Water-Data Report 2011

04232050 ALLEN CREEK NEAR ROCHESTER, NY

Southeastern Lake Ontario Basin
Irondequoit-Ninemile Subbasin

LOCATION.--Lat 43°07′49″, long 77°31′08″ referenced to North American Datum of 1927, Monroe County, NY, Hydrologic Unit 04140101, on right bank 525 ft downstream from Penn Central Transportation Co. bridge, near Rochester, and about 1.3 mi upstream from Irondequoit Creek.

DRAINAGE AREA.--30.1 mi^2 of which 2.83 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--November 1959 to current year.

REVISED RECORDS.--WDR NY-74-1: 1972 (M), 1973 (M, P). WDR NY-76-1: 1960-75 (M, P), 1960-63, 1972-74.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 323.54 ft above NGVD of 1929.

COOPERATION.--Discharge measurements were provided by the Monroe County Department of Environmental Services. Prior to 2003, discharge measurements were provided by the Monroe County Environmental Health Laboratory at Rochester, N.Y.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Unpublished water-quality records for prior years are available in files of Monroe County Department of Health. Discharge prior to January 1980 included undetermined diversion (maximum 20 ft^3/s) from Erie (Barge) Canal upstream from station. January 1980 to present, a maximum of 3 ft^3/s diverted for use by several golf courses adjacent to stream. Telephone gage-height telemeter at station. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,280 ft^3/s, May 17, 1974, gage height, 7.42 ft, from rating curve extended above 1,600 ft^3/s on basis of contracted-opening measurement of peak flow and step-backwater analysis; minimum daily discharge, 1.7 ft^3/s, Jan. 24, 1963; minimum instantaneous discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 20	0500	*730	*4.79
Apr 27	2045	476	4.32
Aug 14	1545	495	4.36

Minimum discharge, 5.2 ft^3/s, July 21, gage height, 1.92 ft.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 04232050, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/04232050.2011.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	39	13	261	21	10	107	31	28	22	8.4	11	10
2	19	12	93	19	e10	64	27	34	18	8.3	9.5	8.3
3	14	12	58	14	e10	38	22	93	16	8.4	13	8.0
4	16	12	40	14	e10	29	61	80	21	7.7	14	18
5	61	32	31	17	e10	109	67	48	19	7.3	15	104
6	51	29	26	15	11	179	42	31	17	7.4	17	50
7	82	19	24	14	12	86	31	25	15	8.0	26	24
8	32	16	23	13	13	59	23	21	14	7.5	19	19
9	20	14	21	12	e13	57	20	19	14	7.2	56	15
10	15	13	18	11	e12	189	18	17	12	7.0	48	12
11	15	12	21	11	e11	138	17	16	14	6.5	27	9.6
12	17	12	45	11	11	81	15	14	14	6.6	15	9.2
13	12	11	54	11	12	58	116	13	13	6.2	45	8.0
14	12	11	28	11	41	43	61	19	12	6.2	167	7.3
15	33	15	19	11	42	35	34	106	11	6.2	81	24
16	29	27	16	11	31	37	58	102	9.6	6.7	35	12
17	18	109	15	10	38	32	44	59	11	9.7	19	9.9
18	15	40	14	11	216	30	33	48	9.5	16	13	8.2
19	13	29	12	22	114	24	29	38	8.5	13	11	7.7
20	11	21	12	17	55	20	420	35	8.2	7.6	9.9	14
21	16	17	11	15	38	57	92	35	9.0	5.9	86	e11
22	13	18	10	13	28	37	50	26	34	7.5	44	9.5
23	12	32	9.8	12	26	31	137	26	31	15	20	8.3
24	16	17	9.2	e11	22	37	68	26	21	23	14	7.9
25	16	12	8.9	11	21	35	92	24	19	13	85	7.3
26	17	17	8.4	11	22	28	144	32	13	11	26	7.3
27	23	12	7.9	12	23	25	160	37	10	9.5	17	6.7
28	15	8.6	7.7	12	131	22	168	71	14	7.9	13	94
29	18	10	7.7	12	---	21	61	38	12	81	11	64
30	15	26	8.1	11	---	21	39	87	9.3	23	9.6	28
31	13	---	8.7	e10	---	33	---	30	---	17	8.8	---
Total	698	628.6	928.4	406	993	1,762	2,180	1,278	451.1	375.7	985.8	622.2
Mean	22.5	21.0	29.9	13.1	35.5	56.8	72.7	41.2	15.0	12.1	31.8	20.7
Max	82	109	261	22	216	189	420	106	34	81	167	104
Min	11	8.6	7.7	10	10	20	15	13	8.2	5.9	8.8	6.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	23.8	29.5	31.5	26.2	35.0	57.3	47.0	31.6	26.0	23.1	23.0	23.4
Max	74.8	102	89.7	108	94.9	131	93.9	103	78.4	79.7	50.7	103
(WY)	(1978)	(1973)	(1978)	(1998)	(1981)	(1960)	(2004)	(1974)	(1972)	(1998)	(1992)	(2004)
Min	7.99	7.42	4.80	4.40	10.4	22.6	11.2	8.73	8.58	6.29	5.08	6.07
(WY)	(1962)	(1961)	(1961)	(1963)	(1989)	(1981)	(1995)	(2007)	(2001)	(2001)	(2002)	(1961)

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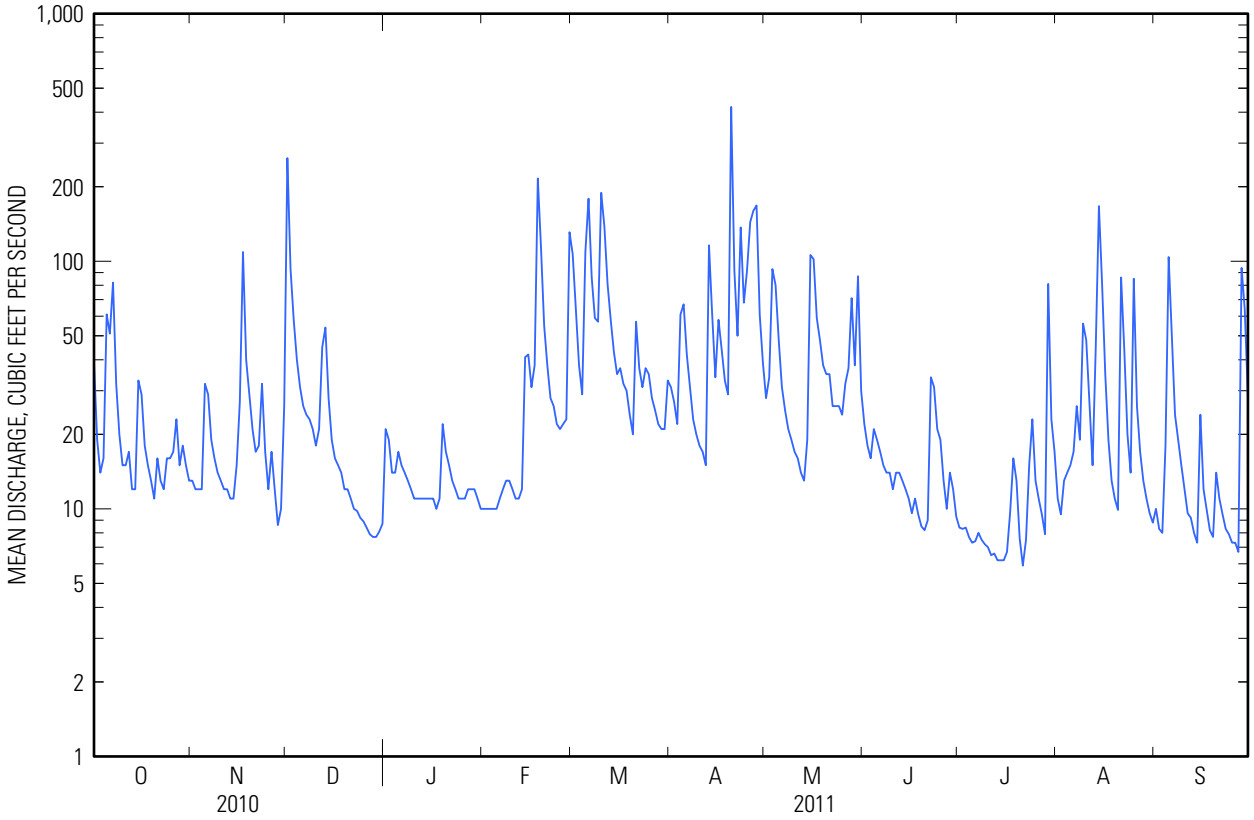
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1960 - 2011	
Annual total	10,824.6		11,308.8			
Annual mean	29.7		31.0		31.3	
Highest annual mean					50.6	1978
Lowest annual mean					16.1	1995
Highest daily mean	261	Dec 1	420	Apr 20	1,970	Mar 30, 1960
Lowest daily mean	6.1	May 30	5.9	Jul 21	1.7	Jan 24, 1963
Annual seven-day minimum	7.0	May 25	6.5	Jul 10	2.3	Feb 15, 1962
10 percent exceeds	60		67		58	
50 percent exceeds	21		17		19	
90 percent exceeds	9.2		8.4		7.4	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-72, 1979-81, 1983 to current year.
CHEMICAL DATA: Water years 1971-72 (a), 1979 (a), 1980 (d), 1981 (e), 1983 to 2003 (e), 2004-05 (d), 2006 (c), 2007-10 (d), 2011 (b).
NUTRIENT DATA: Water years 1971-72 (a), 1979 (a), 1980 (d), 1981 (e), 1983 to 2003 (e), 2004-05 (d), 2006 (c), 2007-10 (d), 2011 (b).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1994 to current year.

INSTRUMENTATION.--Automatic water sampler since October 1983. Water temperature recorder since November 1994 provides 15-minute-interval readings.

REMARKS.--Records for October 1983 to September 1993 are published in "Water Resources of Monroe County New York, Water Years 1984-88", U.S. Geological Survey Open-File Report 93-370, and in "Water Resources of Monroe County New York, Water Years 1989-93", U.S. Geological Survey Open-File Report 97-587. Prior to October 1983, unpublished records are available in the files of the U.S. Geological Survey. No data October 1 to December 14 and September 20-22 due to equipment malfunction.

COOPERATION.--Water-quality samples were collected and analyzed by the Monroe County Environmental Health Laboratory at Rochester, NY.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.5°C, July 5, 1999; minimum, 0.0°C, on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 25.6°C, July 21; minimum recorded, -0.1°C, on several days during winter.

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	---	---	---	---	---	---	---	---	---	4.6	2.7	3.5
2	---	---	---	---	---	---	---	---	---	4.6	2.3	3.5
3	---	---	---	---	---	---	---	---	---	2.8	1.7	2.3
4	---	---	---	---	---	---	---	---	---	3.5	2.4	3.1
5	---	---	---	---	---	---	---	---	---	3.3	2.2	2.9
6	---	---	---	---	---	---	---	---	---	3.0	1.3	2.1
7	---	---	---	---	---	---	---	---	---	2.8	1.8	2.3
8	---	---	---	---	---	---	---	---	---	2.8	1.6	2.0
9	---	---	---	---	---	---	---	---	---	2.5	1.6	2.0
10	---	---	---	---	---	---	---	---	---	2.3	1.0	1.8
11	---	---	---	---	---	---	---	---	---	2.6	1.0	2.1
12	---	---	---	---	---	---	---	---	---	1.3	0.4	0.9
13	---	---	---	---	---	---	---	---	---	1.8	0.6	1.3
14	---	---	---	---	---	---	---	---	1.4	2.7	1.0	1.7
15	---	---	---	---	---	---	2.3	1.1	1.6	2.3	0.9	1.5
16	---	---	---	---	---	---	2.9	1.7	2.3	2.0	0.5	1.4
17	---	---	---	---	---	---	3.4	2.3	2.8	0.9	-0.1	0.3
18	---	---	---	---	---	---	3.1	2.0	2.7	3.9	0.6	2.5
19	---	---	---	---	---	---	3.1	2.0	2.5	3.5	1.6	2.2
20	---	---	---	---	---	---	3.6	2.7	3.1	1.9	0.5	1.3
21	---	---	---	---	---	---	3.4	2.8	3.1	1.8	0.3	1.0
22	---	---	---	---	---	---	3.2	2.7	3.0	1.5	-0.1	0.6
23	---	---	---	---	---	---	3.1	2.7	2.9	0.8	-0.1	0.3
24	---	---	---	---	---	---	3.2	2.5	2.8	0.6	-0.1	0.1
25	---	---	---	---	---	---	3.2	2.7	2.8	2.4	0.6	1.7
26	---	---	---	---	---	---	2.7	1.5	2.2	3.3	2.2	2.7
27	---	---	---	---	---	---	2.1	1.0	1.5	3.6	2.3	2.9
28	---	---	---	---	---	---	3.0	2.0	2.5	3.2	2.2	2.6
29	---	---	---	---	---	---	3.2	2.4	2.9	2.8	1.9	2.4
30	---	---	---	---	---	---	4.0	0.9	2.5	2.9	1.5	2.2
31	---	---	---	---	---	---	5.5	2.9	4.4	1.7	0.2	0.9
Month	---	---	---	---	---	---	---	---	---	4.6	-0.1	1.9

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	1.4	0.0	0.7	2.9	0.6	1.5	6.1	5.2	5.6	13.1	10.9	12.0
2	1.2	0.0	0.6	2.6	0.5	1.7	7.2	4.4	5.8	13.4	11.9	12.6
3	2.4	0.2	1.1	2.2	-0.1	0.9	8.2	4.8	6.6	12.5	9.6	10.7
4	1.8	0.1	0.9	3.1	0.7	2.0	9.4	6.4	7.7	10.1	9.1	9.6
5	1.9	-0.1	0.9	3.6	2.8	3.1	9.2	5.7	7.4	13.2	8.8	10.8
6	3.1	1.4	2.2	3.0	1.4	1.9	6.7	5.0	5.9	13.1	9.5	11.3
7	3.4	2.3	2.8	3.6	1.1	2.1	9.2	5.1	7.1	13.5	10.6	12.0
8	2.4	0.0	1.2	4.2	1.1	2.5	8.1	5.7	7.0	14.8	10.4	12.4
9	1.9	-0.1	0.6	3.0	2.1	2.5	11.1	5.7	8.4	15.1	10.5	12.7
10	1.4	-0.1	0.4	3.9	2.6	3.2	10.5	8.1	9.3	14.3	10.6	12.5
11	1.0	-0.1	0.3	4.7	3.3	4.0	13.7	9.7	11.6	15.9	10.6	13.2
12	2.4	0.8	1.5	4.4	3.1	3.8	12.3	9.3	10.5	16.5	11.9	14.1
13	3.8	0.7	2.3	4.2	3.6	3.9	10.0	8.5	9.1	18.3	13.4	15.7
14	3.1	0.4	2.0	4.4	3.2	3.7	11.5	8.2	9.7	15.9	14.1	15.0
15	1.7	0.1	0.6	6.0	2.2	4.2	10.7	7.3	9.0	14.4	10.8	13.0
16	2.1	0.4	1.2	5.8	4.8	5.3	8.6	7.6	8.0	11.8	10.8	11.3
17	3.5	1.2	2.0	8.2	3.9	6.1	8.9	7.2	8.1	11.4	10.8	11.1
18	2.5	1.3	1.7	10.2	7.5	8.6	7.2	6.1	6.6	14.8	11.0	12.9
19	1.6	0.4	1.0	8.0	5.3	6.5	7.0	5.9	6.6	15.1	13.3	14.1
20	2.3	0.3	1.2	7.0	3.8	5.6	8.7	5.5	7.1	15.9	13.4	14.5
21	1.2	0.3	0.7	6.4	5.4	6.0	8.0	6.6	7.3	17.6	13.9	15.8
22	1.9	-0.1	0.6	6.8	5.6	6.1	8.9	6.0	7.4	16.0	14.8	15.4
23	2.6	-0.1	0.8	5.7	2.6	3.8	10.7	7.1	8.8	18.1	14.9	16.3
24	2.4	0.2	1.4	5.6	2.5	3.8	10.2	8.9	9.5	18.0	15.9	16.8
25	2.1	0.3	1.1	4.5	2.3	3.4	10.4	8.6	9.6	17.6	14.6	16.2
26	2.6	0.3	1.4	5.2	1.6	3.3	12.5	9.6	10.9	18.4	16.8	17.5
27	3.4	1.3	2.3	5.6	2.0	3.7	17.4	11.2	13.9	16.8	13.6	15.2
28	2.4	0.8	1.6	6.0	1.9	3.9	16.9	13.8	15.7	17.8	13.8	15.8
29	---	---	---	6.8	2.8	4.8	13.8	11.2	12.5	19.1	16.2	17.5
30	---	---	---	7.7	3.7	5.7	14.5	10.4	12.2	20.3	17.9	19.0
31	---	---	---	6.4	5.2	5.6	---	---	---	20.9	17.8	19.4
Month	3.8	-0.1	1.3	10.2	-0.1	4.0	17.4	4.4	8.8	20.9	8.8	14.1

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	21.0	17.8	19.5	20.4	16.2	18.0	23.2	20.8	21.7	20.1	18.0	19.1
2	17.8	15.4	16.6	20.6	16.7	18.7	23.0	19.8	21.3	21.1	18.6	19.7
3	17.7	14.1	15.8	22.4	19.2	20.3	21.5	20.3	20.7	22.0	19.4	20.4
4	16.3	15.2	15.7	22.0	18.5	19.8	22.6	20.0	21.0	21.9	19.7	20.4
5	18.7	15.5	17.0	21.9	17.8	19.5	22.5	19.3	20.9	22.1	19.4	20.6
6	19.3	15.9	17.6	21.2	18.9	19.9	21.7	20.4	21.0	19.5	18.5	19.0
7	19.8	16.4	18.0	21.6	18.9	19.9	23.9	20.4	21.8	18.9	17.8	18.1
8	21.4	17.7	19.5	20.7	18.4	19.5	23.3	21.4	22.4	18.6	17.7	18.1
9	20.9	18.9	19.8	21.7	18.1	19.4	21.8	20.3	21.1	19.5	17.4	18.3
10	19.1	17.2	18.0	21.6	18.0	19.7	22.3	20.2	21.1	19.1	16.9	17.9
11	19.9	16.8	18.0	21.7	19.1	20.3	20.8	19.1	19.9	18.5	16.0	17.3
12	18.2	16.8	17.7	23.3	20.1	21.2	21.0	18.0	19.6	19.4	16.7	18.0
13	18.2	15.9	17.0	22.0	19.0	20.3	22.3	18.5	20.3	20.3	17.7	18.8
14	16.9	15.5	16.1	21.9	17.9	19.5	21.4	20.4	20.8	18.5	16.9	17.7
15	19.2	14.7	16.8	21.9	17.3	19.2	21.0	20.4	20.7	17.4	15.2	16.4
16	18.5	15.7	17.2	22.4	18.0	20.0	22.0	20.0	20.8	15.9	14.5	15.1
17	18.8	16.6	17.6	23.3	19.3	21.1	21.2	19.1	20.1	15.7	13.7	14.6
18	20.3	16.7	18.4	22.8	20.5	21.4	21.0	18.8	19.8	16.1	13.1	14.5
19	19.7	16.4	17.8	23.1	20.6	21.6	21.4	18.7	19.9	16.0	13.5	14.9
20	19.9	15.8	17.6	23.5	19.9	21.4	21.9	18.6	20.1	---	---	15.7
21	20.4	16.9	18.4	25.6	21.0	22.9	21.7	19.6	20.5	---	---	---
22	20.1	18.3	19.4	25.0	21.8	23.1	20.6	18.6	19.6	---	---	17.2
23	21.6	18.8	20.0	25.1	21.8	23.2	20.0	17.7	18.8	17.8	16.2	17.1
24	20.4	18.8	19.6	24.5	21.5	23.1	19.6	17.9	18.8	18.2	16.5	17.2
25	19.1	17.8	18.6	22.0	20.4	21.2	21.2	19.0	20.5	18.7	16.0	17.2
26	18.2	17.1	17.6	22.4	19.6	20.9	20.4	19.0	19.7	19.3	16.6	17.8
27	20.2	16.5	18.2	22.5	19.6	20.8	20.4	18.3	19.3	18.3	17.5	17.9
28	20.6	17.8	19.1	20.6	19.7	20.2	19.2	17.3	18.5	19.1	17.5	18.5
29	20.1	17.5	18.5	23.8	20.0	22.1	18.9	16.2	17.5	18.7	17.4	18.2
30	20.2	16.6	18.0	23.2	21.2	22.1	19.8	16.5	18.0	17.4	16.2	17.0
31	---	---	---	23.5	20.0	21.3	19.6	17.1	18.3	---	---	---
Month	21.6	14.1	18.0	25.6	16.2	20.7	23.9	16.2	20.1	---	---	---

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
Part 1 of 2
[N, nitrogen; P, phosphorus; ft3/s, cubic feet per second; ft³/s, cubic feet per second; mg/L, milligrams per liter]

Begin date	Begin time	End date	End time	Discharge, ft3/s (00060)	Discharge, instanta-neous, ft³/s (00061)	Suspended solids, water, unfiltered, mg/L (00530)	Chloride, water, filtered, mg/L (00940)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, unfiltered, mg/L as N (00630)
11-30-2010	**1205**	**12-06-2010**	**1904**	83	--	99	157	0.91	.024	1.09
02-18-2011	**1145**	**02-18-2011**	**1545**	37	--	177	341	2.1	.122	1.19
02-19-2011	**0745**	**02-19-2011**	**1145**	110	--	26	373	.63	.091	1.25
02-28-2011	**0950**	**02-28-2011**	**0950**	--	155	154	669	1.5	.198	.862
03-02-2011	**0715**	**03-02-2011**	**0715**	--	68	103	559	1.4	.114	1.53

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
Part 2 of 2
[N, nitrogen; P, phosphorus; ft3/s, cubic feet per second; ft³/s, cubic feet per second; mg/L, milligrams per liter]

Begin date	Begin time	End date	End time	Orthophos-phate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)
11-30-2010	**1205**	**12-06-2010**	**1904**	.033	.212
02-18-2011	**1145**	**02-18-2011**	**1545**	.035	.505
02-19-2011	**0745**	**02-19-2011**	**1145**	.035	.114
02-28-2011	**0950**	**02-28-2011**	**0950**	.023	.330
03-02-2011	**0715**	**03-02-2011**	**0715**	.033	.269