Sep 08, 2005	09:30	10	17.7	17	745	4.9	51	30	544	7.3

DATE	Sample Start Time	TSS mg/L	Volatile Residue mg/L	Dissolved Chloride mg/L	Ammonia mg/L	Dissolved NO <sub>2</sub> +NO <sub>3</sub> mg/L	Nitrite mg/L	Total Nitrogen mg/L	Dissolved P mg/L	Total P mg/L
Oct 06, 2004	10:00	<10	<10	47.7	0.09	0.14	0.021	1.1	0.11	0.15
Nov 17, 2004	09:20	13	<10	49.6	<0.4	E.06	E.005	1.4	E.03	0.13
Dec 15, 2004	09:30	<10	<10	58.7	0.08	0.08	<0.08	0.99	E.02	0.07
Jan 20, 2005	10:45	20	<10	18.6	0.26	0.08	E.007	0.48	<0.4	0.04
Feb 07, 2005	11:05	<10	<10	137	0.84	0.44	0.021	1.9	0.24	0.34
Mar 14, 2005	10:20	<10	<10	87.8	0.84	0.38	0.036	2.2	0.25	0.34
Mar 31, 2005	11:20	27	12	40.9	0.52	0.45	0.013	1.9	0.18	0.32
Apr 22, 2005	10:05	16	<10	69.7	<0.4	<0.6	<0.08	1.3	0.08	0.16
May 10, 2005	10:00	<10	<10	69.5	0.07	0.06	0.01	1.1	0.11	0.17
Jul 12, 2005	10:10	22	<10	61.8	1.13	<0.6	0.012	3	0.19	0.48
Aug 02, 2005	10:10	11	<10	55.1	1.23	0.19	0.128	2.6	0.29	0.43
Sep 08, 2005	09:30	<10	<10	58.2	0.07	0.36	0.092	1.3	0.13	0.19

Data are provisional and are subject to change  
E = Estimated



## Annual Runoff Summary

