



Water-Data Report 2009

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN

Upper Mississippi Basin
Twin Cities Subbasin

LOCATION.--Lat 45°03'00", long 93°18'36" referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.11, T.118 N., R.21 W., Hennepin County, MN, Hydrologic Unit 07010206, at bridge over Shingle Creek at intersection of Queen Avenue North and 52nd Avenue North in Minneapolis.

DRAINAGE AREA.--28.2 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1996 to September 1999, May 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 850 ft above sea level (from topographic map).

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

Water-Data Report 2009

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[*e*, estimated; *<*, less than]

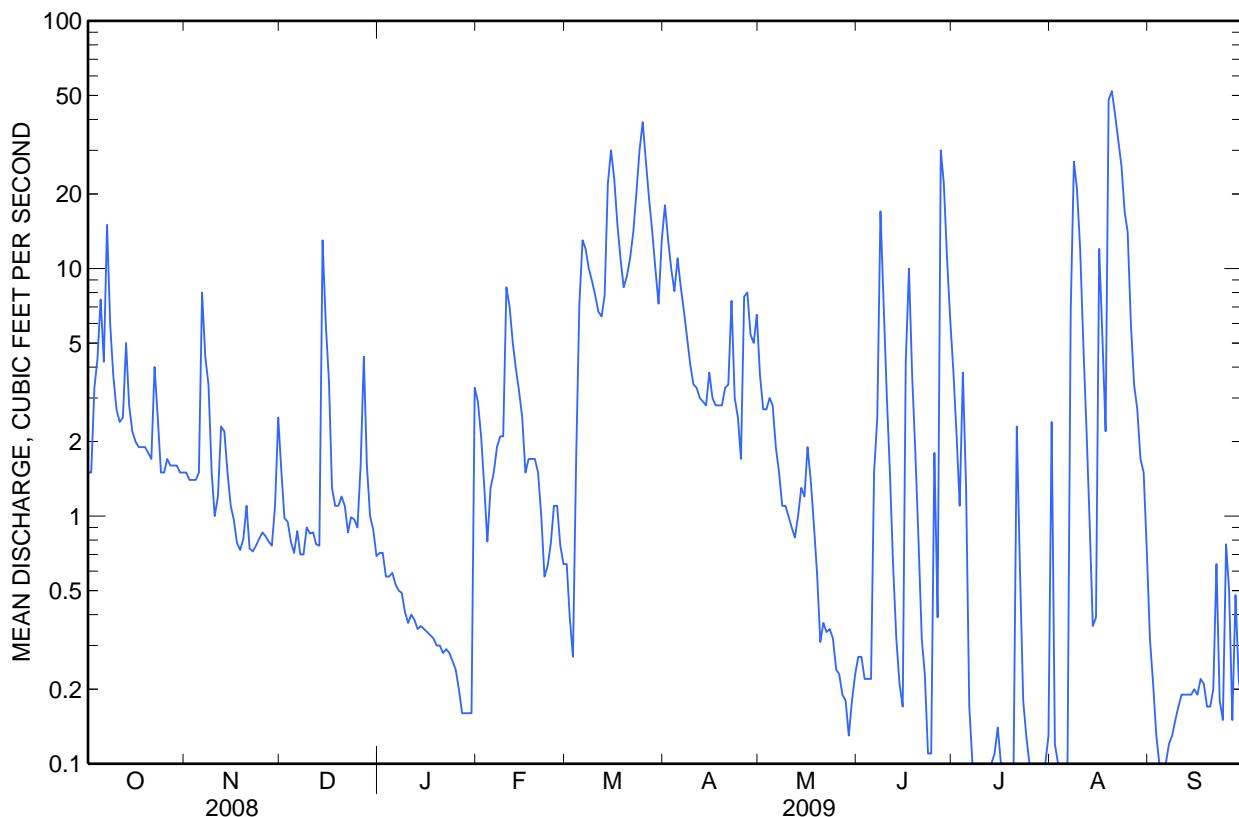
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e1.5	e1.5	1.5	0.71	e2.9	e0.64	18	3.7	0.27	3.8	2.4	0.32
2	1.5	e1.4	0.98	0.71	e2.1	e0.39	13	2.7	0.27	2.1	0.12	0.21
3	3.3	e1.4	0.95	0.57	e1.3	e0.27	10	2.7	0.22	1.1	<0.10	0.13
4	4.3	1.4	0.79	0.57	e0.79	e1.7	8.1	3.0	0.22	3.8	<0.10	0.10
5	7.5	1.5	0.71	0.59	e1.3	e7.2	11	2.8	0.22	1.3	<0.10	<0.10
6	4.2	8.0	0.87	0.53	e1.5	e13	8.4	1.9	1.5	0.17	<0.10	0.10
7	15	4.4	0.70	0.50	e1.9	e12	6.7	1.5	2.5	0.10	6.8	0.12
8	5.9	3.4	0.70	0.49	e2.1	e10	5.2	1.1	17	<0.10	27	0.13
9	3.7	1.5	0.90	0.41	e2.1	e8.9	4.1	1.1	7.1	<0.10	21	0.15
10	2.7	1.00	0.85	0.37	e8.4	e7.8	3.4	1.0	3.0	<0.10	12	0.17
11	2.4	1.2	0.86	0.40	e7.0	e6.7	3.3	0.90	1.5	<0.10	4.9	0.19
12	e2.5	2.3	0.77	0.38	e5.0	e6.4	3.0	0.82	0.63	<0.10	2.2	0.19
13	e5.0	2.2	0.76	0.35	e3.9	e7.8	2.9	1.0	0.32	<0.10	0.91	0.19
14	e2.8	1.5	13	0.36	e3.2	e22	2.8	1.3	0.21	0.11	0.36	0.19
15	e2.2	1.1	e6.0	e0.35	e2.5	e30	3.8	1.2	0.17	0.14	0.39	0.20
16	e2.0	0.97	3.5	e0.34	e1.5	e23	3.0	e1.9	4.2	<0.10	12	0.19
17	e1.9	0.78	1.3	e0.33	e1.7	e15	2.8	e1.4	10	<0.10	5.3	0.22
18	e1.9	0.73	1.1	e0.32	e1.7	e11	2.8	e0.92	3.7	<0.10	2.2	0.21
19	e1.9	0.81	1.1	e0.30	e1.7	e8.4	2.8	e0.58	1.8	<0.10	48	0.17
20	e1.8	1.1	1.2	e0.30	e1.5	e9.3	3.3	0.31	0.79	<0.10	52	0.17
21	e1.7	0.74	1.1	e0.28	e1.00	e11	3.4	0.37	0.32	2.3	42	0.20
22	e4.0	0.72	0.86	e0.29	e0.57	e14	7.4	0.34	0.23	0.60	33	0.64
23	e2.5	0.76	0.99	e0.28	e0.63	e20	3.0	0.35	0.11	0.18	26	0.18
24	e1.5	0.81	0.97	e0.26	e0.78	e30	2.5	0.32	0.11	0.13	17	0.15
25	e1.5	0.86	0.90	e0.24	e1.1	39	1.7	0.24	1.8	<0.10	14	0.77
26	e1.7	0.83	1.6	e0.20	e1.1	27	7.7	0.23	0.39	<0.10	6.0	0.50
27	e1.6	0.79	4.4	e0.16	e0.76	19	8.0	0.19	30	<0.10	3.4	0.15
28	e1.6	0.76	1.6	e0.16	e0.64	14	5.4	0.18	22	<0.10	2.7	0.48
29	e1.6	1.1	1.0	e0.16	---	10	5.0	0.13	11	<0.10	1.7	0.22
30	e1.5	2.5	0.88	e0.16	---	7.2	6.5	0.18	6.2	<0.10	1.5	0.17
31	e1.5	---	0.69	e3.3	---	13	---	0.23	---	0.13	0.74	---
Total	94.7	48.06	53.53	14.37	60.67	405.70	169.0	34.59	127.78	17.66	346.02	6.91
Mean	3.05	1.60	1.73	0.46	2.17	13.1	5.63	1.12	4.26	0.57	11.2	0.23
Max	15	8.0	13	3.3	8.4	39	18	3.7	30	3.8	52	0.77
Min	1.5	0.72	0.69	0.16	0.57	0.27	1.7	0.13	0.11	0.10	0.10	0.10
Ac-ft	188	95	106	29	120	805	335	69	253	35	686	14
Cfsm	0.11	0.06	0.06	0.02	0.08	0.46	0.20	0.04	0.15	0.02	0.40	0.01
In.	0.12	0.06	0.07	0.02	0.08	0.54	0.22	0.05	0.17	0.02	0.46	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	16.0	9.58	5.30	3.46	5.65	14.5	24.9	26.7	27.0	19.8	15.4	14.1
Max	47.1	28.2	9.21	7.39	20.3	24.3	35.3	56.6	55.4	58.5	56.2	40.3
(WY)	(2006)	(1997)	(1997)	(2007)	(2005)	(1997)	(2006)	(2002)	(2002)	(2002)	(2002)	(2005)
Min	3.05	1.60	1.73	0.41	1.09	7.54	5.63	1.12	4.26	0.57	3.57	0.23
(WY)	(2009)	(2009)	(2009)	(2004)	(2007)	(2008)	(2009)	(2009)	(2009)	(2009)	(2004)	(2009)

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued**SUMMARY STATISTICS**

	Calendar Year 2008	Water Year 2009	Water Years 1996 - 2009	
Annual total	3,373.77	1,378.99		
Annual mean	9.22	3.78	15.2	
Highest annual mean			27.9	2002
Lowest annual mean			3.78	2009
Highest daily mean	72 Jun 12	52 Aug 20	230 Jun 25, 2003	
Lowest daily mean	0.37 Aug 24	^a <0.10 Jul 7	^a <0.10 Jul 7, 2009	
Annual seven-day minimum	0.59 Aug 20	0.10 Jul 7	0.10 Jul 7, 2009	
Maximum peak flow		211 Aug 19	291 Sep 4, 2005	
Maximum peak stage		12.40 Aug 19	14.21 Jun 25, 2003	
Instantaneous low flow		<0.10 Aug 5	^b <0.10 Aug 15, 2005	
Annual runoff (ac-ft)	6,690	2,740	11,030	
Annual runoff (cfs-m)	0.327	0.134	0.540	
Annual runoff (inches)	4.45	1.82	7.33	
10 percent exceeds	30	10	41	
50 percent exceeds	2.8	1.2	7.4	
90 percent exceeds	0.91	0.15	1.2	

^a Many days.^b Many days, several years.

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1996 to September 1998, February 2004 to current year.

WATER TEMPERATURE: May 1996 to September 1998, February 2004 to current year.

REVISED RECORDS.--WDR MN-96-1: Specific conductance.

INSTRUMENTATION.--Water-quality monitor May 1996 to September 1998, and February 2004 to current year, which provides continuous recordings.

Sensor is located at gage.

REMARKS.--Conductance and temperature at the sensor were compared independently with a calibrated meter bi-weekly to monthly. Variation of conductance was within 6% (corrections applied). Specific conductance record is rated "Good" to "Excellent". Variation of temperature between meter and recorded values were within +/- 0.2 C (no corrections applied). Water temperature record is rated "Excellent". Prior to the 2009 water year, water temperatures at sensor were represented within 0.5 C.

Additional water-quality data for this site are available at: URL <http://water.usgs.gov/mn/nwis/qw>.

EXTREMES OUTSIDE PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: A value of 6,620 $\mu\text{S}/\text{cm}$ was detected on March 11, 2002, based on discrete water sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 8,070 $\mu\text{S}/\text{cm}$, Feb. 1, 2009; minimum, 65 $\mu\text{S}/\text{cm}$, Sep. 4, 2005.

WATER TEMPERATURE: Maximum, 29.0 C, July 21, 2004; minimum, -0.2 C, on many days most winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 8,070 $\mu\text{S}/\text{cm}$, Feb. 1; minimum, 128 $\mu\text{S}/\text{cm}$, Aug. 19.

WATER TEMPERATURE: Maximum, 28.8 C, June 25; minimum, -0.2 C, many days.

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	
October				November				December				January	
1	---	---	---	1,090	1,010	1,070	1,420	1,400	1,410	2,860	2,670	2,740	
2	744	---	---	1,060	1,020	1,030	1,430	1,390	1,420	4,050	2,860	3,630	
3	787	730	755	1,040	1,030	1,030	1,410	1,380	1,390	3,620	3,100	3,340	
4	926	787	869	1,060	1,040	1,050	1,410	1,390	1,400	3,230	3,010	3,140	
5	923	715	867	1,090	1,060	1,080	1,400	1,370	1,390	3,040	2,720	2,880	
6	880	807	835	1,090	851	973	1,410	1,350	1,380	2,810	2,690	2,750	
7	820	609	714	1,020	834	940	1,440	1,410	1,430	3,140	2,690	2,940	
8	710	582	640	925	860	888	1,440	1,410	1,430	2,920	2,390	2,660	
9	725	637	693	979	880	934	1,570	1,440	1,500	2,390	1,870	2,140	
10	668	622	648	985	958	976	1,760	1,570	1,660	1,880	1,660	1,800	
11	635	616	624	958	869	925	1,750	1,670	1,700	1,710	1,540	1,640	
12	652	628	636	869	805	823	1,670	1,570	1,630	2,180	1,530	1,810	
13	657	560	608	884	807	844	1,570	1,470	1,510	2,160	1,890	2,050	
14	709	654	686	881	822	842	2,190	1,440	1,600	1,900	1,620	1,760	
15	---	---	---	882	825	849	1,660	1,370	1,490	1,640	1,450	1,550	
16	768	---	---	913	882	903	1,820	1,420	1,720	1,480	1,420	1,460	
17	903	696	782	945	911	925	1,800	1,750	1,770	1,460	1,370	1,410	
18	903	832	861	988	945	970	1,990	1,770	1,900	1,420	1,350	1,370	
19	834	827	831	1,010	978	992	1,960	1,890	1,910	2,240	1,360	1,610	
20	839	829	834	1,020	958	1,000	2,330	1,890	2,110	2,740	2,110	2,320	
21	861	837	847	1,070	980	1,030	2,180	1,950	2,070	2,860	2,530	2,670	
22	865	738	834	1,130	1,070	1,100	1,950	1,710	1,820	2,980	2,570	2,720	
23	882	736	819	1,160	1,130	1,140	1,710	1,610	1,660	3,000	2,780	2,860	
24	918	882	899	1,200	1,150	1,180	1,610	1,580	1,590	2,860	2,510	2,720	
25	917	902	907	1,290	1,200	1,260	1,580	1,550	1,570	2,510	2,040	2,250	
26	914	902	907	1,330	1,290	1,320	7,320	1,530	1,880	2,040	1,700	1,810	
27	932	902	919	1,350	1,330	1,340	7,930	3,150	5,530	1,700	1,560	1,610	
28	942	927	934	1,380	1,340	1,370	4,150	3,080	3,670	1,560	1,420	1,490	
29	960	937	946	1,440	1,380	1,390	4,150	3,270	3,800	1,470	1,350	1,390	
30	995	960	978	1,460	1,400	1,430	3,270	2,630	2,860	1,680	1,360	1,440	
31	1,010	989	1,000	---	---	---	2,700	2,620	2,660	2,160	1,620	1,760	
Month	---	---	---	1,460	805	1,050	7,930	1,350	1,960	4,050	1,350	2,180	

Water-Data Report 2009

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
February				March				April				May
1	8,070	1,990	6,070	2,220	2,120	2,160	891	681	815	875	835	855
2	5,940	5,230	5,590	2,220	2,100	2,170	924	678	771	948	846	921
3	5,250	4,090	4,770	2,100	1,910	1,990	1,330	924	1,090	1,040	945	1,000
4	4,090	2,620	3,400	2,760	1,820	2,010	1,180	1,140	1,160	1,030	977	1,010
5	2,620	1,930	2,250	3,750	2,760	3,260	1,170	1,010	1,060	1,030	1,000	1,020
6	2,910	1,670	1,930	3,120	1,160	2,290	1,030	935	1,010	1,080	1,000	1,050
7	6,320	1,830	2,630	1,620	1,130	1,330	975	906	924	1,130	1,080	1,100
8	5,770	2,590	3,580	1,280	1,030	1,140	1,080	975	1,040	1,140	1,120	1,130
9	5,780	3,190	3,870	1,520	1,240	1,400	1,170	1,080	1,120	1,150	1,130	1,140
10	4,260	1,370	1,770	2,670	1,520	1,820	1,210	1,170	1,190	1,170	1,140	1,150
11	1,760	1,480	1,670	2,570	1,990	2,240	1,240	1,210	1,210	1,190	1,160	1,170
12	1,740	1,670	1,700	2,850	2,000	2,540	1,270	1,240	1,250	1,220	1,180	1,200
13	1,800	1,690	1,750	3,350	2,440	2,680	1,300	1,230	1,250	1,210	1,160	1,190
14	1,930	1,800	1,860	2,870	1,790	2,480	1,310	1,270	1,300	1,210	1,180	1,200
15	2,100	1,910	2,010	1,790	830	1,320	1,350	1,260	1,290	1,240	1,100	1,210
16	2,180	2,060	2,100	1,010	758	901	1,320	1,280	1,290	1,200	1,100	1,150
17	2,190	1,990	2,120	1,100	799	962	1,300	1,190	1,270	1,200	1,140	1,170
18	2,080	1,900	2,000	1,170	961	1,100	1,300	1,210	1,280	1,180	1,140	1,160
19	2,220	2,040	2,150	1,270	1,120	1,190	1,360	1,210	1,290	1,190	1,130	1,150
20	2,090	2,050	2,070	1,580	1,190	1,270	1,390	1,340	1,360	1,210	1,160	1,190
21	2,060	1,870	1,950	1,240	1,170	1,200	1,400	1,320	1,360	1,220	1,150	1,180
22	2,090	1,860	1,980	1,170	1,040	1,080	1,380	1,160	1,250	1,240	1,150	1,180
23	2,070	1,990	2,040	1,080	958	1,020	1,220	1,050	1,110	1,180	1,120	1,140
24	2,590	1,990	2,100	1,080	700	926	1,180	1,050	1,090	1,210	1,130	1,160
25	3,840	2,140	2,750	897	615	720	1,260	1,180	1,250	1,200	1,150	1,170
26	2,710	2,320	2,410	944	707	850	1,290	936	1,180	1,180	1,130	1,150
27	2,380	2,090	2,250	978	944	968	1,160	1,030	1,100	1,200	1,140	1,170
28	2,140	2,060	2,100	1,020	975	998	1,140	925	1,060	1,200	1,120	1,150
29	---	---	---	1,010	975	989	925	803	861	1,180	1,130	1,150
30	---	---	---	1,010	994	1,000	891	733	849	1,180	1,130	1,150
31	---	---	---	1,010	836	958	---	---	---	1,180	1,110	1,150
Month	8,070	1,370	2,600	3,750	615	1,510	1,400	678	1,140	1,240	835	1,130

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
				June			July			August		
1	1,150	1,110	1,130	658	625	641	641	578	601	610	585	600
2	1,150	1,110	1,130	788	657	696	614	597	605	627	601	614
3	1,150	1,110	1,130	816	774	798	623	614	620	630	608	618
4	1,140	1,090	1,120	818	554	734	627	618	623	624	597	611
5	1,120	1,100	1,110	674	570	637	630	623	626	629	593	611
6	1,120	864	1,060	665	647	657	634	627	630	625	603	613
7	1,080	863	949	647	608	622	636	370	517	629	606	620
8	1,080	584	825	615	585	602	430	220	311	639	616	627
9	688	392	466	627	601	618	225	208	216	654	630	641
10	572	437	511	635	608	621	322	219	269	669	646	658
11	641	572	611	648	616	633	387	322	357	715	657	680
12	686	639	667	656	627	642	434	387	410	730	685	701
13	742	686	711	653	626	637	460	434	454	754	716	730
14	759	742	753	646	606	630	475	457	464	745	737	742
15	776	755	767	614	602	606	480	420	474	769	741	756
16	786	457	721	639	609	626	459	326	412	774	759	764
17	683	538	622	667	639	656	511	376	460	795	770	786
18	678	531	601	672	656	665	393	365	375	822	789	802
19	544	519	533	669	656	663	415	128	319	829	798	817
20	580	534	558	684	667	676	281	202	236	844	818	834
21	570	530	551	681	530	635	336	281	303	859	826	840
22	629	522	564	644	602	633	389	325	356	878	611	683
23	689	629	657	602	543	559	428	386	410	790	681	747
24	702	673	690	574	531	553	476	428	448	806	758	780
25	726	560	637	604	574	593	483	347	434	833	676	773
26	609	588	598	623	604	615	560	448	513	767	709	742
27	611	269	443	636	622	629	599	560	586	792	743	770
28	441	251	327	643	631	638	601	567	587	797	730	766
29	545	438	495	653	642	646	600	570	587	797	736	773
30	626	544	590	665	650	657	640	582	599	808	778	794
31	---	---	---	678	510	664	637	595	606	---	---	---
Month	1,150	251	718	818	510	641	641	128	465	878	585	716

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued
TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October				November				December			
1	---	---	---	8.8	6.2	7.4	1.3	0.4	0.8	0.7	0.2	0.4
2	13.8	---	---	10.0	7.5	8.7	2.2	0.7	1.4	0.7	0.1	0.4
3	14.1	11.9	12.6	12.4	8.9	10.3	2.0	0.9	1.3	0.7	0.3	0.5
4	14.5	11.7	12.7	12.5	11.3	12.0	1.8	1.0	1.3	0.4	0.1	0.2
5	13.6	11.8	12.8	13.2	12.3	12.7	1.6	1.0	1.3	0.4	0.1	0.2
6	15.9	12.7	14.4	13.3	11.4	12.8	1.5	0.7	1.2	0.8	0.3	0.5
7	15.0	12.8	14.3	11.4	8.5	9.7	1.1	0.7	0.9	0.8	0.4	0.5
8	15.0	12.3	13.3	8.5	5.2	6.9	1.6	0.7	1.2	0.6	0.3	0.4
9	13.3	11.5	12.2	5.2	2.6	3.9	1.3	0.6	0.8	0.6	0.4	0.5
10	14.0	11.5	12.6	3.5	2.0	2.8	1.2	0.5	0.8	0.6	0.3	0.5
11	16.3	12.5	14.5	3.2	2.5	2.8	1.2	0.5	0.9	0.7	0.4	0.5
12	17.6	15.4	16.4	4.0	2.7	3.4	0.9	0.5	0.7	0.9	0.5	0.6
13	17.3	11.4	14.9	4.6	3.7	4.1	1.8	0.9	1.3	0.6	0.4	0.5
14	11.8	11.3	11.6	4.2	3.3	3.9	1.3	0.0	0.6	0.6	0.5	0.5
15	11.6	---	---	3.6	2.7	3.0	---	-0.2	---	0.6	0.4	0.5
16	---	---	---	3.1	2.3	2.6	0.0	-0.2	-0.1	0.6	0.4	0.5
17	10.7	9.8	10.2	2.6	1.6	2.1	0.2	0.0	0.1	0.9	0.5	0.7
18	11.6	8.6	9.9	2.9	1.8	2.3	0.5	0.1	0.3	1.1	0.8	0.9
19	12.5	9.4	10.6	2.6	2.0	2.3	0.8	0.5	0.6	1.2	0.8	1.0
20	12.5	10.5	11.1	2.0	1.4	1.8	0.6	0.1	0.4	1.5	0.9	1.1
21	10.6	8.0	9.0	2.6	1.3	1.9	0.4	0.1	0.2	2.0	1.2	1.5
22	9.5	8.2	9.0	2.9	2.0	2.4	0.4	0.2	0.3	2.4	1.1	1.7
23	9.7	8.2	8.8	3.2	2.5	2.8	0.3	0.2	0.3	2.3	1.0	1.7
24	9.7	9.0	9.4	3.2	2.2	2.5	0.5	0.3	0.3	1.3	0.6	0.9
25	10.2	8.7	9.5	2.8	1.6	2.2	0.5	0.3	0.4	0.9	0.3	0.5
26	10.2	6.3	8.1	3.1	1.7	2.3	1.1	0.4	0.6	0.3	0.1	0.2
27	6.3	4.5	5.3	3.4	2.2	2.6	1.1	0.0	0.4	0.2	0.0	0.0
28	5.8	4.1	4.7	3.5	2.0	2.5	0.5	0.0	0.2	0.2	-0.1	0.0
29	6.5	4.3	5.1	3.6	2.1	2.7	0.8	0.1	0.4	0.4	0.0	0.2
30	8.3	5.4	6.8	2.1	1.0	1.5	0.3	0.0	0.1	0.3	0.0	0.1
31	9.7	8.1	8.6	---	---	---	0.5	0.0	0.2	1.1	0.1	0.4
Month	---	---	---	13.3	1.0	4.6	---	-0.2	---	2.4	-0.1	0.6

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued
TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
February				March				April				May
1	1.7	0.2	0.9	0.0	-0.2	-0.1	3.1	2.2	2.6	16.3	11.2	13.3
2	1.3	0.0	0.7	0.0	-0.2	-0.1	5.5	1.7	3.5	16.4	11.1	13.5
3	0.4	-0.1	0.0	0.1	-0.2	-0.1	8.9	4.7	6.5	18.5	11.8	14.6
4	0.2	-0.2	0.0	0.7	-0.1	0.2	7.3	5.5	6.5	18.8	13.3	15.8
5	0.4	-0.1	0.0	1.3	0.2	0.8	6.9	4.1	5.4	18.5	14.4	16.4
6	0.6	0.0	0.2	0.9	0.1	0.3	7.7	3.6	5.6	18.9	14.7	16.8
7	1.4	0.3	0.5	0.5	-0.2	0.1	8.9	4.1	6.3	18.7	14.7	17.0
8	1.7	0.1	0.8	0.3	-0.2	0.0	10.6	5.7	7.7	17.7	14.4	15.5
9	1.5	-0.1	0.9	0.5	-0.1	0.1	12.3	6.3	8.7	14.8	12.0	12.8
10	0.0	-0.1	-0.1	1.3	0.0	0.4	12.9	6.7	9.3	12.8	11.1	12.0
11	-0.1	-0.2	-0.2	0.8	-0.2	0.1	13.6	7.0	9.8	15.5	10.7	12.9
12	0.0	-0.2	-0.2	0.9	-0.2	0.2	13.9	8.0	10.5	15.4	13.2	14.2
13	-0.1	-0.2	-0.2	1.7	0.0	0.5	13.1	9.0	10.8	16.9	13.8	15.0
14	0.0	-0.2	-0.1	2.4	0.2	0.6	15.1	8.0	11.4	15.8	11.9	13.8
15	0.0	-0.2	-0.1	1.6	0.0	0.6	16.4	9.8	12.7	17.1	13.0	14.5
16	0.2	-0.2	-0.1	1.5	-0.1	0.5	16.9	10.2	13.3	14.5	11.5	13.0
17	0.4	-0.2	0.0	1.1	0.0	0.3	18.7	12.3	15.2	15.9	11.5	13.4
18	0.4	-0.2	0.0	1.7	-0.1	0.4	18.4	13.2	15.7	17.8	13.2	15.2
19	0.4	-0.2	0.0	1.7	-0.2	0.4	16.0	11.5	12.7	20.1	15.2	17.2
20	0.5	-0.2	0.0	1.7	-0.1	0.6	12.3	9.8	11.0	21.3	16.4	18.6
21	0.1	-0.2	-0.1	3.1	-0.1	1.1	13.7	7.2	10.4	18.7	15.4	16.9
22	0.2	-0.2	-0.1	3.9	0.6	2.2	15.0	10.2	12.3	18.4	13.0	15.5
23	0.3	-0.1	0.0	3.9	2.2	2.9	15.7	9.6	12.5	18.2	15.6	16.6
24	0.6	-0.1	0.1	5.7	3.7	4.4	17.6	13.0	14.9	18.7	12.8	15.6
25	1.2	0.1	0.5	5.4	2.3	3.6	14.3	10.8	12.7	17.5	13.9	15.7
26	0.1	-0.2	0.0	2.3	0.6	1.1	13.4	10.2	11.7	16.3	14.7	15.5
27	0.1	-0.2	-0.1	2.1	-0.2	0.8	12.7	10.5	11.6	15.7	12.9	13.8
28	0.1	-0.2	-0.1	4.1	0.8	2.3	15.6	9.6	12.2	18.7	11.5	14.7
29	---	---	---	5.7	2.1	3.8	12.9	12.1	12.4	19.7	14.1	16.6
30	---	---	---	5.9	3.8	4.7	15.2	12.2	13.2	18.6	14.5	16.4
31	---	---	---	5.0	3.1	3.9	---	---	---	18.5	12.7	15.5
Month	1.7	-0.2	0.1	5.9	-0.2	1.2	18.7	1.7	10.3	21.3	10.7	15.1

Water-Data Report 2009

05288705 SHINGLE CREEK AT QUEEN AVE. IN MINNEAPOLIS, MN—Continued
TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	18.1	14.2	16.4	20.8	18.4	19.4	21.8	19.6	20.6	18.7	16.9	18.0
2	19.2	14.7	16.7	23.6	18.5	20.6	22.0	18.3	20.2	19.7	17.0	18.3
3	17.9	13.1	15.5	23.3	19.8	21.5	23.3	19.6	21.4	20.4	17.2	18.7
4	19.4	13.3	16.2	25.1	21.4	22.8	22.2	20.0	21.1	20.7	16.9	18.7
5	19.4	15.4	17.1	23.6	20.6	22.3	21.4	18.2	20.0	20.7	17.1	18.9
6	16.5	12.8	14.4	24.3	20.5	22.3	21.5	18.4	20.0	21.0	18.1	19.5
7	15.9	13.5	14.3	23.3	20.4	21.8	21.7	19.0	20.5	21.3	17.8	19.4
8	14.3	12.6	13.5	22.2	19.8	21.1	23.1	20.2	21.5	21.4	18.7	20.0
9	14.9	12.1	13.5	22.7	18.9	20.8	25.6	23.0	24.1	20.9	18.6	19.7
10	17.8	14.6	15.7	25.1	20.8	22.5	26.0	24.0	25.1	22.3	19.2	20.6
11	20.5	15.2	17.5	22.4	19.4	21.0	26.6	23.3	24.8	22.2	19.7	20.9
12	19.2	16.4	17.8	21.4	18.7	20.0	27.7	22.7	24.8	22.7	19.7	21.0
13	20.6	16.2	18.4	21.8	18.1	20.0	26.9	23.8	24.9	22.9	19.8	21.3
14	23.0	17.6	20.1	21.3	19.3	20.2	26.9	23.7	25.0	21.8	19.7	20.8
15	21.0	18.4	19.8	22.4	19.9	21.1	25.0	23.2	24.1	21.7	18.5	20.2
16	21.1	18.4	19.4	20.5	17.8	18.9	25.3	23.7	24.4	21.0	18.7	19.7
17	22.0	19.5	20.6	18.5	16.4	16.9	24.9	22.0	23.3	21.2	18.2	19.6
18	24.9	21.0	22.6	17.0	15.6	16.4	24.3	20.2	22.1	21.5	18.7	20.1
19	25.7	22.6	23.9	19.6	15.2	17.3	23.0	19.5	20.6	21.7	19.3	20.5
20	25.4	21.7	23.6	21.4	16.9	18.9	19.8	19.1	19.5	20.9	19.1	20.0
21	24.5	21.8	22.8	24.1	18.9	21.5	20.3	18.1	19.1	19.7	18.0	19.0
22	27.5	21.7	24.0	22.0	19.5	20.8	21.4	17.4	19.4	19.9	19.1	19.4
23	27.2	22.8	24.8	23.8	20.0	21.7	21.5	18.7	20.3	21.0	18.7	19.5
24	25.1	22.3	23.4	23.3	20.2	21.6	22.8	20.5	21.7	20.4	17.6	19.0
25	28.8	21.0	25.2	21.3	19.5	20.5	23.9	21.9	22.8	19.6	18.5	19.0
26	27.1	23.4	25.1	23.3	19.2	21.2	22.9	20.9	22.1	19.2	16.9	18.0
27	24.9	23.0	24.1	23.7	20.5	22.0	23.6	20.7	22.0	18.0	15.3	16.9
28	23.7	20.8	22.4	22.3	19.5	20.6	23.2	20.4	21.6	15.3	13.0	13.9
29	22.7	20.5	21.3	20.1	17.8	19.2	20.6	18.1	19.3	13.0	11.0	12.0
30	20.8	19.0	19.7	20.6	18.0	19.2	20.6	16.2	17.8	12.1	9.6	10.9
31	---	---	---	20.5	17.5	19.1	18.8	16.0	17.5	---	---	---
Month	28.8	12.1	19.7	25.1	15.2	20.4	27.7	16.0	21.7	22.9	9.6	18.8