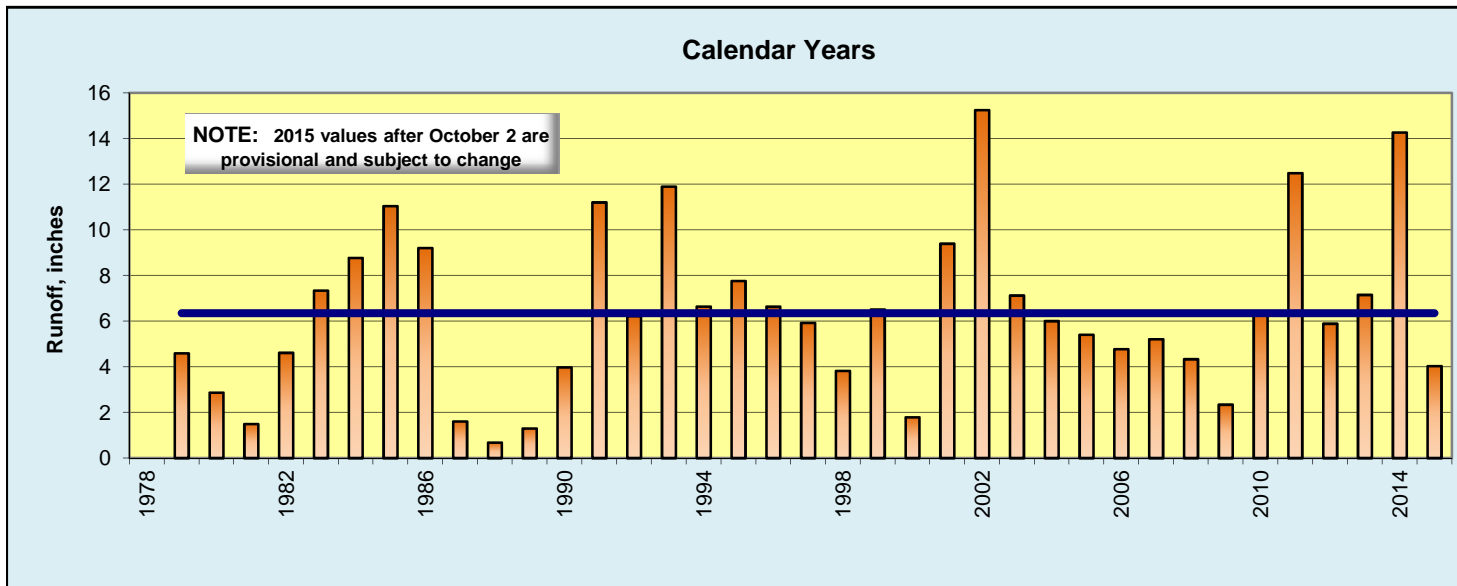
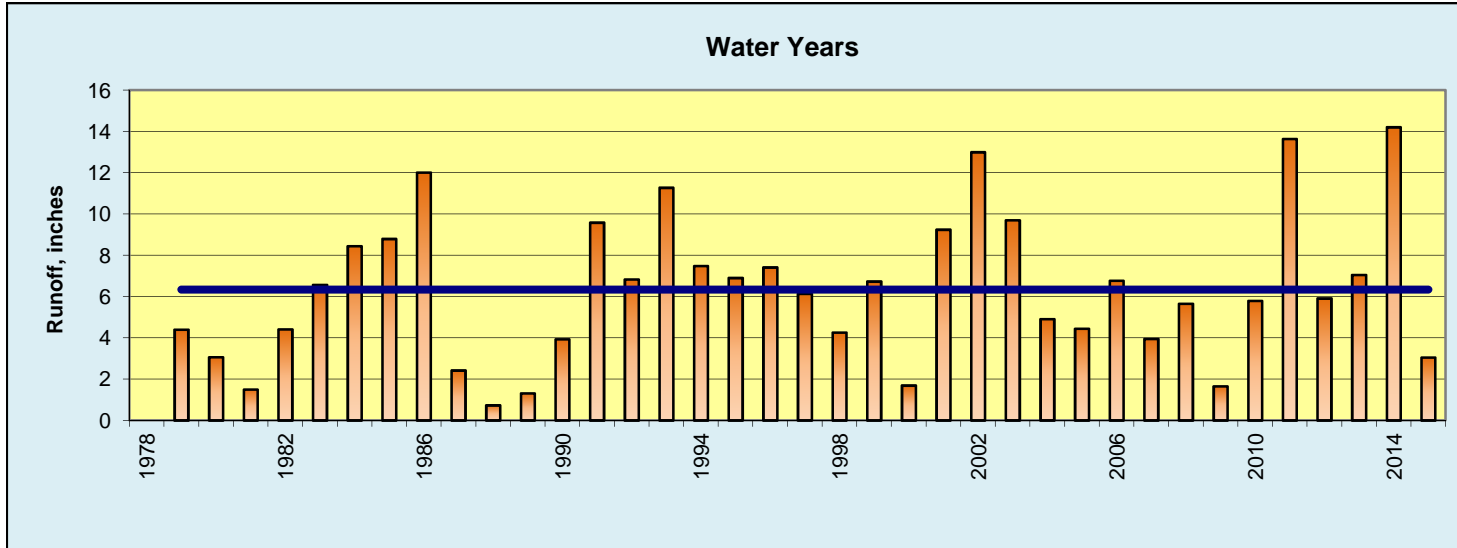


USGS 2015 Daily Runoff Summary



U.S. Geological Survey
 Elm Creek near Champlin, Station Number 5287890
 Selected Water-Quality Data for Water Year 2015
 Complete data can be downloaded from: <http://tinyurl.com/Elm-Creek-WQ>

agency_cd	site_no	sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	tm_datum_rlby_cd	coll_ent_cd	medium_cd	tu_id	body_part_id
USGS	5287890	10/9/14	9:00			CDT	K	USGS	WS		
USGS	5287890	11/13/14	10:00			CST	K	USGSMNWC	WS		
USGS	5287890	12/3/14	11:00			CST	K	USGSMNWC	WS		
USGS	5287890	12/30/14	10:30			CST	K	USGSMNWC	WS		
USGS	5287890	1/15/15	11:30			CST	K	USGSMNWC	WS		
USGS	5287890	2/9/15	10:30			CST	K	USGSMNWC	WS		
USGS	5287890	3/26/15	13:00			CDT	K	USGSMNWC	WS		
USGS	5287890	4/12/15	23:28	4/14/15	11:29	CDT	K	USGSMNWC	WS		
USGS	5287890	4/23/15	12:00			CDT	K	USGSMNWC	WS		
USGS	5287890	5/11/15	0:33	5/12/15	15:33	CDT	K	USGSMNWC	WS		
USGS	5287890	5/13/15	11:00			CDT	K	USGSMNWC	WS		
USGS	5287890	5/17/15	10:21	5/19/15	4:22	CDT	K	USGSMNWC	WS		
USGS	5287890	6/24/15	10:00			CDT	K	USGSMNWC	WS		
USGS	5287890	7/6/15	3:25	7/9/15	0:27	CDT	K	USGSMNWC	WS		
USGS	5287890	7/8/15	10:30			CDT	K	USGSMNWC	WS		
USGS	5287890	7/13/15	1:12	7/15/15	7:13	CDT	K	USGSMNWC	WS		
USGS	5287890	7/18/15	3:16	7/20/15	6:17	CDT	K	USGSMNWC	WS		
USGS	5287890	8/19/15	8:01	8/21/15	17:02	CDT	K	USGSMNWC	WS		
USGS	5287890	8/22/15	19:59	8/25/15	8:00	CDT	K	USGSMNWC	WS		
USGS	5287890	8/24/15	11:30			CDT	K	USGSMNWC	WS		
USGS	5287890	9/3/15	11:30			CDT	K	USGSMNWC	WS		

sample_dt	sample_tm	sample_en d_dt	sample_en d_tm	sample_start_t ime_datum_cd	p00004	p00010	p00025	p00032	p00035	p00041	p00060	p00061
10/9/14	9:00			CDT	32	7.1	742	10		1	4.6	8.6
11/13/14	10:00			CST	24	0	748				10	
12/3/14	11:00			CST	25							
12/30/14	10:30			CST		-0.2						
1/15/15	11:30			CST		0.5	737	2	0			
2/9/15	10:30			CST	24	1.1	746					2.6
3/26/15	13:00			CDT	27.5	2.5	741					16
4/12/15	23:28	4/14/15	11:29	CDT								
4/23/15	12:00			CDT	32	6.4	739					15
5/11/15	0:33	5/12/15	15:33	CDT								
5/13/15	11:00			CDT	29	10.5	748			1		23
5/17/15	10:21	5/19/15	4:22	CDT								
6/24/15	10:00			CDT	30	19.2	741					
7/6/15	3:25	7/9/15	0:27	CDT								
7/8/15	10:30			CDT	32	18.5	739					
7/13/15	1:12	7/15/15	7:13	CDT								
7/18/15	3:16	7/20/15	6:17	CDT								
8/19/15	8:01	8/21/15	17:02	CDT								
8/22/15	19:59	8/25/15	8:00	CDT								
8/24/15	11:30			CDT	33	16.9	764			1		
9/3/15	11:30			CDT	32	21	762			0		

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p00063	p00065	p00095	p00191	p00300	p00301	p00340	p00400	p00530
10/9/14	9:00			CDT	5	3.57	590	0.00002	9.1	77	30	7.6	< 15
11/13/14	10:00			CST	1	3.96	563	0.00002	13.3	93	30	7.7	18
12/3/14	11:00			CST	1	3.49					30		< 15
12/30/14	10:30			CST	1		762	0.00002	10.2			7.7	
1/15/15	11:30			CST	1	3.37	748	0.00002	10.5	75	20	7.7	< 15
2/9/15	10:30			CST	5	3.21	790	0.00002	11.9	85	20	7.7	< 15
3/26/15	13:00			CDT	5	3.78	703	0.00001	13.7	103	40	7.9	< 15
4/12/15	23:28	4/14/15	11:29	CDT	1		544	0.00001			40	8.1	< 15
4/23/15	12:00			CDT	5	3.72	653	0.00001	13.3	111	30	8	< 15
5/11/15	0:33	5/12/15	15:33	CDT	1		751	0.00001			40	8	< 15
5/13/15	11:00			CDT	5	3.93	803	0.00001	10.6	96	40	7.8	< 15
5/17/15	10:21	5/19/15	4:22	CDT	1		668	0.00001			40	8.2	< 15
6/24/15	10:00			CDT	5	3.53	788	0.00002	6.8	75	40	7.7	21
7/6/15	3:25	7/9/15	0:27	CDT	1		589	0.00001			40	8	32
7/8/15	10:30			CDT	5	4.55	636	0.00003	6.6	72	50	7.5	28
7/13/15	1:12	7/15/15	7:13	CDT	1		557	0.00002			50	7.7	33
7/18/15	3:16	7/20/15	6:17	CDT	1		501	0.00001			40	7.9	42
8/19/15	8:01	8/21/15	17:02	CDT	1		523	0.00001			40	8	< 15
8/22/15	19:59	8/25/15	8:00	CDT	1		589	0.00001			40	8	< 15
8/24/15	11:30			CDT	5	4.96	589	0.00003	6.4	66	40	7.5	< 15
9/3/15	11:30			CDT	5	4.02	575	0.00002	6.2	69	40	7.6	< 15

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p00535	p00540	p00600	p00605	p00608	p00610	p00613	p00618	p00625
10/9/14	9:00			CDT	11	< 4	1.1	0.87	0.08	0.1	0.013	0.161	0.97
11/13/14	10:00			CST	10	8	1.9	1.4	0.47	0.51	0.008	0.073	1.9
12/3/14	11:00			CST	< 10	< 15	1.5	0.92	0.44	0.52	0.006	0.08	1.4
12/30/14	10:30			CST				0.96		0.94			1.9
1/15/15	11:30			CST	< 10	< 15	1.1	0.55	0.46	0.49	0.005	0.099	1
2/9/15	10:30			CST	< 10	< 15	1.1	0.75	0.24	0.27	0.003	0.055	1
3/26/15	13:00			CDT	< 10	< 15	1.9	1.6	0.22	0.24	0.004	0.066	1.8
4/12/15	23:28	4/14/15	11:29	CDT			1.4	1.1	0.11	0.16	0.015	0.154	1.3
4/23/15	12:00			CDT	< 10	< 15	< 1.0	0.97	< 0.01	0.03	0.001	< 0.039	1
5/11/15	0:33	5/12/15	15:33	CDT			1.3	1.1	0.12	< 0.02	0.013	0.102	1.2
5/13/15	11:00			CDT	< 10	< 15	1.2	1.1	0.06	< 0.02	0.006	0.04	1.1
5/17/15	10:21	5/19/15	4:22	CDT	< 10	< 15	1.4	1.2	0.07	< 0.02	0.01	0.077	1.3
6/24/15	10:00			CDT	< 10	< 21	1.3	1.1	0.1	0.14	0.011	0.082	1.2
7/6/15	3:25	7/9/15	0:27	CDT	14	18	2.1	1.7	0.17	0.2	0.03	0.169	1.9
7/8/15	10:30			CDT	14	14	2	1.7	0.15	0.19	0.03	0.145	1.9
7/13/15	1:12	7/15/15	7:13	CDT			1.9	1.4	0.31	0.36	0.019	0.088	1.8
7/18/15	3:16	7/20/15	6:17	CDT	42	0	1.6	1.3	0.17	0.23	0.017	0.092	1.5
8/19/15	8:01	8/21/15	17:02	CDT	< 10	< 15	1.5	1.2	0.07	0.11	0.045	0.204	1.3
8/22/15	19:59	8/25/15	8:00	CDT	< 10	< 15	1.5	1.3	0.04	0.07	0.016	0.146	1.4
8/24/15	11:30			CDT	< 10	< 15	1.4	1.2	0.03	0.05	0.015	0.148	1.3
9/3/15	11:30			CDT	< 10	< 15	1.4	1.1	0.14	0.15	0.034	0.089	1.2

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p00631	p00665	p00666	p00940	p01300	p01305	p01320	p01325	p01330
10/9/14	9:00			CDT	0.174	0.12	0.06	45.7	0	0	1	0	0
11/13/14	10:00			CST	0.081	0.16	0.05	57.5					
12/3/14	11:00			CST	0.087	0.1	0.03	54					
12/30/14	10:30			CST		0.11							
1/15/15	11:30			CST	0.104	0.09	0.02	39.8					
2/9/15	10:30			CST	0.058	0.1	0.03	61.4					
3/26/15	13:00			CDT	0.07	0.16	0.02	103					
4/12/15	23:28	4/14/15	11:29	CDT	0.169	0.13	< 0.02	113					
4/23/15	12:00			CDT	< 0.040	0.12	0.04	78.7					
5/11/15	0:33	5/12/15	15:33	CDT	0.114	0.19	0.1	112					
5/13/15	11:00			CDT	0.047	0.17	0.11	124					
5/17/15	10:21	5/19/15	4:22	CDT	0.087	0.2	0.12	97.2					
6/24/15	10:00			CDT	0.094	0.29	0.17	128					
7/6/15	3:25	7/9/15	0:27	CDT	0.2	0.32	0.24	96.3					
7/8/15	10:30			CDT	0.175	0.3	0.15	106					
7/13/15	1:12	7/15/15	7:13	CDT	0.107	0.39	0.22	87.9					
7/18/15	3:16	7/20/15	6:17	CDT	0.109	0.39	0.22	75.5					
8/19/15	8:01	8/21/15	17:02	CDT	0.249	0.24	0.15	75.1					
8/22/15	19:59	8/25/15	8:00	CDT	0.163	0.19	0.12	85					
8/24/15	11:30			CDT	0.163	0.19	0.12	83.1					
9/3/15	11:30			CDT	0.123	0.22	0.17	72.1					

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p01340	p01345	p01350	p30207	p30208	p30209	p32000	p50280	p62856
10/9/14	9:00			CDT	0	0	2	1.09	0.13	0.24	5	1001	
11/13/14	10:00			CST				1.21	0.28		5	1001	
12/3/14	11:00			CST				1.06				1001	
12/30/14	10:30			CST								1001	
1/15/15	11:30			CST				1.03				1001	
2/9/15	10:30			CST				0.98		0.07		1001	
3/26/15	13:00			CDT				1.15		0.47		1001	
4/12/15	23:28	4/14/15	11:29	CDT							4	1002	26
4/23/15	12:00			CDT				1.13		0.42		1001	
5/11/15	0:33	5/12/15	15:33	CDT							4	1002	23
5/13/15	11:00			CDT				1.2		0.65		1001	
5/17/15	10:21	5/19/15	4:22	CDT							4	1002	28
6/24/15	10:00			CDT				1.08				1001	
7/6/15	3:25	7/9/15	0:27	CDT							4	1002	46
7/8/15	10:30			CDT				1.39				1001	
7/13/15	1:12	7/15/15	7:13	CDT							4	1002	80
7/18/15	3:16	7/20/15	6:17	CDT							4	1002	126
8/19/15	8:01	8/21/15	17:02	CDT							4	1002	44
8/22/15	19:59	8/25/15	8:00	CDT							4	1002	59
8/24/15	11:30			CDT				1.51				1098	
9/3/15	11:30			CDT				1.23				1001	

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p71845	p71846	p71851	p71856	p71999	p72104	p72105	p72123	p81904
10/9/14	9:00			CDT	0.129	0.1	0.711	0.043	10		20		
11/13/14	10:00			CST	0.661	0.605	0.322	0.027	10	100			
12/3/14	11:00			CST	0.668	0.572	0.356	0.021	10		15		
12/30/14	10:30			CST	1.21				10				
1/15/15	11:30			CST	0.628	0.588	0.437	0.016	10	150			0.23
2/9/15	10:30			CST	0.346	0.31	0.243	0.009	10	150			0.18
3/26/15	13:00			CDT	0.308	0.285	0.294	0.013	10	150			
4/12/15	23:28	4/14/15	11:29	CDT	0.207	0.147	0.683	0.049	10	0		25	
4/23/15	12:00			CDT	0.033	< 0.013	< 0.171	0.004	10		20		
5/11/15	0:33	5/12/15	15:33	CDT	< 0.026	0.154	0.45	0.041	10	0		20	
5/13/15	11:00			CDT	< 0.026	0.078	0.178	0.021	10	120			
5/17/15	10:21	5/19/15	4:22	CDT	< 0.026	0.085	0.34	0.033	10	0		27	
6/24/15	10:00			CDT	0.175	0.132	0.365	0.036	10		30		
7/6/15	3:25	7/9/15	0:27	CDT	0.254	0.217	0.75	0.1	10	0		38	
7/8/15	10:30			CDT	0.247	0.197	0.643	0.099	10		20		
7/13/15	1:12	7/15/15	7:13	CDT	0.469	0.398	0.389	0.062	10	0		73	
7/18/15	3:16	7/20/15	6:17	CDT	0.295	0.216	0.405	0.057	10	0		116	
8/19/15	8:01	8/21/15	17:02	CDT	0.135	0.088	0.904	0.148	10	0		39	
8/22/15	19:59	8/25/15	8:00	CDT	0.085	0.055	0.648	0.053	10	0		56	
8/24/15	11:30			CDT	0.064	0.037	0.657	0.049	10		20		
9/3/15	11:30			CDT	0.193	0.175	0.394	0.112	10		20		

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p82398	p84164	p84171	p84182	p99111	p99156	p99162	p99163	p99165
10/9/14	9:00			CDT	40	3060	10	1			30274	0	30330
11/13/14	10:00			CST	70	3071	10	2		40157	30298		30314
12/3/14	11:00			CST	50	3071	10	2					
12/30/14	10:30			CST	50	3071		2		40166			
1/15/15	11:30			CST	50	3071	10	2		40166			
2/9/15	10:30			CST	40	3071	10	2		40166	30298	30344	30314
3/26/15	13:00			CDT	40	3071		2		40170	30298	30344	30314
4/12/15	23:28	4/14/15	11:29	CDT	25	4115	10	2		40170			
4/23/15	12:00			CDT	40	3060		1		40170	30361	30344	30330
5/11/15	0:33	5/12/15	15:33	CDT	25	4115	10	2		40170			
5/13/15	11:00			CDT	40	3071	10	2		40170	30361	30357	30386
5/17/15	10:21	5/19/15	4:22	CDT	25	4115	10	2		40170			
6/24/15	10:00			CDT	40	3061	10	1		40182	30361	30357	30386
7/6/15	3:25	7/9/15	0:27	CDT	25	4115	10	2		40182		30344	
7/8/15	10:30			CDT	40	3061	10	1		40182	30361	30357	30386
7/13/15	1:12	7/15/15	7:13	CDT	25	4115	10	2		40182			
7/18/15	3:16	7/20/15	6:17	CDT	25	4115	10	2		40182			
8/19/15	8:01	8/21/15	17:02	CDT	25	4115	10	2		40182			
8/22/15	19:59	8/25/15	8:00	CDT	25	4115	10	2		40182			
8/24/15	11:30			CDT	40	3061	10	1		40182	30401	30379	30386
9/3/15	11:30			CDT	40	3061	10	1	10	40182	30401	30379	30386

sample_dt	sample_tm	sample_end_dt	sample_end_tm	sample_start_time_datum_cd	p99171	p99172	p99173	p99200	p99206	p99234
10/9/14	9:00			CDT	20083	20089	20067		10012	
11/13/14	10:00			CST	20097	20089	20095			
12/3/14	11:00			CST						
12/30/14	10:30			CST						
1/15/15	11:30			CST						
2/9/15	10:30			CST	20097	20089	20095		10012	
3/26/15	13:00			CDT	20097	20089	20095		10023	
4/12/15	23:28	4/14/15	11:29	CDT					10033	13
4/23/15	12:00			CDT	20097	20089	20099		10012	
5/11/15	0:33	5/12/15	15:33	CDT	20109	20133	20129		10012	14
5/13/15	11:00			CDT	20109	20133	20129		10012	
5/17/15	10:21	5/19/15	4:22	CDT	20109		20129		10012	15
6/24/15	10:00			CDT	20109	20133	20129		10012	
7/6/15	3:25	7/9/15	0:27	CDT	20088		20099		10033	24
7/8/15	10:30			CDT	20109	20133	20129		10033	
7/13/15	1:12	7/15/15	7:13	CDT					10033	19
7/18/15	3:16	7/20/15	6:17	CDT					10033	18
8/19/15	8:01	8/21/15	17:02	CDT					10033	16
8/22/15	19:59	8/25/15	8:00	CDT					10033	21
8/24/15	11:30			CDT	20142	20148	20159		10033	
9/3/15	11:30			CDT	20142	20148	20159	81505	10033	

U.S. Geological Survey

This file contains selected water-quality data for stations in the National Water Information System Water-quality database. Explanations of codes found in this file are followed by the retrieved data.

The data you have secured from the USGS NWISWeb database may include data that have not received Director's approval and as such are provisional and subject to revision. The data are released on the condition that neither the USGS nor the United States Government may be held liable for any damages resulting from its authorized or unauthorized use.

To view additional data-quality attributes output the results using these options:
one result per row, expanded attributes. Additional precautions are at:
http://waterdata.usgs.gov/nwis/qwdata?help#Data_retrievals_precautions.

# agency_cd	- Agency Code	# P00600	- Total nitrogen [nitrate + nitrite + ammonia + organic-N], water, unfiltered, milligrams per liter
# site_no	- Station number	# P00605	- Organic nitrogen, water, unfiltered, milligrams per liter as nitrogen
# sample_dt	- Begin date	# P00608	- Ammonia, water, filtered, milligrams per liter as nitrogen
# sample_tm	- Begin time	# P00610	- Ammonia, water, unfiltered, milligrams per liter as nitrogen
# sample_end_dt	- End date	# P00613	- Nitrite, water, filtered, milligrams per liter as nitrogen
# sample_end_tm	- End time	# P00618	- Nitrate, water, filtered, milligrams per liter as nitrogen
# sample_start_time_datum_cd	- Time datum	# P00625	- Ammonia plus organic nitrogen, water, unfiltered, milligrams per liter as nitrogen
# tm_datum_rlby_cd	- Time datum reliability code	# P00631	- Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen
# coll_ent_cd	- Agency Collecting Sample Code	# P00665	- Phosphorus, water, unfiltered, milligrams per liter as phosphorus
# medium_cd	- Medium code	# P00666	- Phosphorus, water, filtered, milligrams per liter as phosphorus
# tu_id	- Taxonomic unit code	# P00940	- Chloride, water, filtered, milligrams per liter
# body_part_id	- Body part code	# P01300	- Oil and grease, severity, code
# P00004	- Stream width, feet	# P01305	- Suds or foam, severity, code
# P00010	- Temperature, water, degrees Celsius	# P01320	- Floating garbage, severity, code
# P00025	- Barometric pressure, millimeters of mercury	# P01325	- Floating algae mats, severity, code
# P00032	- Cloud cover, percent	# P01330	- Odor, atmospheric, severity, code
# P00035	- Wind speed, miles per hour	# P01340	- Dead fish, severity, code
# P00041	- Weather, World Meteorological Organization code	# P01345	- Floating debris, severity, code
# P00060	- Discharge, cubic feet per second	# P01350	- Turbidity, severity, code
# P00061	- Discharge, instantaneous, cubic feet per second	# P30207	- Gage height, above datum, meters
# P00063	- Number of sampling points, count	# P30208	- Discharge, cubic meters per second
# P00065	- Gage height, feet	# P30209	- Discharge, instantaneous, cubic meters per second
# P00095	- Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius	# P32000	- Sample volume, liters
# P00191	- Hydrogen ion, water, unfiltered, calculated, milligrams per liter	# P50280	- Site visit purpose, code
# P00300	- Dissolved oxygen, water, unfiltered, milligrams per liter	# P62856	- Discharge, peak for storm event, cubic feet per second
# P00301	- Dissolved oxygen, water, unfiltered, percent of saturation	# P71845	- Ammonia, water, unfiltered, milligrams per liter as NH4
# P00340	- Chemical oxygen demand, high level, water, unfiltered, milligrams per liter	# P71846	- Ammonia, water, filtered, milligrams per liter as NH4
# P00400	- pH, water, unfiltered, field, standard units	# P71851	- Nitrate, water, filtered, milligrams per liter as nitrate
# P00530	- Suspended solids, water, unfiltered, milligrams per liter	# P71856	- Nitrite, water, filtered, milligrams per liter as nitrite
# P00535	- Loss on ignition of suspended solids, water, unfiltered, milligrams per liter	# P71999	- Sample purpose, code
# P00540	- Suspended solids remaining after ignition, water, unfiltered, milligrams per liter	# P72104	- Sample location, distance downstream, feet
		# P72105	- Sample location, distance upstream, feet

P72123 - Discharge, mean for storm event, cubic feet per second
 # P81904 - Velocity at point in stream, feet per second
 # P82398 - Sampling method, code
 # P84164 - Sampler type, code
 # P84171 - Sample splitter type, field, code
 # P84182 - Bottle or bag sampler material (construction), code
 # P99111 - Type of quality assurance data associated with sample, code
 # P99156 - Sulfuric acid NWIS lot number, 4.5 N (1:7), 1 mL, National Field Supply Service (NFSS) stock number Q438FLD
 # P99162 - Conductance standard NWIS lot number, 250 uS/cm KCl, National Field Supply Service (NFSS) stock number Q44FLD
 # P99163 - Conductance standard NWIS lot number, 500 uS/cm KCl, National Field Supply Service (NFSS) stock number Q45FLD
 # P99165 - Conductance standard NWIS lot number, 1000 uS/cm KCl, National Field Supply Service (NFSS) stock number Q47FLD
 # P99171 - pH 10 Buffer solution, NWIS lot number, National Field Supply Service (NFSS) stock numbers Q122FLD, Q123FLD
 # P99172 - pH 4 Buffer solution, NWIS lot number, National Field Supply Service (NFSS) stock numbers Q124FLD, Q125FLD
 # P99173 - pH 7 Buffer solution, NWIS lot number, National Field Supply Service (NFSS) stock numbers Q126FLD, Q127FLD
 # P99200 - Lot number, first, inorganic-grade water, number
 # P99206 - NWIS lot number, capsule filter, 0.45 micron
 # P99234 - Count of samples collected by autosampler, number
 #

Description of sample_start_time_datum_cd:
 # CST - Central Standard Time
 # CDT - Central Daylight Time
 #
 # Description of tm_datum_rlbtty_cd:
 # K - Known
 #
 # Description of coll_ent_cd:
 # USGS - U.S. Geological Survey
 # USGSMNWC - USGS - Minnesota Water Science Center
 #
 # Description of medium_cd:
 # WS - Surface water
 #
 # Description of tu_id:
 # <http://www.itis.gov/>
 #
 # Description of body_part_id:
 #
 # Description of remark_cd:
 # < - le# < - less than

Stream Monitoring

There are three hydrologic watersheds within the administrative boundaries of the Elm Creek Watershed Management Commission – Elm Creek, Crow River and Mississippi River. The Elm Creek watershed contains several large depressions and drainage ways. Stormwater within the Elm Creek watershed is generally directed from the south and west to the northeast via four main drainage ways – Rush Creek, North Fork Rush Creek, Diamond Creek, and Elm Creek. These drainage ways converge in the Elm Creek Park Reserve and enter Hayden Lake. Water is eventually discharged to the Mississippi River near the Mill Pond in Champlin.

Northwest areas of Rogers drain to the Crow River. Within this area, Fox Creek is the main drainage way that collects stormwater along the I-94 corridor and the area between I-94, Territorial Road and Fletcher Lane. Areas north of I-94 and along the HWY 101 corridor drain north to the Crow River, mostly along the Highway 101 corridor. The northern quarter of Dayton flows north into Mississippi River with a small area on the northwest side of Dayton draining to Crow River. There are no major drainageways in these areas.

Elm Creek has been monitored since 1976 by a station located in Champlin. The monitoring station is located at the Elm Creek Road crossing in the Elm Creek Park Reserve and is operated in cooperation with the United States Geological Survey (USGS). The exact location is: latitude 45°09'48", longitude 93°26'11" referenced to North American Datum of 1927, in NE ¼ NW ¼ Sec.35, T.120 N., R.22 W., Hennepin County, MN, Hydrologic Unit 07010206, on the left bank, 33 feet downstream from the bridge on Elm Creek Road, 2.5 miles southwest of Champlin. The Commission shares the costs of operating the station, which collects continuous flow data and periodic event and base water quality data. The watershed area above the gauging station is 86 square miles, or 81% of the hydrologic watershed.

Both grab samples and storm runoff samples are collected and analyzed for various parameters. Analyses of the streamflow and water quality monitoring data for Elm Creek and its tributaries are summarized below. Real time data from the monitoring station in Champlin may be viewed on the Internet at

http://waterdata.usgs.gov/mn/nwis/uv/?site_no=05287890&PARAMeter_cd=00065,00060.

Flow Monitoring

Storm event samples are collected using an automatic sampler. Routine manual sampling occurs approximately monthly. The average daily discharge for the 2015 WY (October 1, 2014 through September 30, 2015) was 19.3 cubic feet per second (cfs) or 3.05 inches. During the same period, the minimum and maximum observed average daily discharge values were 2.00 cfs and 125 cfs, respectively. The long-term average daily discharge at the station is 40.1 cfs or 6.34 inches (years 1979-2015). A spreadsheet of the data received in 2015 water year (WY), including daily discharge and summary information, long-term flow volumes (calendar and water years), the flow hydrograph and the annual instantaneous peak discharge values at the gauging station for the period of record are also found in this appendix.

Elm Creek Annual Instantaneous Peak Discharge Rates							
Date	Peak Flow (cfs)	Date	Peak Flow (cfs)	Date	Peak Flow (cfs)	Date	Peak Flow (cfs)
4/4/79	307	3/31/89	159	5/15/99	538*	3/27/09	119
3/25/80	199	8/1/90	225	7/13/00	112	3/17/10	369
6/15/81	44	6/1/91	371	4/25/01	875**	3/24/11	803
4/3/82	471*	3/8/92	380	5/11/02	554	5/29/12	568
3/9/83	408	6/22/93	315	6/28/03	695	6/26/13	389
2/25/84	341	4/30/94	669*	6/03/04	350	5/1/14	803
3/18/85	579*	3/17/95	237	10/30/04	118	7/19/15	127
3/27/86	812*	3/19/96	407	10/09/05	295		
8/1/87	185	4/1/97	511*	3/17/07	223		
3/27/88	39	4/5/98	306	5/4/08	205		

*These values have been revised based on the 2001 rating curve.

**All-time instantaneous peak discharge. The estimated 100-year flood discharge at this site is 2,290 cfs.

Elm Creek Near Champlin (USGS Station 05287890)

Manual Water Quality Samples for Water Year 2015

(Selected Parameters)

USGS Parameter #		P00010	P00020	P00025	P00061	P00095	P00300	P00301	P00340	P00400
DATE	Sample Start Time	Water Temp. °C	Air Temp. °C	Barom Press mm Hg	Disch Inst cfs	Sp cond mS/cm	DO mg/L	DO % Satur	COD mg/L	pH
9-Oct-14	9:00	7.1		742	8.6	590	9.1	77	30	7.6
13-Nov-14	10:00	0.0		748		563	13.3	93	30	7.7
3-Dec-14	11:00								30	
30-Dec-14	10:30	-0.2				762	10.2			7.7
15-Jan-15	11:30	0.5		737		748	10.5	75	20	7.7
9-Feb-15	10:30	1.1		746	2.6	790	11.9	85	20	7.7
26-Mar-15	13:00	2.5		741	16	703	13.7	103	40	7.9
23-Apr-15	12:00	6.4		739	15	653	13.3	111	30	8.0
13-May-15	11:00	10.5		748	23	803	10.6	96	40	7.8
24-Jun-15	10:00	19.2		741		788	6.8	75	40	7.7
8-Jul-15	10:30	18.5		739		636	6.6	72	50	7.5
24-Aug-15	11:30	16.9		764		589	6.4	66	40	7.5
3-Sep-15	11:30	21.0		762		575	6.2	69	40	7.6

USGS Parameter #		P00530	P00535	P00608	P00613	P00625	P00631	P00665	P00666	P00940
DATE	Sample Start Time	TSS mg/L	Volatile Residue mg/L	Ammonia mg/L	Nitrite mg/L	Total Nitrogen mg/L	Dissolved NO ₂ +NO ₃ mg/L	Total P mg/L	Dissolved P mg/L	Dissolved Chloride mg/L
9-Oct-14	9:00	< 15	11	0.08	0.013	0.97	0.174	0.12	0.06	45.7
13-Nov-14	10:00	18	10	0.47	0.008	1.90	0.081	0.16	0.05	57.5
3-Dec-14	11:00	< 15	< 10	0.44	0.006	1.40	0.087	0.10	0.03	54.0
30-Dec-14	10:30					1.90		0.11		
15-Jan-15	11:30	< 15	< 10	0.46	0.005	1.00	0.104	0.09	0.02	39.8
9-Feb-15	10:30	< 15	< 10	0.24	0.003	1.00	0.058	0.10	0.03	61.4
26-Mar-15	13:00	< 15	< 10	0.22	0.004	1.80	0.070	0.16	0.02	103.0
23-Apr-15	12:00	< 15	< 10	< 0.01	0.001	1.00	< 0.040	0.12	0.04	78.7
13-May-15	11:00	< 15	< 10	0.06	0.006	1.10	0.047	0.17	0.11	124.0
24-Jun-15	10:00	21	< 10	0.10	0.011	1.20	0.094	0.29	0.17	128.0
8-Jul-15	10:30	28	14	0.15	0.030	1.90	0.175	0.30	0.15	106.0
24-Aug-15	11:30	< 15	< 10	0.03	0.015	1.30	0.163	0.19	0.12	83.1
3-Sep-15	11:30	< 15	< 10	0.14	0.034	1.20	0.123	0.22	0.17	72.1

E = Estimated

05287890 ELM CREEK NEAR CHAMPLIN, MN
USGS Water-Year Summary 2015

LOCATION - Lat 45°09'48", Long 93°26'11" North American Datum of 1927, in NE 1/4 NW 1/4 sec.35, T.120 N., R.22 W., Hennepin County, MN.

DISCHARGE, CUBIC FEET PER SECOND. YEAR 2014-10-01 to 2015-09-30. DAILY MEAN VALUES.

DRAINAGE AREA - 86 mi². [e, Value has been estimated.]

Complete data can be downloaded from: <http://tinyurl.com/Elm-Creek-Streamflow>

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	2014	2014	2014	2015	2015	2015	2015	2015	2015	2015	2015	2015
1	4.9	64	e5.0	e4.4	e2.9	e2.1	8.5	e9.5	28	22	39	23
2	5.1	68	e5.0	e4.2	e2.8	e2.1	12	e8.9	26	20	33	24
3	6.6	75	e5.0	e4.2	e2.9	e2.1	11	e9.4	26	17	28	26
4	7.6	72	e5.0	e4.3	e2.9	e2.1	11	e10	32	15	24	23
5	7.3	67	e5.1	e4.4	e2.8	e2.0	11	e9.3	29	12	20	21
6	6.9	62	e5.0	e4.4	e2.8	e2.0	11	8.6	26	27	17	23
7	6.2	53	5.0	e4.4	e2.8	e2.0	10	9.1	26	42	18	29
8	5.3	44	5.1	e4.3	e2.7	e2.0	9.3	12	24	44	17	29
9	4.6	35	5.1	e4.2	e2.6	e2.0	13	13	22	48	17	28
10	4.0	28	e5.0	e4.0	e2.6	e2.3	17	13	19	49	21	29
11	3.9	e23	e5.0	e3.7	e2.5	e3.2	16	22	18	48	21	28
12	3.7	e19	e5.0	e3.5	e2.5	e5.1	16	25	16	45	20	27
13	3.4	e16	e5.1	e3.4	e2.4	e9.0	25	23	15	67	19	25
14	3.5	e13	e5.2	e3.2	e2.4	e12	26	21	14	80	19	24
15	3.1	e11	e5.3	e3.0	e2.3	e15	26	24	12	79	18	24
16	3.2	e9.6	e5.4	e2.9	e2.3	e17	25	25	11	77	17	23
17	3.3	e8.8	e5.0	e2.9	e2.3	e20	24	26	11	76	18	21
18	3.4	e8.2	e4.8	e2.9	e2.2	21	22	29	10	103	21	20
19	3.2	e7.2	e4.6	e3.0	e2.1	24	21	30	9.3	125	32	19
20	2.6	e6.8	e4.6	e3.2	e2.3	21	20	30	10	124	43	17
21	2.5	e6.3	e4.6	e3.1	e2.1	19	18	30	9.8	115	46	17
22	2.7	e6.1	e4.7	e3.1	e2.0	17	16	28	12	106	50	16
23	2.9	e6.0	e4.7	e3.0	e2.0	16	15	26	13	97	56	15
24	7.7	e6.0	e4.8	e3.1	e2.1	15	14	25	10	88	58	15
25	37	e6.0	e4.8	e3.2	e2.1	15	13	27	9.3	79	59	15
26	43	e5.7	e4.9	e3.1	e2.1	16	12	28	8.6	69	57	14
27	46	e5.4	e4.7	e2.9	e2.1	14	11	33	8.3	60	51	13
28	50	e5.3	e4.6	e3.0	e2.1	14	e11	29	8.7	61	43	12
29	55	e5.2	e4.7	e3.0	e3.0	14	e11	28	13	60	35	11
30	60	e5.1	e4.6	e3.0	e3.0	13	e10	32	22	53	30	9.6
31	63		e4.6	e3.0	e3.0	9.3		30		45	26	

STATISTICS FOR WATER YEAR OCTOBER 2014 TO SEPTEMBER 2015

Total	462	748	152	108	67.7	330	466	674	499	1,953	973	621
Mean	14.9	24.9	4.90	3.48	2.42	10.7	15.5	21.7	16.6	63.0	31.4	20.7
Max	63	75	5.4	4.4	2.9	24	26	33	32	125	59	29
Min	2.5	5.1	4.6	2.9	2.0	2.0	8.5	8.6	8.3	12	17	9.6
Ac-ft	916	1,482	301	214	134	655	924	1,336	990	3,874	1,930	1,231

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2015, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	30.8	19.9	9.57	5.28	8.56	59.4	102	85.2	65.4	42.3	26.7	24.9
Max	240	67.4	41.3	22.0	99.1	189	414	355	391	157	151	170
(WY)	(1986)	(1994)	(1992)	(1992)	(1984)	(2011)	(2001)	(2014)	(2014)	(1993)	(2002)	(1991)
Min	1.13	1.03	.92	.74	.85	3.48	5.31	3.54	1.34	.76	1.37	1.03
(WY)	(1990)	(1990)	(1990)	(1991)	(2014)	(2014)	(1987)	(2000)	(1988)	(1988)	(2008)	(2013)

SUMMARY STATISTICS	WATER YEAR 2015		WATER YEARS 1979 - 2015	
Annual total	7,052			
Annual mean	19.3		40.1	
Highest annual mean			90.0 2014	
Lowest annual mean			4.54 1988	
Highest daily mean	125.0	Jul 19	815.0	Apr 25, 2001
Lowest daily mean	2.00	Feb 22	0.310	Jun 30, 1988
Annual 7-day minimum	2.03	Mar 03	0.347	Aug 04, 2007
Maximum peak flow	127	Jul 19	875	Apr 25, 2001
Maximum peak stage	6.25	Jul 19	10.02	Apr 25, 2001
Annual runoff (cfsm)	0.225		0.467	
Annual runoff (inches)	3.05		6.34	
10 percent exceeds	48.4		112.5	
50 percent exceeds	12.0		11.0	
90 percent exceeds	2.80		1.50	

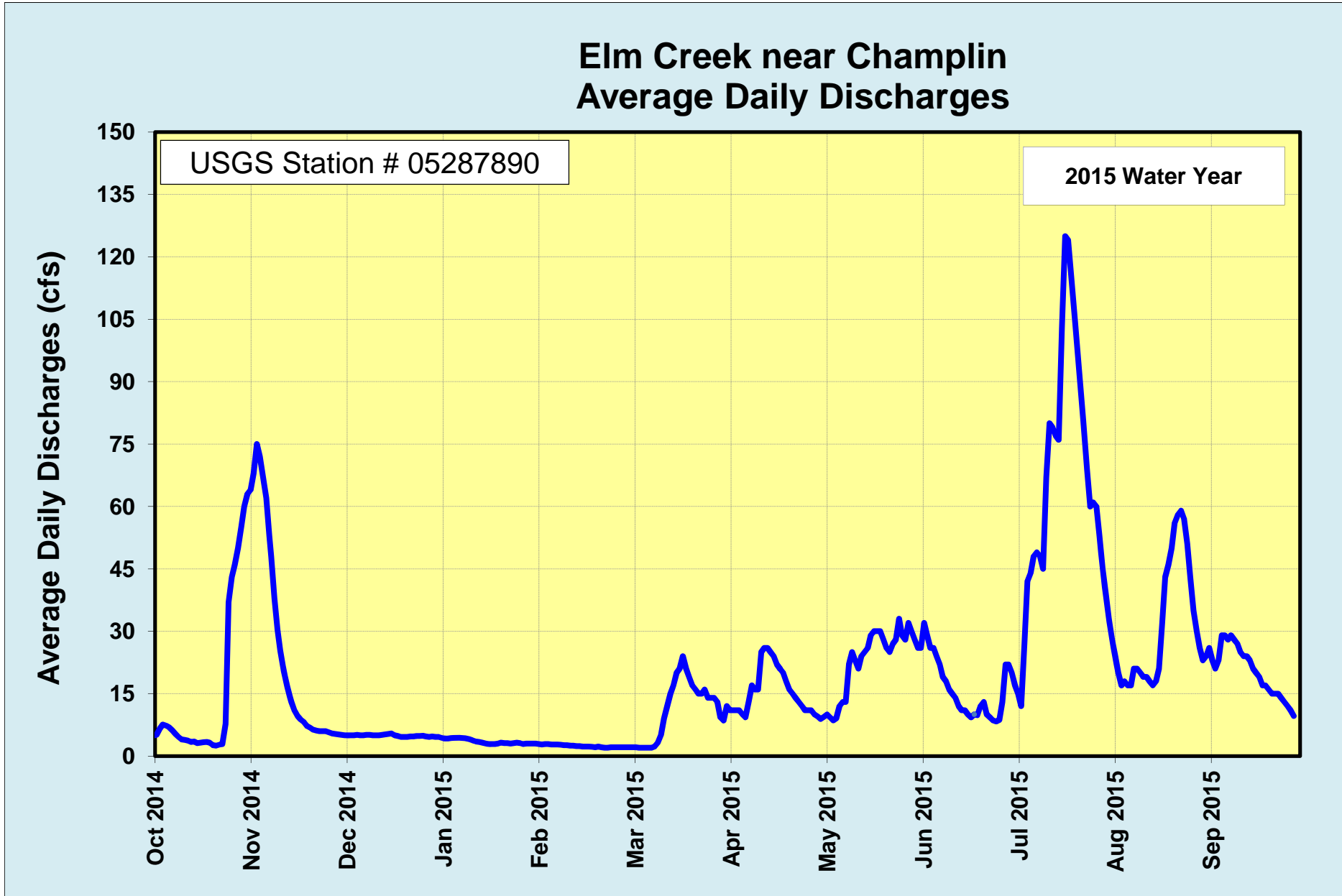
Automatic Event Samples for Water Year 2015

(Selected parameters)

USGS Parameter #			P00095	P00340	P00400	P00530	P00608	P00613	P00625	P00631	P00665	P00666	P00940
DATE & TIME			Sp Cond μS/cm	COD mg/L	pH	TSS mg/L	Ammonia mg/L	Nitrite mg/L	Total N mg/L	Dissolved NO ₂ +NO ₃ mg/L	Total P mg/L	Dissolved P mg/L	Dissolved Chloride
12-Apr-15	23:28	to	544	40	8.1	< 15	0.11	0.015	1.3	0.169	0.13	< 0.02	113
14-Apr-15	11:29												
11-May-15	00:33	to	751	40	8	< 15	0.12	0.013	1.2	0.114	0.19	0.1	112
12-May-15	15:33												
17-May-15	10:21	to	668	40	8.2	< 15	0.07	0.01	1.3	0.087	0.2	0.12	97.2
19-May-15	04:22												
6-Jul-15	03:25	to	589	40	8	32	0.17	0.03	1.9	0.2	0.32	0.24	96.3
9-Jul-15	00:27												
13-Jul-15	01:12	to	557	50	7.7	33	0.31	0.019	1.8	0.107	0.39	0.22	87.9
15-Jul-15	07:13												
18-Jul-15	03:16	to	501	40	7.9	42	0.17	0.017	1.5	0.109	0.39	0.22	75.5
20-Jul-15	06:17												
19-Aug-15	08:01	to	523	40	8	< 15	0.07	0.045	1.3	0.249	0.24	0.15	75.1
21-Aug-15	17:02												
22-Aug-15	19:59	to	589	40	8	< 15	0.04	0.016	1.4	0.163	0.19	0.12	85
25-Aug-15	08:00												

USGS Parameters

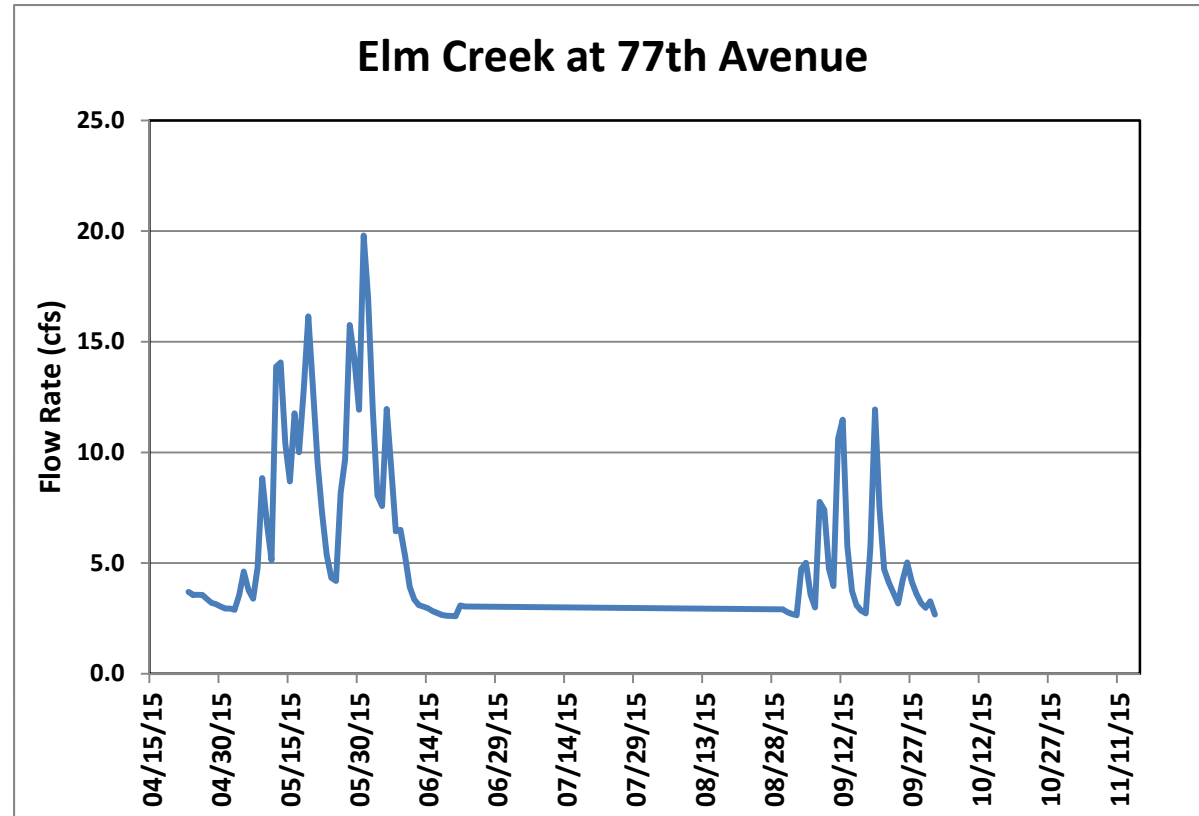
- # P00010 - Temperature, water, degrees Celsius
- # P00020 - Temperature, air, degrees Celsius
- # P00025 - Barometric pressure, millimeters of mercury
- # P00061 - Discharge, instantaneous, cubic feet per second
- # P00095 - Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius
- # P00300 - Dissolved oxygen, water, unfiltered, milligrams per liter
- # P00301 - Dissolved oxygen, water, unfiltered, percent of saturation
- # P00340 - Chemical oxygen demand, high level, water, unfiltered, milligrams per liter
- # P00400 - pH, water, unfiltered, field, standard units
- # P00530 - Residue, total nonfilterable, milligrams per liter
- # P00535 - Loss on ignition, from nonfilterable residue, milligrams per liter
- # P00608 - Ammonia, water, filtered, milligrams per liter as nitrogen
- # P00613 - Nitrite, water, filtered, milligrams per liter as nitrogen
- # P00625 - Ammonia plus organic nitrogen, water, unfiltered, milligrams per liter as nitrogen
- # P00631 - Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen
- # P00665 - Phosphorus, water, unfiltered, milligrams per liter
- # P00666 - Phosphorus, water, filtered, milligrams per liter
- # P00940 - Chloride, water, filtered, milligrams per liter



2015 Stream Monitoring - Elm Creek at 77th Avenue

Site Name	EC77 2015	EC77 2015
Isco Quantity	Level	Flow Rate
Label	Level	Flow Rate
Units	ft	cfs
Resolution	0.1	0.1
Significant Digits	0	0

04/23/15	0.601	3.695
04/24/15	0.572	3.565
04/25/15	0.573	3.563
04/26/15	0.57	3.559
04/27/15	0.526	3.371
04/28/15	0.482	3.206
04/29/15	0.466	3.142
04/30/15	0.429	3.031
05/01/15	0.4	2.946
05/02/15	0.403	2.948
05/03/15	0.376	2.883
05/04/15	0.522	3.562
05/05/15	0.761	4.615
05/06/15	0.616	3.783
05/07/15	0.532	3.39
05/08/15	0.745	4.795
05/09/15	1.237	8.835
05/10/15	1.038	6.817
05/11/15	0.836	5.136
05/12/15	1.611	13.879
05/13/15	1.626	14.064
05/14/15	1.367	10.409
05/15/15	1.222	8.691
05/16/15	1.47	11.765
05/17/15	1.334	10.005
05/18/15	1.538	12.796
05/19/15	1.757	16.143



2015 Stream Monitoring - Elm Creek at 77th Avenue

05/20/15	1.548	12.902	06/23/15	0.671	4.287	07/27/15	0.583	3.641
05/21/15	1.295	9.534	06/24/15	0.641	3.935	07/28/15	0.404	2.967
05/22/15	1.085	7.258	06/25/15	0.467	3.156	07/29/15	1.4	13.017
05/23/15	0.867	5.361	06/26/15	0.352	2.83	07/30/15	1.743	15.933
05/24/15	0.718	4.336	06/27/15	0.992	6.916	07/31/15	1.245	9.086
05/25/15	0.693	4.195	06/28/15	0.698	4.412	08/01/15	0.837	5.163
05/26/15	1.164	8.154	06/29/15	0.703	5.239	08/02/15	0.557	3.553
05/27/15	1.302	9.7	06/30/15	1.472	11.953	08/03/15	0.35	2.831
05/28/15	1.732	15.752	07/01/15	1.853	17.789	08/04/15	0.232	2.634
05/29/15	1.635	14.228	07/02/15	1.461	11.787	08/05/15	0.148	2.583
05/30/15	1.466	11.932	07/03/15	0.957	6.145	08/06/15	0.113	2.582
05/31/15	1.963	19.799	07/04/15	0.686	4.171	08/07/15	0.208	2.704
06/01/15	1.802	16.949	07/05/15	0.507	3.301	08/08/15	0.739	4.48
06/02/15	1.478	11.92	07/06/15	0.4	2.948	08/09/15	0.794	4.824
06/03/15	1.162	8.049	07/07/15	2.608	38.195	08/10/15	1.175	10.669
06/04/15	1.107	7.575	07/08/15	3.115	48.396	08/11/15	2.035	21.25
06/05/15	1.484	11.961	07/09/15	2.477	31.229	08/12/15	1.497	12.375
06/06/15	1.274	9.303	07/10/15	1.6	13.913	08/13/15	0.936	5.953
06/07/15	0.997	6.433	07/11/15	1.056	7.017	08/14/15	0.792	4.803
06/08/15	1.007	6.498	07/12/15	0.796	4.859	08/15/15	0.73	4.411
06/09/15	0.857	5.312	07/13/15	0.637	4.218	08/16/15	0.605	3.727
06/10/15	0.639	3.912	07/14/15	2.796	39.117	08/17/15	0.628	4.107
06/11/15	0.519	3.355	07/15/15	2.777	38.665	08/18/15	0.777	4.753
06/12/15	0.452	3.094	07/16/15	2.02	21.238	08/19/15	1.312	13.077
06/13/15	0.43	3.03	07/17/15	1.359	10.371	08/20/15	3.096	48.098
06/14/15	0.403	2.952	07/18/15	1.067	7.08	08/21/15	3.23	52.064
06/15/15	0.354	2.832	07/19/15	2.443	30.6	08/22/15	2.465	31.013
06/16/15	0.312	2.745	07/20/15	2.385	28.732	08/23/15	1.628	14.188
06/17/15	0.251	2.653	07/21/15	1.963	19.917	08/24/15	1.466	11.718
06/18/15	0.221	2.616	07/22/15	1.504	12.335	08/25/15	1.209	8.594
06/19/15	0.213	2.612	07/23/15	1.147	7.901	08/26/15	0.865	5.355
06/20/15	0.194	2.597	07/24/15	0.892	5.567	08/27/15	0.663	4.027
06/21/15	0.42	3.08	07/25/15	0.788	4.778	08/28/15	0.536	3.41
06/22/15	0.431	3.037	07/26/15	0.688	4.16	08/29/15	0.442	3.066

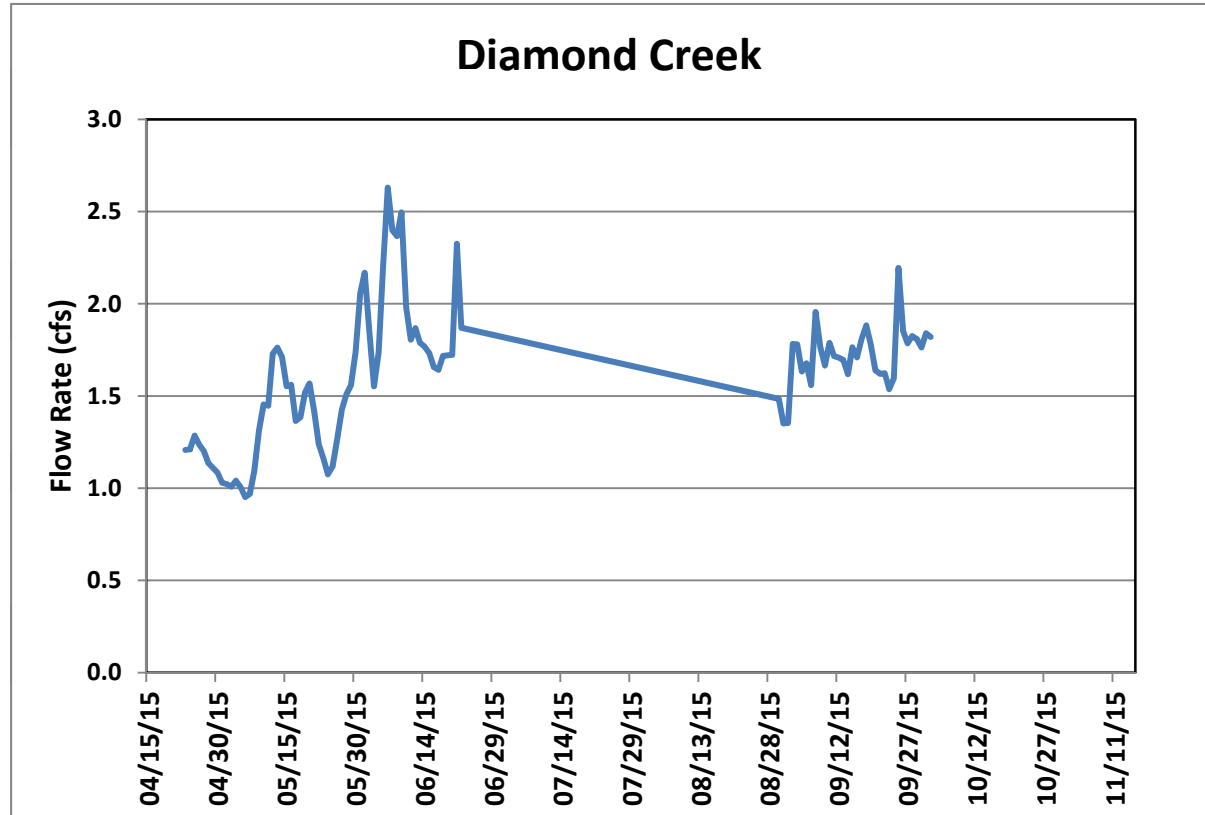
2015 Stream Monitoring - Elm Creek at 77th Avenue

08/30/15	0.387	2.905	10/03/15	0.208	2.607
08/31/15	0.33	2.775	10/04/15	0.208	2.606
09/01/15	0.285	2.695	10/05/15	0.17	2.585
09/02/15	0.243	2.639	10/06/15	0.158	2.582
09/03/15	0.74	4.728	10/07/15	0.139	2.579
09/04/15	0.82	5.012	10/08/15	0.13	2.578
09/05/15	0.57	3.576	10/09/15	0.619	4.062
09/06/15	0.417	2.992	10/10/15	0.708	4.274
09/07/15	1.068	7.764	10/11/15	0.517	3.337
09/08/15	1.097	7.413	10/12/15	0.428	3.019
09/09/15	0.777	4.725	10/13/15	0.433	3.035
09/10/15	0.644	3.965	10/14/15	0.441	3.059
09/11/15	1.362	10.6	10/15/15	0.355	2.833
09/12/15	1.44	11.473	10/16/15	0.28	2.686
09/13/15	0.909	5.745	10/17/15	0.189	2.598
09/14/15	0.606	3.737	10/18/15	0.131	2.58
09/15/15	0.451	3.095	10/19/15	0.144	2.583
09/16/15	0.365	2.852	10/20/15	0.155	2.58
09/17/15	0.305	2.729	10/21/15	0.224	2.625
09/18/15	0.773	5.711	10/22/15	0.28	2.687
09/19/15	1.481	11.937	10/23/15	0.334	2.781
09/20/15	1.101	7.463	10/24/15	0.664	4.598
09/21/15	0.776	4.713	10/25/15	1.78	16.706
09/22/15	0.682	4.126	10/26/15	1.605	13.85
09/23/15	0.591	3.654	10/26/15	1.194	8.378
09/24/15	0.475	3.176			
09/25/15	0.682	4.205			
09/26/15	0.824	5.025			
09/27/15	0.69	4.169			
09/28/15	0.581	3.602			
09/29/15	0.478	3.187			
09/30/15	0.414	2.982			
10/01/15	0.472	3.267			
10/02/15	0.266	2.678			

2015 Stream Monitoring - Diamond Creek

Site Name	DC 2015	DC 2015
Isco Quantity	Level	Flow Rate
Label	Level	Flow Rate
Units	ft	cfs
Resolution	0.1	0.1
Significant Digits	0	0

04/23/15	0.639	1.207
04/24/15	0.641	1.211
04/25/15	0.676	1.285
04/26/15	0.653	1.237
04/27/15	0.635	1.203
04/28/15	0.601	1.136
04/29/15	0.588	1.11
04/30/15	0.573	1.085
05/01/15	0.542	1.029
05/02/15	0.539	1.022
05/03/15	0.53	1.008
05/04/15	0.549	1.041
05/05/15	0.53	1.007
05/06/15	0.498	0.952
05/07/15	0.508	0.969
05/08/15	0.577	1.094
05/09/15	0.686	1.312
05/10/15	0.748	1.454
05/11/15	0.745	1.447
05/12/15	0.844	1.729
05/13/15	0.855	1.762
05/14/15	0.839	1.712
05/15/15	0.786	1.553
05/16/15	0.787	1.561
05/17/15	0.712	1.365
05/18/15	0.719	1.385
05/19/15	0.772	1.519



2015 Stream Monitoring - Diamond Creek

05/20/15	0.791	1.568	06/23/15	0.937	2.069	07/27/15	1.507	6.379
05/21/15	0.733	1.418	06/24/15	0.916	1.981	07/28/15	1.51	6.41
05/22/15	0.653	1.237	06/25/15	0.947	2.098	07/29/15	1.616	7.89
05/23/15	0.614	1.161	06/26/15	0.95	2.141	07/30/15	1.537	6.77
05/24/15	0.569	1.075	06/27/15	0.92	1.999	07/31/15	1.509	6.431
05/25/15	0.591	1.117	06/28/15	0.851	1.753	08/01/15	1.452	5.767
05/26/15	0.667	1.266	06/29/15	0.952	2.135	08/02/15	1.412	5.321
05/27/15	0.734	1.426	06/30/15	0.998	2.323	08/03/15	1.344	4.663
05/28/15	0.769	1.508	07/01/15	1.051	2.575	08/04/15	1.274	4.046
05/29/15	0.786	1.558	07/02/15	1.11	2.899	08/05/15	1.246	3.828
05/30/15	0.843	1.738	07/03/15	1.113	2.918	08/06/15	1.218	3.604
05/31/15	0.937	2.058	07/04/15	1.105	2.873	08/07/15	1.236	3.746
06/01/15	0.964	2.168	07/05/15	1.094	2.808	08/08/15	1.257	3.903
06/02/15	0.878	1.849	07/06/15	1.078	2.718	08/09/15	1.245	3.801
06/03/15	0.784	1.552	07/07/15	1.477	6.151	08/10/15	1.262	3.946
06/04/15	0.836	1.736	07/08/15	1.491	6.187	08/11/15	1.23	3.702
06/05/15	0.971	2.205	07/09/15	1.473	5.984	08/12/15	1.178	3.335
06/06/15	1.062	2.63	07/10/15	1.401	5.201	08/13/15	1.154	3.173
06/07/15	1.015	2.398	07/11/15	1.305	4.317	08/14/15	1.194	3.429
06/08/15	1.007	2.367	07/12/15	1.316	4.382	08/15/15	1.169	3.274
06/09/15	1.035	2.495	07/13/15	1.333	4.6	08/16/15	1.174	3.299
06/10/15	0.915	1.982	07/14/15	1.604	7.703	08/17/15	1.188	3.392
06/11/15	0.867	1.806	07/15/15	1.589	7.456	08/18/15	1.195	3.446
06/12/15	0.886	1.868	07/16/15	1.6	7.612	08/19/15	1.289	4.204
06/13/15	0.861	1.788	07/17/15	1.563	7.089	08/20/15	1.326	4.477
06/14/15	0.857	1.768	07/18/15	1.519	6.535	08/21/15	1.322	4.451
06/15/15	0.844	1.734	07/19/15	1.815	11.205	08/22/15	1.508	7.194
06/16/15	0.82	1.656	07/20/15	1.794	10.758	08/23/15	1.005	2.515
06/17/15	0.816	1.642	07/21/15	1.838	11.599	08/24/15	0.914	1.99
06/18/15	0.841	1.717	07/22/15	1.767	10.29	08/25/15	1.001	2.33
06/19/15	0.842	1.721	07/23/15	1.661	8.531	08/26/15	0.999	2.323
06/20/15	0.842	1.723	07/24/15	1.584	7.387	08/27/15	0.939	2.068
06/21/15	0.994	2.325	07/25/15	1.544	6.85	08/28/15	0.897	1.909
06/22/15	0.884	1.87	07/26/15	1.504	6.352	08/29/15	0.796	1.585

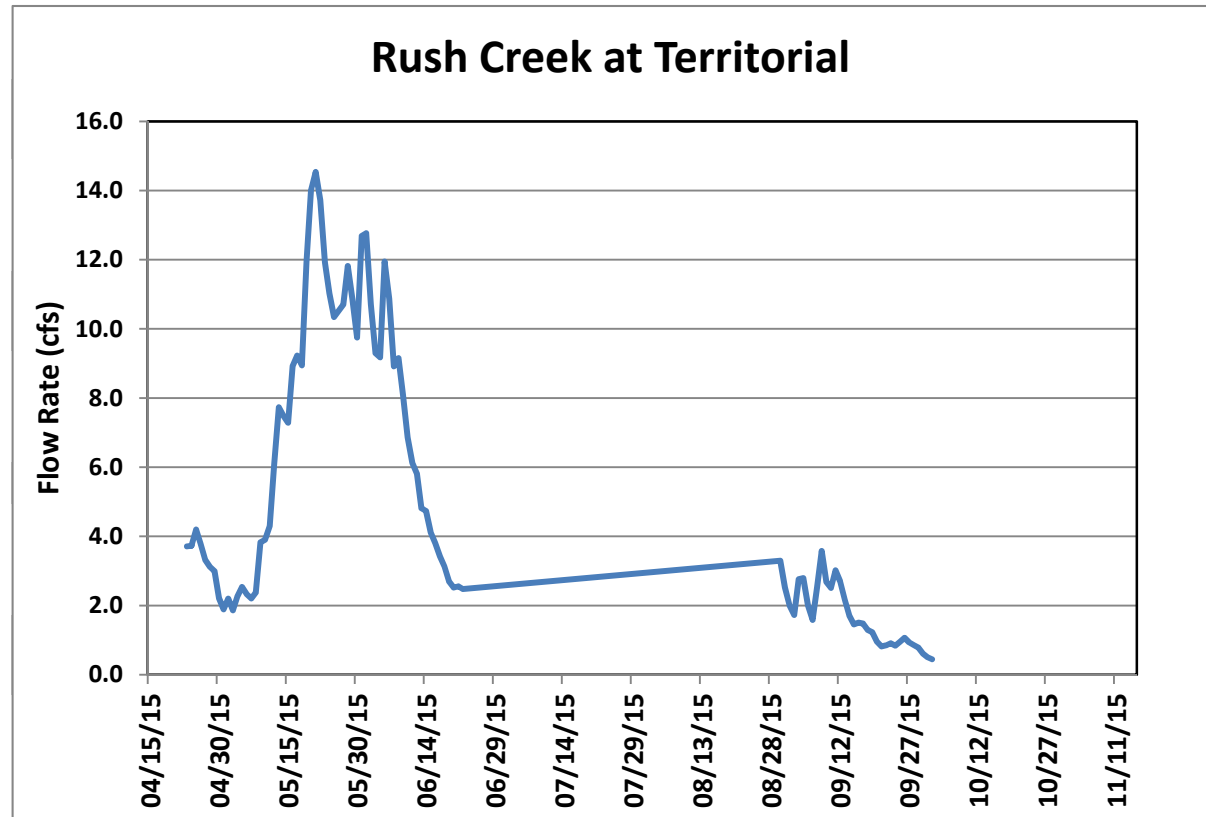
2015 Stream Monitoring - Diamond Creek

08/30/15	0.76	1.485	10/03/15	0.881	1.862
08/31/15	0.705	1.351	10/04/15	0.9	1.916
09/01/15	0.707	1.354	10/05/15	0.811	1.626
09/02/15	0.828	1.782	10/06/15	0.807	1.612
09/03/15	0.856	1.78	10/07/15	0.794	1.576
09/04/15	0.813	1.633	10/08/15	0.788	1.56
09/05/15	0.827	1.677	10/09/15	0.88	1.861
09/06/15	0.787	1.559	10/10/15	0.821	1.656
09/07/15	0.906	1.956	10/11/15	0.801	1.596
09/08/15	0.855	1.767	10/12/15	0.8	1.594
09/09/15	0.822	1.665	10/13/15	0.824	1.666
09/10/15	0.862	1.788	10/14/15	0.843	1.722
09/11/15	0.841	1.716	10/15/15	0.803	1.603
09/12/15	0.838	1.708	10/16/15	0.796	1.582
09/13/15	0.833	1.695	10/17/15	0.773	1.521
09/14/15	0.809	1.618	10/18/15	0.735	1.421
09/15/15	0.854	1.764	10/19/15	0.745	1.447
09/16/15	0.839	1.709	10/19/15	0.76	1.485
09/17/15	0.869	1.811			
09/18/15	0.89	1.883			
09/19/15	0.861	1.78			
09/20/15	0.815	1.638			
09/21/15	0.809	1.62			
09/22/15	0.81	1.623			
09/23/15	0.78	1.537			
09/24/15	0.8	1.595			
09/25/15	0.957	2.194			
09/26/15	0.881	1.852			
09/27/15	0.862	1.786			
09/28/15	0.874	1.825			
09/29/15	0.869	1.808			
09/30/15	0.855	1.763			
10/01/15	0.877	1.84			
10/02/15	0.872	1.82			

2015 Stream Monitoring - Rush Creek at Territorial Road

Site Name	RT 2015	RT 2015
Isco Quantity	Level	Flow Rate
Label	Level	Flow Rate
Units	ft	cfs
Resolution	0.1	0.1
Significant Digits	0	0

04/23/15	2.222	3.71
04/24/15	2.222	3.73
04/25/15	2.255	4.2
04/26/15	2.226	3.785
04/27/15	2.19	3.321
04/28/15	2.174	3.118
04/29/15	2.164	2.993
04/30/15	2.082	2.211
05/01/15	2.046	1.889
05/02/15	2.085	2.197
05/03/15	2.043	1.863
05/04/15	2.092	2.265
05/05/15	2.122	2.538
05/06/15	2.1	2.328
05/07/15	2.087	2.205
05/08/15	2.105	2.374
05/09/15	2.23	3.826
05/10/15	2.235	3.901
05/11/15	2.261	4.294
05/12/15	2.355	6.087
05/13/15	2.427	7.734
05/14/15	2.417	7.484
05/15/15	2.409	7.282
05/16/15	2.468	8.917
05/17/15	2.478	9.227
05/18/15	2.469	8.945
05/19/15	2.556	11.948



2015 Stream Monitoring - Rush Creek at Territorial Road

05/20/15	2.606	14.012	06/23/15	2.162	2.981	07/27/15	3.013	47.041
05/21/15	2.618	14.539	06/24/15	2.158	2.942	07/28/15	2.94	38.377
05/22/15	2.599	13.719	06/25/15	2.123	2.549	07/29/15	2.93	37.232
05/23/15	2.554	11.925	06/26/15	2.114	2.467	07/30/15	2.867	31.185
05/24/15	2.532	11.025	06/27/15	2.106	2.386	07/31/15	2.756	22.506
05/25/15	2.513	10.342	06/28/15	2.07	2.064	08/01/15	2.653	16.396
05/26/15	2.517	10.523	06/29/15	2.099	2.438	08/02/15	2.547	11.719
05/27/15	2.522	10.702	06/30/15	2.323	5.595	08/03/15	2.441	8.201
05/28/15	2.553	11.817	07/01/15	2.473	9.088	08/04/15	2.348	5.928
05/29/15	2.527	10.851	07/02/15	2.388	6.801	08/05/15	2.267	4.421
05/30/15	2.494	9.751	07/03/15	2.304	5.057	08/06/15	2.186	3.258
05/31/15	2.575	12.69	07/04/15	2.228	3.822	08/07/15	2.116	2.478
06/01/15	2.577	12.766	07/05/15	2.154	2.893	08/08/15	2.131	2.618
06/02/15	2.523	10.713	07/06/15	2.107	2.393	08/09/15	2.117	2.485
06/03/15	2.48	9.296	07/07/15	2.579	15.371	08/10/15	2.129	2.639
06/04/15	2.476	9.176	07/08/15	2.722	20.158	08/11/15	2.286	4.705
06/05/15	2.557	11.946	07/09/15	2.656	16.458	08/12/15	2.182	3.226
06/06/15	2.527	10.869	07/10/15	2.589	13.316	08/13/15	2.089	2.227
06/07/15	2.468	8.918	07/11/15	2.526	10.866	08/14/15	2.054	1.932
06/08/15	2.476	9.153	07/12/15	2.476	9.176	08/15/15	2.02	1.682
06/09/15	2.439	8.089	07/13/15	2.425	7.786	08/16/15	1.983	1.444
06/10/15	2.39	6.858	07/14/15	2.905	34.755	08/17/15	1.945	1.228
06/11/15	2.358	6.133	07/15/15	2.901	34.222	08/18/15	1.953	1.269
06/12/15	2.345	5.817	07/16/15	2.848	29.412	08/19/15	2.037	1.875
06/13/15	2.29	4.813	07/17/15	2.825	27.401	08/20/15	2.418	7.76
06/14/15	2.288	4.735	07/18/15	2.812	26.387	08/21/15	2.5	9.921
06/15/15	2.248	4.121	07/19/15	3.277	98.041	08/22/15	2.432	7.884
06/16/15	2.227	3.804	07/20/15	3.348	112.969	08/23/15	2.376	6.505
06/17/15	2.199	3.421	07/21/15	3.304	101.244	08/24/15	2.381	6.608
06/18/15	2.177	3.128	07/22/15	3.261	90.76	08/25/15	2.351	5.937
06/19/15	2.137	2.692	07/23/15	3.225	82.861	08/26/15	2.362	6.197
06/20/15	2.12	2.519	07/24/15	3.176	72.904	08/27/15	2.424	7.658
06/21/15	2.124	2.554	07/25/15	3.133	65.075	08/28/15	2.37	6.391
06/22/15	2.116	2.478	07/26/15	3.072	55.293	08/29/15	2.266	4.397

2015 Stream Monitoring - Rush Creek at Territorial Road

08/30/15	2.19	3.296	10/03/15	1.744	0.508
08/31/15	2.12	2.523	10/04/15	1.659	0.336
09/01/15	2.062	2.001	10/05/15	1.613	0.257
09/02/15	2.027	1.728	10/06/15	1.597	0.238
09/03/15	2.136	2.759	10/07/15	1.588	0.227
09/04/15	2.146	2.791	10/08/15	1.566	0.202
09/05/15	2.062	2.004	10/09/15	1.64	0.315
09/06/15	2.005	1.583	10/10/15	1.728	0.458
09/07/15	2.106	2.526	10/11/15	1.692	0.384
09/08/15	2.211	3.58	10/12/15	1.684	0.368
09/09/15	2.136	2.678	10/13/15	1.679	0.36
09/10/15	2.12	2.508	10/14/15	1.663	0.332
09/11/15	2.167	3.017	10/15/15	1.648	0.309
09/12/15	2.138	2.698	10/16/15	1.612	0.256
09/13/15	2.083	2.169	10/17/15	1.567	0.203
09/14/15	2.024	1.706	10/18/15	1.549	0.185
09/15/15	1.985	1.454	10/19/15	1.581	0.219
09/16/15	1.993	1.503	10/20/15	1.606	0.25
09/17/15	1.989	1.476	10/21/15	1.624	0.273
09/18/15	1.957	1.291	10/22/15	1.572	0.209
09/19/15	1.945	1.226	10/23/15	1.577	0.216
09/20/15	1.887	0.953	10/24/15	1.659	0.334
09/21/15	1.853	0.817	10/25/15	1.98	1.432
09/22/15	1.861	0.848	10/26/15	1.979	1.412
09/23/15	1.876	0.907	10/26/15	1.964	1.328
09/24/15	1.859	0.841			
09/25/15	1.885	0.95			
09/26/15	1.913	1.066			
09/27/15	1.883	0.936			
09/28/15	1.864	0.859			
09/29/15	1.843	0.782			
09/30/15	1.788	0.609			
10/01/15	1.749	0.506			
10/02/15	1.722	0.444			