05412500 Turkey River at Garber, IA

Upper Mississippi-Maquoketa-Plum Basin
Turkey Subbasin

LOCATION.--Lat 42°44′24″, long 91°15′42″ referenced to North American Datum of 1927, in SE ¼ SE ¼ NW ¼ sec.36, T.92 N., R.4 W., Clayton County, IA, Hydrologic Unit 07060004, on right bank on downstream side of bridge on County Highway C43, at southern edge of Garber, 800 ft upstream from Wayman Creek, 2,000 ft downstream from Elk Creek, 1.0 mi downstream from Volga River, and 21.2 mi upstream from mouth.

DRAINAGE AREA.--1,545 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from August 1913 to November 1916, May 1919 to September 1927, April 1929 to September 1930, October 1932 to current year. Prior to December 1932, monthly mean discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1922-25 (M), 1927 (M). WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 634.46 ft above National Geodetic Vertical Datum of 1929. Prior to February 7, 1935, non-recording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since at least 1890, no flood outside the period of record exceeded that of February 23, 1922, stage 28.06 ft. Flood of May 18, 1902, reached a stage of 23.70 ft, discharge about 25,000 ft^3/s.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 05412500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/05412500.2013.pdf

05412500 Turkey River at Garber, IA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	198	268	246	e216	e320	e403	5,100	1,980	10,100	3,820	836	537
2	197	259	244	e223	e344	e365	3,670	1,820	8,210	3,340	816	517
3	195	253	240	e223	e379	e346	2,720	2,090	6,350	3,000	797	502
4	191	252	234	e230	e325	e356	2,140	5,080	5,100	2,700	771	493
5	189	248	229	e228	e305	e365	1,970	7,120	4,620	2,460	825	481
6	190	252	227	e230	e280	e332	1,840	6,600	5,120	2,250	1,050	469
7	193	257	226	e227	e270	e332	1,720	5,520	4,950	2,080	1,060	458
8	194	251	224	e211	310	e365	1,600	4,520	4,220	2,620	1,030	446
9	199	244	235	e212	295	735	2,230	3,620	3,720	2,740	951	436
10	212	240	240	e234	460	7,810	4,160	4,780	3,360	2,090	875	424
11	219	294	232	e233	2,150	15,200	5,790	5,300	3,020	1,870	826	436
12	214	395	213	e246	1,540	7,430	6,040	4,540	2,850	1,750	806	429
13	227	350	215	e244	e1,050	4,470	5,050	3,630	5,230	1,640	831	402
14	365	326	218	e232	e860	3,150	3,590	3,110	6,610	1,550	924	386
15	536	305	245	e229	e760	2,580	4,820	2,770	5,130	1,470	1,010	412
16	485	296	280	e236	e679	2,710	6,610	2,450	4,080	1,400	901	419
17	408	284	288	e229	e598	2,530	6,170	2,240	3,380	1,340	833	413
18	353	275	277	e235	e555	2,270	8,680	2,190	2,940	1,270	784	418
19	325	266	268	e219	e494	1,770	8,110	2,050	2,640	1,220	746	447
20	302	263	e244	e202	e446	1,310	5,820	2,990	2,410	1,180	714	509
21	285	262	e178	e199	e432	1,120	4,460	5,500	4,720	1,160	685	442
22	284	259	e193	e209	e413	1,070	3,760	5,450	18,800	1,110	696	407
23	290	254	e210	e215	e394	1,150	3,440	4,910	8,670	1,070	757	387
24	275	246	e218	e207	e418	1,740	3,360	4,000	7,130	1,020	717	373
25	280	248	e231	e207	e432	1,690	3,150	3,630	14,100	996	667	362
26	284	242	e228	e193	e418	1,270	2,770	3,350	11,100	1,040	631	354
27	283	235	e227	e196	e403	2,090	2,480	4,980	7,950	984	607	346
28	282	228	e223	e219	e418	3,920	2,260	5,680	5,930	940	589	349
29	278	241	e219	e1,430	---	4,670	2,110	6,850	4,850	907	575	363
30	274	244	e222	e655	---	5,410	2,100	20,500	4,340	877	563	355
31	273	---	e221	e413	---	5,790	---	17,500	---	857	553	---
Total	8,480	8,037	7,195	8,682	15,748	84,749	117,720	156,750	181,630	52,751	24,426	12,772
Mean	274	268	232	280	562	2,734	3,924	5,056	6,054	1,702	788	426
Max	536	395	288	1,430	2,150	15,200	8,680	20,500	18,800	3,820	1,060	537
Min	189	228	178	193	270	332	1,600	1,820	2,410	857	553	346
Ac-ft	16,820	15,940	14,270	17,220	31,240	168,100	233,500	310,900	360,300	104,600	48,450	25,330
Cfsm	0.18	0.17	0.15	0.18	0.36	1.77	2.54	3.27	3.92	1.10	0.51	0.28
In.	0.20	0.19	0.17	0.21	0.38	2.04	2.83	3.77	4.37	1.27	0.59	0.31

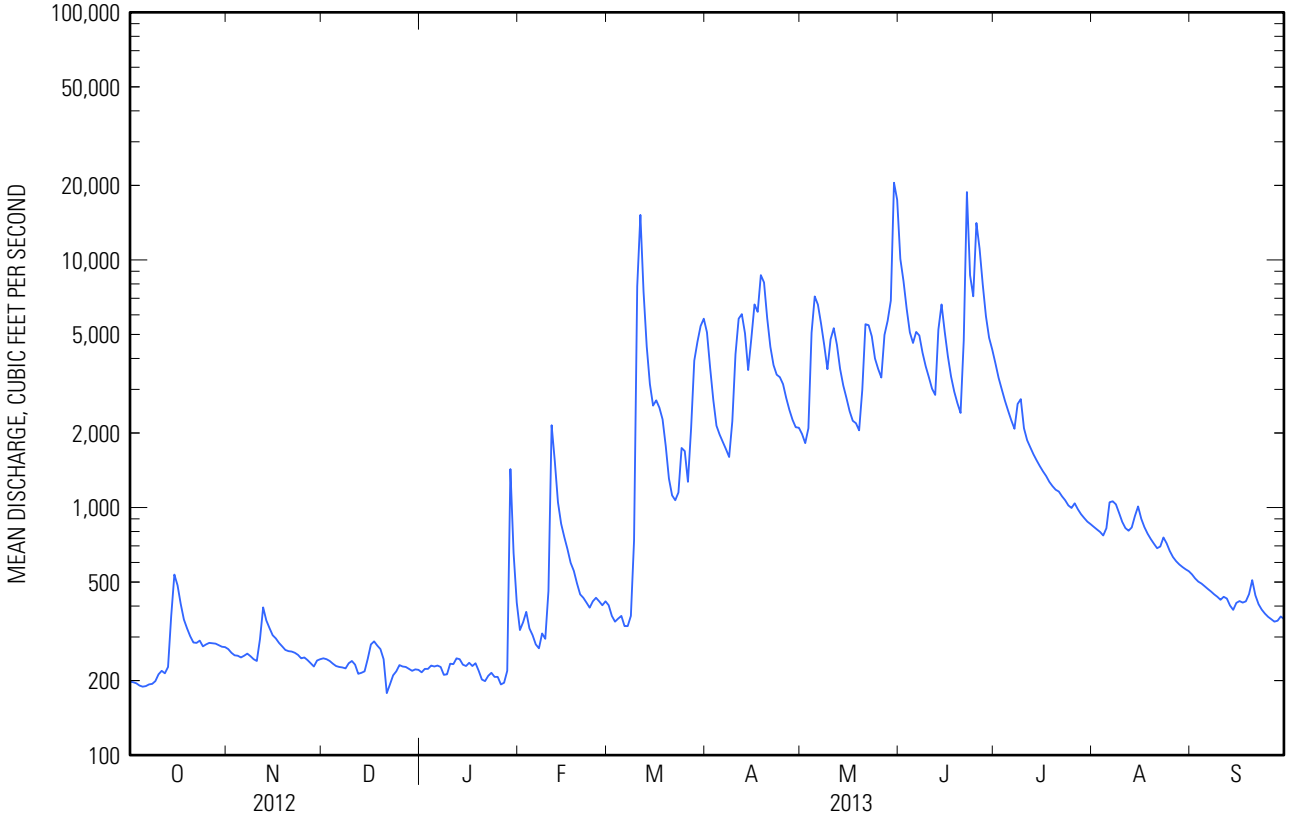
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	599	611	484	508	817	2,025	1,833	1,510	1,568	1,059	866	639
Max	3,385	2,834	2,889	3,306	4,265	4,832	8,153	6,038	8,580	5,772	5,119	3,011
(WY)	(2008)	(1962)	(1983)	(1916)	(1922)	(1979)	(2008)	(2004)	(2008)	(1993)	(1993)	(1938)
Min	88.2	92.2	78.5	62.0	60.9	188	288	95.7	103	121	140	108
(WY)	(1950)	(1950)	(1959)	(1940)	(1959)	(1934)	(1957)	(1934)	(1934)	(1936)	(1964)	(1958)

05412500 Turkey River at Garber, IA—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1913 - 2013	
Annual total	239,625		678,940			
Annual mean	655		1,860		1,047	
Highest annual mean					2,905	1993
Lowest annual mean					249	1934
Highest daily mean	3,780	Apr 22	20,500	May 30	52,200	May 23, 2004
Lowest daily mean	178	Dec 21	178	Dec 21	49	Jan 28, 1940
Annual seven-day minimum	193	Oct 2	193	Oct 2	51	Jan 25, 1940
Maximum peak flow			36,400	Jun 22	66,700	May 23, 2004
Maximum peak stage			27.18	Jun 22	32.80	May 23, 2004
Annual runoff (ac-ft)	475,300		1,347,000		758,700	
Annual runoff (cfsm)	0.424		1.20		0.678	
Annual runoff (inches)	5.77		16.35		9.21	
10 percent exceeds	1,370		5,110		2,240	
50 percent exceeds	459		575		550	
90 percent exceeds	218		223		180	



05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-1962, 2004 to current year.

PERIOD OF DAILY RECORD.--

NITRATE + NITRITE: May 2013 to current year, records fragmentary.

WATER TEMPERATURE: Daily instantaneous values collected in conjunction with suspended-sediment samples, October 1957 to September 1962, records fragmentary.

Daily mean, May 2012 to current year, records fragmentary.

SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE: October 1957 to September 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (for period May 2012 to current year): Maximum daily mean, 30.1°C, July 6, 2012; minimum daily mean, -0.1°C, many days during winter periods.

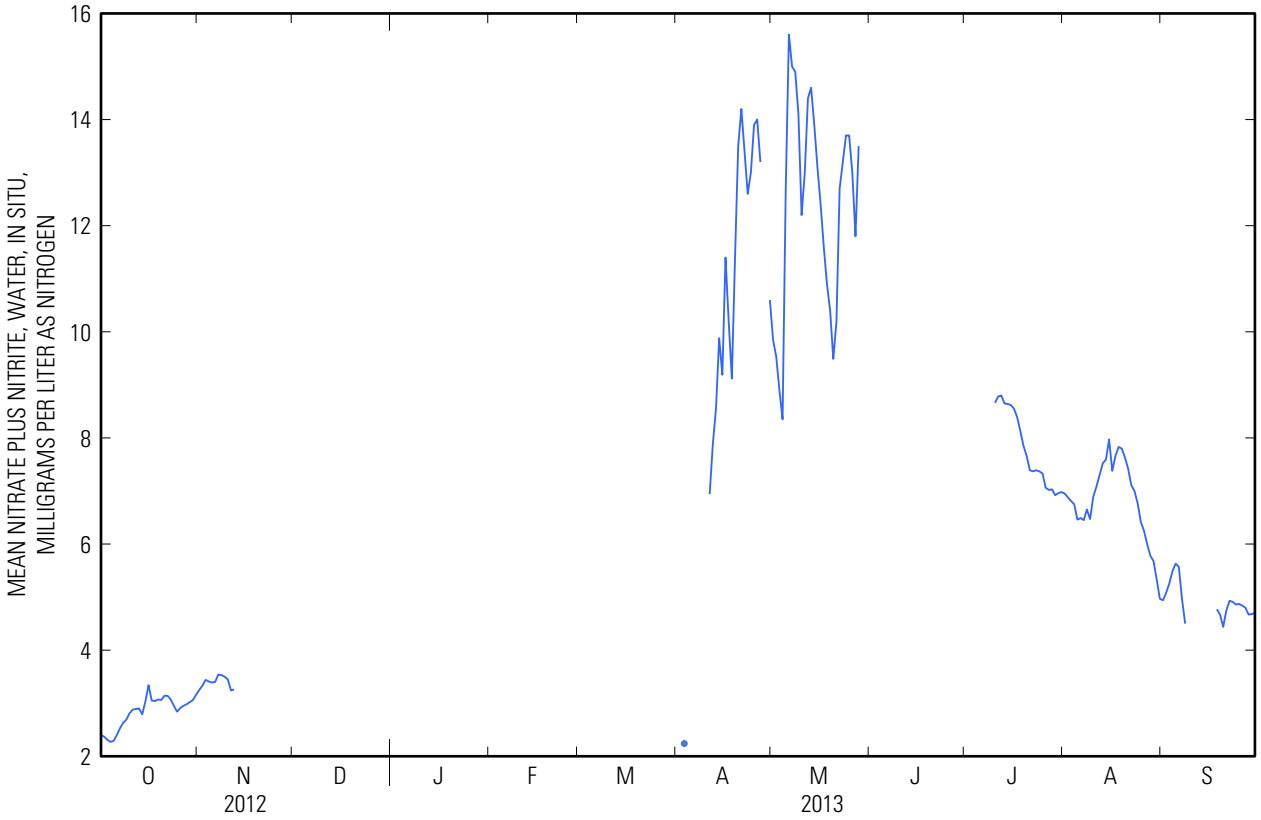
SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 19,300 mg/L, May 20, 1959; minimum daily mean, 5 mg/L, February 13, 1962.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 294,000 tons/day, June 26, 1959; minimum daily, 2 tons/day, January 1 to February 28, 1959.

NITRATE PLUS NITRITE, WATER, IN SITU, MILLIGRAMS PER LITER AS NITROGEN
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.40	3.25	---	---	---	---	---	9.85	---	---	6.95	4.94
2	2.37	3.33	---	---	---	---	---	9.53	---	---	6.88	5.08
3	2.31	3.44	---	---	---	---	2.24	8.90	---	---	6.81	5.26
4	2.27	3.41	---	---	---	---	---	8.35	---	---	6.75	5.49
5	2.29	3.39	---	---	---	---	---	12.7	---	---	6.46	5.63
6	2.40	3.40	---	---	---	---	---	15.6	---	---	6.49	5.57
7	2.53	3.54	---	---	---	---	---	15.0	---	---	6.45	4.96
8	2.63	3.53	---	---	---	---	---	14.9	---	---	6.65	4.50
9	2.69	3.50	---	---	---	---	---	14.1	---	---	6.47	---
10	2.81	3.45	---	---	---	---	---	12.2	---	8.66	6.89	---
11	2.88	3.24	---	---	---	---	6.94	13.0	---	8.78	7.08	---
12	2.89	3.26	---	---	---	---	7.88	14.4	---	8.80	7.30	---
13	2.90	---	---	---	---	---	8.56	14.6	---	8.65	7.52	---
14	2.79	---	---	---	---	---	9.88	13.9	---	8.64	7.59	---
15	3.03	---	---	---	---	---	9.19	13.1	---	8.62	7.97	---
16	3.34	---	---	---	---	---	11.4	12.4	---	8.55	7.38	---
17	3.05	---	---	---	---	---	10.2	11.6	---	8.39	7.66	---
18	3.04	---	---	---	---	---	9.12	10.9	---	8.13	7.83	4.77
19	3.07	---	---	---	---	---	11.4	10.4	---	7.85	7.80	4.67
20	3.06	---	---	---	---	---	13.5	9.49	---	7.66	7.63	4.44
21	3.14	---	---	---	---	---	14.2	10.2	---	7.39	7.42	4.75
22	3.14	---	---	---	---	---	13.4	12.7	---	7.37	7.11	4.93
23	3.07	---	---	---	---	---	12.6	13.2	---	7.39	7.00	4.91
24	2.95	---	---	---	---	---	13.0	13.7	---	7.37	6.77	4.86
25	2.84	---	---	---	---	---	13.9	13.7	---	7.33	6.42	4.87
26	2.91	---	---	---	---	---	14.0	13.0	---	7.06	6.25	4.84
27	2.95	---	---	---	---	---	13.2	11.8	---	7.02	6.00	4.80
28	2.98	---	---	---	---	---	---	13.5	---	7.03	5.78	4.67
29	3.02	---	---	---	---	---	---	---	---	6.92	5.68	4.68
30	3.06	---	---	---	---	---	10.6	---	---	6.96	5.34	4.70
31	3.16	---	---	---	---	---	---	---	---	6.98	4.97	---
Mean	2.84	---	---	---	---	---	---	---	---	---	6.82	---
Max	3.34	---	---	---	---	---	---	---	---	---	7.97	---
Min	2.27	---	---	---	---	---	---	---	---	---	4.97	---

05412500 Turkey River at Garber, IA—Continued



05412500 Turkey River at Garber, IA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	14.9	5.9	3.0	-0.1	-0.1	0.3	---	18.3	---	---	22.0	25.5
2	15.3	5.4	5.4	-0.1	-0.1	0.3	---	13.7	---	---	22.6	22.6
3	15.5	6.4	7.7	-0.1	-0.1	0.4	4.5	8.8	---	---	22.2	20.5
4	14.6	6.7	6.2	-0.1	-0.1	0.3	6.3	7.8	---	---	21.4	20.9
5	10.4	7.2	3.2	0.0	-0.1	0.3	7.6	9.9	---	---	19.9	22.0
6	8.1	5.6	3.9	-0.1	0.0	0.4	7.8	12.2	---	---	20.8	22.5
7	9.1	6.3	4.2	-0.1	0.0	0.5	8.5	13.8	---	---	22.8	23.6
8	9.1	6.7	3.5	0.0	0.1	0.7	10.4	14.8	---	---	22.4	23.0
9	10.1	7.2	2.7	-0.1	0.0	1.1	9.8	14.8	---	---	22.6	23.5
10	8.8	10.3	1.8	0.0	0.1	---	6.5	13.7	---	24.0	22.0	24.7
11	9.3	10.9	0.4	0.0	0.0	---	5.2	13.3	---	23.1	21.6	24.4
12	9.2	5.1	0.8	0.0	0.2	---	4.5	12.4	---	22.9	22.1	22.6
13	10.6	2.6	1.1	-0.1	0.0	---	4.4	12.5	---	21.6	21.8	19.9
14	12.3	4.2	1.3	-0.1	0.2	---	5.5	14.3	---	21.7	20.5	18.4
15	10.7	5.2	3.5	-0.1	0.0	---	7.3	17.1	---	23.5	20.8	17.9
16	11.6	4.5	4.2	0.0	-0.1	---	7.1	18.1	---	25.1	20.8	17.4
17	11.9	4.4	2.7	-0.1	-0.1	---	7.3	18.9	---	26.2	21.3	16.2
18	10.8	5.3	2.0	0.0	0.2	---	6.7	19.1	---	26.9	21.5	18.0
19	10.3	7.0	2.2	0.0	-0.1	---	5.8	19.7	---	26.6	21.2	20.7
20	9.4	7.4	-0.1	-0.1	0.0	---	5.7	20.1	---	25.0	22.1	19.6
21	10.2	7.7	-0.1	-0.1	-0.1	---	7.2	19.0	---	24.0	23.6	17.2
22	11.9	8.1	-0.1	-0.1	0.0	---	8.6	17.0	---	23.5	23.6	17.1
23	14.5	4.3	-0.1	-0.1	0.1	---	8.6	16.5	---	23.4	23.3	17.1
24	16.5	1.9	-0.1	-0.1	0.2	---	8.3	16.4	---	21.7	23.5	17.1
25	15.4	1.8	-0.1	-0.1	0.4	---	9.4	15.5	---	21.6	25.2	17.2
26	9.5	1.2	-0.1	-0.1	0.1	---	10.9	13.2	---	22.0	26.1	17.6
27	7.6	0.0	-0.1	-0.1	0.2	---	12.5	12.2	---	19.8	26.9	18.8
28	6.5	0.2	-0.1	-0.1	0.4	---	13.9	13.0	---	18.3	26.0	18.2
29	5.9	0.7	-0.1	0.0	---	---	15.4	15.2	---	19.5	25.8	16.8
30	5.7	2.2	-0.1	-0.1	---	---	17.5	---	---	19.7	26.9	16.4
31	5.1	---	-0.1	-0.1	---	---	---	---	---	20.7	26.7	---
Mean	10.7	5.1	1.9	-0.1	0.0	---	---	---	---	---	22.9	19.9
Max	16.5	10.9	7.7	0.0	0.4	---	---	---	---	---	26.9	25.5
Min	5.1	0.0	-0.1	-0.1	-0.1	---	---	---	---	---	19.9	16.2

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 10

[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Barometric pressure, mm Hg (00025)	Discharge, ft^3/s (00060)	Discharge, instantaneous, ft^3/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)
10-15-2012 1030	742	--	563	10.3	91	8.0	507	9.0	25
11-20-2012 1030	744	--	260	11.8	99	8.0	584	7.1	E 2.4
12-19-2012 1015	741	--	268	13.4	99	8.0	597	2.0	< 2.0
01-09-2013 0930	746	E 212	--	13.5	94	8.0	635	-.1	E 2.1
02-13-2013 0915	737	E 1,050	--	12.5	88	7.7	297	-.1	20
03-13-2013 1015	750	--	460	13.4	92	7.4	164	-.1	83
04-10-2013 0930	744	--	3,950	11.3	93	8.0	405	6.0	380
05-09-2013 1100	742	--	3,600	9.7	97	8.0	524	14.3	26
06-13-2013 1020	747	--	5,040	8.3	91	7.8	481	18.8	1,160
07-10-2013 1130	748	--	2,100	8.2	97	7.9	581	23.0	70
08-14-2013 1100	751	--	873	8.8	97	8.0	566	19.4	21
09-26-2013 0945	744	--	353	9.6	97	8.0	541	14.7	E 5.6

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 2 of 10

[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Stream width, ft (00004)	Number of sampling points, count (00063)	Dissolved solids dried at 180°C, water, filtered, mg/L (70300)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as $CaCO_3$ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Carbonate, water, filtered, inflection-point incremental titration method, field, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Inorganic carbon, suspended sediment, total, mg/L (00688)
10-15-2012 1030	157	10	292	222	269	2.25	0.9	15.9	0.19
11-20-2012 1030	165	13	310	254	306	.38	1.6	17.8	< .03
12-19-2012 1015	120	13	290	257	311	.42	1.0	17.9	< .03
01-09-2013 0930	170	5	347	274	332	.44	.9	18.1	.08
02-13-2013 0915	175	10	170	102	124	3.68	.1	11.5	.09
03-13-2013 1015	180	8	117	65.2	79.4	6.66	--	5.68	.10
04-10-2013 0930	180	11	233	158	190	14.8	.9	11.8	2.08
05-09-2013 1100	180	10	323	165	200	3.83	.6	21.4	.27
06-13-2013 1020	180	11	268	165	199	27.0	.8	14.3	1.03
07-10-2013 1130	165	10	340	230	276	3.65	1.7	15.4	.16
08-14-2013 1100	165	10	317	239	289	1.34	1.1	16.9	.06
09-26-2013 0945	172	11	296	222	269	.44	.8	15.9	< .03

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 3 of 10

[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Silica, water, filtered, mg/L as SiO_2 (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophos-phate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phos-phorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)
10-15-2012 1030	6.98	22.0	0.014	2.55	0.020	0.020	0.256	0.032	0.164
11-20-2012 1030	3.39	28.3	< .010	3.48	.013	.011	.070	.014	.031
12-19-2012 1015	5.28	28.0	< .010	4.03	.015	.013	.029	.013	.027
01-09-2013 0930	7.04	29.1	.010	4.33	.012	.018	.052	.018	.031
02-13-2013 0915	5.93	14.3	.762	2.42	.032	.341	.322	.361	.564
03-13-2013 1015	3.75	7.44	.791	1.40	.015	.278	.671	.316	.721
04-10-2013 0930	8.83	18.8	.272	3.52	.031	.216	1.23	.255	1.19
05-09-2013 1100	8.32	21.7	.018	13.0	.021	.077	.265	.082	.199
06-13-2013 1020	8.84	16.8	.073	8.78	.036	.144	2.50	.143	2.50
07-10-2013 1130	10.8	20.5	.014	8.19	.020	.099	.400	.099	.338
08-14-2013 1100	9.75	23.2	< .010	6.58	.010	.075	.133	.081	.147
09-26-2013 0945	5.98	23.5	.032	4.35	.013	.024	.066	.035	.045

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Total nitrogen, water, filtered, analytically determined, mg/L (62854)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)	Escherichia coli, Defined Substrate Technology, water, MPN/100 mL (50468)	Total coliform, Defined Substrate Technology, water, MPN/100 mL (50569)	Chlorophyll a, phytoplankton, chromatographic-fluorometric method, µg/L (70953)	Pheophytin a, phytoplankton, µg/L (62360)	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, µg/L (04040)	Acetochlor, water, filtered, recoverable, µg/L (49260)
10-15-2012 1030	2.82	3.22	6,300	42,000	21.8	18.0	< .0060	E .069	0.522
11-20-2012 1030	3.66	3.60	49	980	11.1	6.4	< .0060	E .065	.048
12-19-2012 1015	4.01	4.23	< 34	--	6.4	E 3.6	< .0060	E .054	< .010
01-09-2013 0930	4.12	4.36	8	320	E 2.4	E 1.6	< .0060	E .065	< .010
02-13-2013 0915	4.24	4.71	1,300	550,000	9.2	11.1	< .0060	E .039	.068
03-13-2013 1015	3.02	3.57	1,200	96,000	12.7	11.8	< .0060	E .024	.103
04-10-2013 0930	3.86	5.57	13,000	27,000	19.8	18.8	< .0060	E .034	.028
05-09-2013 1100	14.4	14.0	< 210	--	7.6	3.5	< .0060	E .062	.026
06-13-2013 1020	9.01	--	1,000	1,000	32.2	31.9	< .0060	E .254	E 5.68
07-10-2013 1130	10.3	--	2,700	53,000	28.8	8.3	< .0060	E .138	.118
08-14-2013 1100	7.43	7.58	200	12,000	5.8	4.4	< .0060	E .100	.021
09-26-2013 0945	4.88	4.86	< 52	--	11.2	5.6	< .0060	E .069	.008

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Alachlor, water, filtered, recoverable, µg/L (46342)	alpha-HCH, water, filtered, recoverable, µg/L (34253)	Atrazine, water, filtered, recoverable, µg/L (39632)	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82686)	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82673)	Butylate, water, filtered, recoverable, µg/L (04028)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82680)	Carbofuran, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82674)	Chlorpyrifos, water, filtered, recoverable, µg/L (38933)
10-15-2012 1030	< .008	< .0040	E 2.01	< .120	< .014	< .0040	< .060	< .060	< .0100
11-20-2012 1030	< .008	< .0040	.074	< .120	< .014	< .0040	< .060	< .060	< .0100
12-19-2012 1015	< .008	< .0040	.034	< .120	< .014	< .0040	< .060	< .060	< .0100
01-09-2013 0930	< .008	< .0040	.034	< .120	< .014	< .0040	< .060	< .060	< .0100
02-13-2013 0915	< .008	< .0040	.050	< .120	< .014	< .0040	< .060	< .060	< .0100
03-13-2013 1015	< .008	< .0040	.056	< .120	< .014	< .0040	< .060	< .060	< .0100
04-10-2013 0930	< .008	< .0040	.297	< .120	< .014	< .0040	< .060	< .060	.0059
05-09-2013 1100	.004	< .0040	.056	< .120	< .014	< .0040	< .060	< .060	< .0100
06-13-2013 1020	.006	< .0040	E 8.23	< .120	< .014	< .0040	< .060	< .060	.0067
07-10-2013 1130	< .008	< .0040	.647	< .120	< .014	< .0040	< .060	< .060	< .0100
08-14-2013 1100	< .008	< .0040	.135	< .120	< .014	< .0040	< .060	< .060	< .0100
09-26-2013 0945	< .008	< .0040	.067	< .120	< .014	< .0040	< .060	< .060	< .0100

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	Cyanazine, water, filtered, recoverable, µg/L (04041)	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82682)	Desulfinylfipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfinylfipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dieldrin, water, filtered, recoverable, µg/L (39381)	Disulfoton, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82677)	EPTC, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82668)
10-15-2012 1030	< .010	< .022	0.0007	< .029	< .012	< .0060	< .008	< .040	< .0056
11-20-2012 1030	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
12-19-2012 1015	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
01-09-2013 0930	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
02-13-2013 0915	< .010	< .022	.0016	< .029	< .012	< .0060	< .008	< .040	< .0056
03-13-2013 1015	< .010	< .022	.0018	< .029	< .012	< .0060	< .008	< .040	< .0056
04-10-2013 0930	< .010	.009	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
05-09-2013 1100	< .010	.006	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
06-13-2013 1020	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	--	< .0056
07-10-2013 1130	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
08-14-2013 1100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
09-26-2013 0945	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Ethal-fluralin, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (82663)	Ethoprop, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (82672)	Fipronil sulfide, water, filtered, recover-able, µg/L (62167)	Fipronil sulfone, water, filtered, recover-able, µg/L (62168)	Fipronil, water, filtered, recover-able, µg/L (62166)	Fonofos, water, filtered, recover-able, µg/L (04095)	Lindane, water, filtered, recover-able, µg/L (39341)	Linuron, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (82666)	Malathion, water, filtered, recover-able, µg/L (39532)
10-15-2012 1030	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
11-20-2012 1030	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
12-19-2012 1015	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
01-09-2013 0930	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
02-13-2013 0915	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
03-13-2013 1015	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
04-10-2013 0930	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
05-09-2013 1100	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
06-13-2013 1020	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
07-10-2013 1130	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
08-14-2013 1100	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
09-26-2013 0945	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82667)	Metolachlor, water, filtered, recoverable, µg/L (39415)	Metribuzin, water, filtered, recoverable, µg/L (82630)	Molinate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82671)	Napropamide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82684)	p,p'-DDE, water, filtered, recoverable, µg/L (34653)	Parathion, water, filtered, recoverable, µg/L (39542)	Pebulate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82669)	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82683)
10-15-2012 1030	< .008	0.652	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
11-20-2012 1030	< .008	.023	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
12-19-2012 1015	< .008	.018	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
01-09-2013 0930	< .008	.013	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
02-13-2013 0915	< .008	.102	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
03-13-2013 1015	< .008	.059	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
04-10-2013 0930	< .008	.105	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
05-09-2013 1100	< .008	.058	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
06-13-2013 1020	< .008	E 2.72	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
07-10-2013 1130	< .008	.725	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
08-14-2013 1100	< .008	.045	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012
09-26-2013 0945	< .008	.021	< .012	< .0080	< .010	< .005	< .020	< .0160	< .012

05412500 Turkey River at Garber, IA—Continued

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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82664)	Prometon, water, filtered, recoverable, µg/L (04037)	Propachlor, water, filtered, recoverable, µg/L (04024)	Propanil, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82679)	Propargite, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82685)	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82676)	Simazine, water, filtered, recoverable, µg/L (04035)	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82670)	Terbacil, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82665)
10-15-2012 1030	< .020	< .012	< .006	< .010	< .020	< .0080	0.015	< .028	< .024
11-20-2012 1030	< .020	.004	< .006	< .010	< .020	< .0080	< .006	< .028	< .024
12-19-2012 1015	< .020	.004	< .006	< .010	< .020	< .0080	.004	< .028	< .024
01-09-2013 0930	< .020	< .012	< .006	< .010	< .020	< .0080	.004	< .028	< .024
02-13-2013 0915	< .020	< .012	< .006	< .010	< .020	< .0080	< .006	< .028	< .024
03-13-2013 1015	< .020	< .012	< .006	< .010	< .020	< .0080	.005	< .028	< .024
04-10-2013 0930	< .020	.003	< .006	< .010	< .020	< .0080	.004	< .028	< .024
05-09-2013 1100	< .020	< .012	< .006	< .010	< .020	< .0080	.006	< .028	< .024
06-13-2013 1020	< .020	< .012	< .006	< .010	< .020	< .0080	.031	< .028	< .024
07-10-2013 1130	< .020	.003	< .006	< .010	< .020	< .0080	.005	< .028	< .024
08-14-2013 1100	< .020	< .012	< .006	< .010	< .020	< .0080	< .006	< .028	< .024
09-26-2013 0945	< .020	< .012	< .006	< .010	< .020	< .0080	.002	< .028	< .024

05412500 Turkey River at Garber, IA—Continued

WATER-QUALITY DATA
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[%, percent; $CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82675)	Thiobencarb, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82681)	Triallate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82678)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661)	Organic carbon, suspended sediment, total, mg/L (00689)	Suspended sediment concentration, mg/L (80154)
10-15-2012 1030	< .018	< .016	< .0046	< .018	2.06	165
11-20-2012 1030	< .018	< .016	< .0046	< .018	.38	52
12-19-2012 1015	< .018	< .016	< .0046	< .018	.42	17
01-09-2013 0930	< .018	< .016	< .0046	< .018	.37	16
02-13-2013 0915	< .018	< .016	< .0046	< .018	3.59	95
03-13-2013 1015	< .018	< .016	< .0046	< .018	6.56	295
04-10-2013 0930	< .018	< .016	< .0046	< .018	12.7	1,150
05-09-2013 1100	< .018	< .016	< .0046	< .018	3.57	135
06-13-2013 1020	< .018	< .016	< .0046	< .018	25.9	2,080
07-10-2013 1130	< .018	< .016	< .0046	< .018	3.48	260
08-14-2013 1100	< .018	< .016	< .0046	< .018	1.28	87
09-26-2013 0945	< .018	< .016	< .0046	< .018	.44	40