

0422026250 NORTHRUP CREEK AT NORTH GREECE, NY

Southwestern Lake Ontario Basin
Oak Orchard-Twelvemile Subbasin

LOCATION.--Lat 43°15'13", long 77°44'32" referenced to North American Datum of 1983, Monroe County, NY, Hydrologic Unit 04130001, on right bank 75 ft downstream from bridge on State Highway 18 (Latta Road), 0.5 mi west of North Greece, and 5.1 mi upstream from mouth.

DRAINAGE AREA.--10.1 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1989 to current year.

REVISED RECORDS.--WDR NY-01-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 306 ft above NGVD of 1929, from topographic map.

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Discharge includes undetermined diversion from Erie (Barge) Canal upstream from station. Unpublished water-quality records for prior years are available in files of Monroe County Department of Health.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s, Sept. 9, 2004, gage height, 5.01 ft, from rating extended above 200 ft³/s on basis of contracted-opening measurement at gage height 4.36 ft; minimum discharge, 0.39 ft³/s, Aug. 19, 26, 27, 1993, gage height 0.46 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 758 ft³/s, May 17, 1974, gage height, 4.36 ft, on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 12	1415	*299	*2.96
Jul 3	2045	244	2.74

Minimum discharge, 6.3 ft³/s, Jan. 22, result of freezeup, gage height, 1.03 ft.

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

[e, estimated; &, affected value]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	14	10	13	e12	e15	38	10	17	e20	16	14	11
2	14	9.4	12	e14	e12	24	9.8	17	e28	14	15	11
3	14	8.8	12	e16	e11	19	9.1	17	e18	57	14	11
4	13	8.4	12	16	e9.8	18	8.5	16	e15	33	14	11
5	13	8.1	12	15	e8.8	16	8.3	17	e14	15	14	11
6	15	8.0	10	15	e7.6	15	7.9	16	e34	14	13	11
7	9.5	8.0	9.8	15	e7.2	19	7.6	16	e26	14	17	11
8	9.1	8.0	9.5	14	e6.8	22	7.3	17	e14	16	39	12
9	9.0	7.7	9.1	13	e9.9	25	9.0	18	14	15	25	12
10	8.7	7.6	12	17	16	35	65	19	15	14	15	12
11	8.2	8.2	10	24	18	44	66	21	14	14	14	11
12	8.1	8.5	9.1	40	24	44	160	19	18	14	14	12
13	8.0	10	8.4	31	17	25	45	18	69	15	14	12
14	9.1	8.4	8.0	22	15	19	23	17	14	15	14	11
15	8.4	7.7	7.6	16	20	16	18	17	17	14	14	11
16	7.8	7.6	7.0	14	e16	15	16	e14	23	14	14	11
17	7.6	7.6	7.6	12	e14	13	16	e13	86	14	15	11
18	7.8	7.6	13	e11	e13	13	16	e13	26	14	15	11
19	9.2	7.6	13	11	e13	14	15	e13	15	14	15	11
20	9.2	7.2	10	10	e12	15	13	e12	14	15	15	11
21	7.8	6.9	18	e10	e12	13	12	e12	14	15	15	16
22	7.3	7.0	18	e9.4	11	12	11	e15	14	14	14	16
23	9.8	7.2	15	e8.6	11	13	14	e18	14	14	14	14
24	9.7	7.3	13	8.3	11	13	15	e19	14	14	14	14
25	8.7	7.3	12	8.3	10	13	15	e15	14	15	14	13
26	8.0	9.8	e10	8.5	11	12	16	e14	14	15	16	13
27	8.3	20	e10	8.2	56	11	19	e13	21	15	15	13
28	11	19	e9.6	8.2	57	12	19	e17	56	15	15	13
29	17	17	e9.4	&24	---	12	19	e31	94	15	12	13
30	25	15	e10	40	---	11	17	e20	37	14	11	13
31	13	---	e10	30	---	10	---	e17	---	13	11	---
Total	328.3	280.9	340.1	501.5	445.1	581	687.5	518	786	510	475	363
Mean	10.6	9.36	11.0	16.2	15.9	18.7	22.9	16.7	26.2	16.5	15.3	12.1
Max	25	20	18	40	57	44	160	31	94	57	39	16
Min	7.3	6.9	7.0	8.2	6.8	10	7.3	12	14	13	11	11

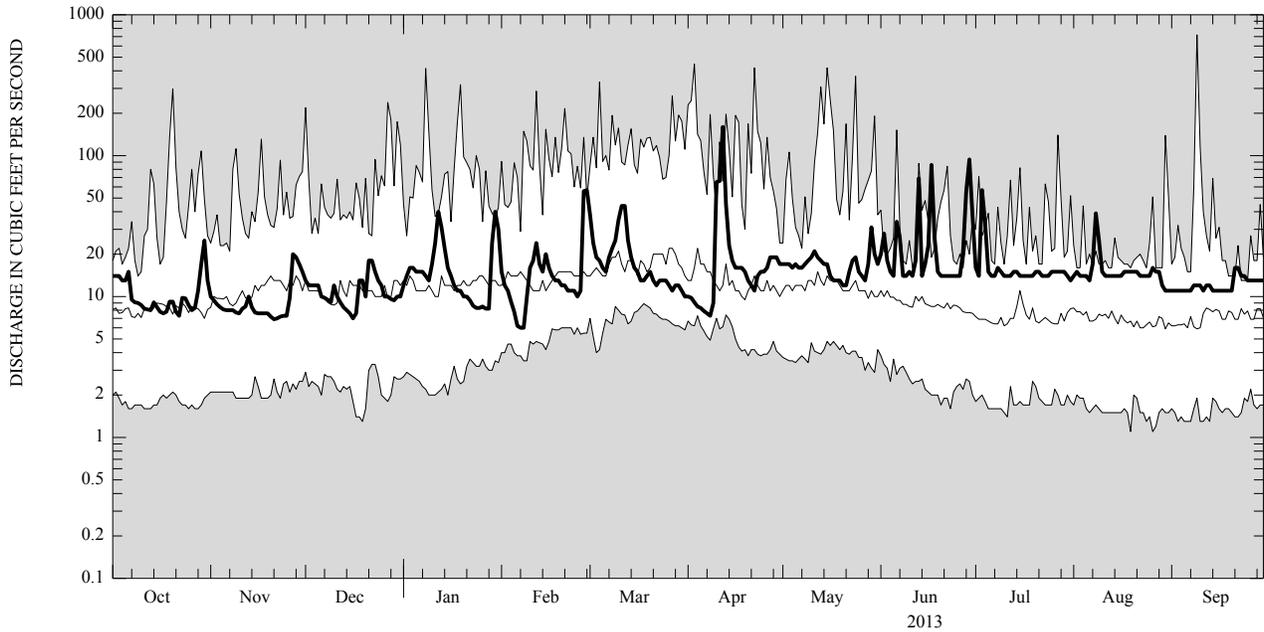
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10.6	13.0	15.4	17.2	20.2	25.9	22.7	17.4	10.9	9.64	8.73	9.63
Max	30.9	26.4	28.5	45.6	40.6	40.7	48.2	52.1	26.2	22.0	16.0	41.3
(WY)	(1997)	(1997)	(2009)	(1998)	(2009)	(1993)	(2005)	(2011)	(2013)	(2004)	(2007)	(2004)
Min	1.83	2.49	3.00	6.39	7.44	11.2	5.27	4.77	3.06	1.96	1.60	1.92
(WY)	(1995)	(1992)	(1999)	(2000)	(2007)	(2006)	(1995)	(1993)	(1991)	(1993)	(1993)	(1994)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1990 - 2013	
Annual total	5,669.0		5,816.4			
Annual mean	15.5		15.9		15.1	
Highest annual mean					21.7	2007
Lowest annual mean					7.33	1995
Highest daily mean	149	Apr 23	160	Apr 12	720	Sep 9, 2004
Lowest daily mean	6.9	Nov 21	6.8	Feb 8	1.1	Aug 19, 1993
Annual seven-day minimum	7.2	Nov 19	7.2	Nov 19	1.4	Aug 22, 1993
10 percent exceeds	22		23		26	
50 percent exceeds	13		14		11	
90 percent exceeds	8.5		8.2		3.9	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
 SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to current year.

CHEMICAL DATA: Water years 1989 (a), 1990 to 2003 (e), 2004-05 (d), 2006-07 (c), 2008-10 (d), 2011-12 (c), 2013 (c).

NUTRIENT DATA: Water years 1989 (a), 1990 to 2003 (e), 2004-05 (d), 2006-07 (c), 2008-10 (d), 2011-12 (c), 2013 (c).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1994 to current year.

INSTRUMENTATION.--Automatic water sampler since October 1989. Water temperature recorder since November 1994 provides 15-minute-interval readings.

REMARKS.--Prior to 1994 water year, data published in "Water Resources of Monroe County New York, Water Years 1989-93", U.S. Geological Survey Open-File Report 97-587. No data May 16 to August 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, 29.0°C, July 18, 2005; minimum, -0.5°C, Jan. 6, 2009.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.1°C, Aug. 31, Sept. 2, 11; minimum, 0.2°C, on many days during winter period.

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	16.1	14.5	15.2	10.1	9.2	9.8	4.1	2.1	2.9	0.3	0.2	0.3
2	16.6	14.9	15.6	9.2	7.9	8.6	6.8	4.1	5.5	0.3	0.2	0.3
3	17.6	16.5	17.1	7.9	7.1	7.5	7.2	6.3	6.7	0.3	0.2	0.3
4	17.9	16.8	17.4	7.3	6.5	6.9	9.8	6.6	8.4	0.3	0.2	0.3
5	17.6	16.6	17.1	6.5	5.8	6.1	9.3	4.7	6.9	0.3	0.2	0.3
6	16.8	13.3	14.8	6.3	5.0	5.6	4.7	3.1	3.6	0.4	0.2	0.3
7	13.3	12.3	12.9	5.2	3.7	4.6	5.0	3.1	4.1	0.4	0.2	0.3
8	12.8	11.4	12.1	5.1	3.9	4.5	5.7	4.9	5.3	0.4	0.2	0.3
9	12.9	10.8	11.9	6.4	3.8	5.0	5.2	4.2	4.6	0.8	0.2	0.4
10	12.6	11.5	12.2	7.9	6.2	7.1	6.3	4.4	5.7	2.5	0.8	1.8
11	11.5	10.2	10.9	9.9	7.9	8.9	5.6	2.9	4.2	3.1	1.8	2.4
12	11.4	9.4	10.8	11.0	9.1	9.9	3.5	2.4	3.0	4.9	2.8	3.8
13	9.9	7.9	8.9	10.0	6.3	7.8	3.2	2.0	2.6	8.4	4.8	6.6
14	14.1	9.9	12.2	6.3	4.8	5.8	2.9	1.5	2.3	8.3	3.9	6.1
15	14.2	12.0	13.6	5.1	3.6	4.5	3.6	2.3	3.0	3.9	2.6	3.1
16	12.0	10.3	11.2	5.1	3.3	4.3	6.1	3.4	4.8	3.0	2.3	2.6
17	12.2	9.5	10.8	5.4	3.5	4.5	7.0	6.0	6.5	2.5	0.2	1.6
18	13.5	11.8	12.7	5.3	3.6	4.5	6.8	6.1	6.6	0.4	0.2	0.3
19	13.6	12.0	12.8	5.3	3.6	4.5	6.1	4.3	5.0	2.1	0.2	1.0
20	13.6	12.1	12.9	6.0	4.4	5.2	4.3	2.8	3.4	3.0	0.2	1.9
21	12.6	11.2	11.9	5.7	4.0	4.9	4.4	3.5	4.0	0.3	0.2	0.3
22	13.0	11.1	12.1	6.3	4.3	5.3	3.5	1.4	1.8	0.3	0.2	0.3
23	12.4	12.0	12.2	7.2	5.6	6.3	2.2	1.4	1.8	0.3	0.2	0.3
24	13.2	12.3	12.8	5.8	3.2	4.3	2.3	1.4	1.8	0.3	0.2	0.3
25	15.9	13.1	14.5	3.5	2.8	3.2	2.1	1.1	1.6	0.3	0.2	0.3
26	16.2	14.4	15.2	4.3	2.9	3.5	1.8	0.2	1.1	0.3	0.3	0.3
27	14.4	12.0	13.1	4.2	3.5	3.9	0.3	0.2	0.3	0.3	0.3	0.3
28	12.0	10.7	11.2	4.1	3.4	3.7	0.3	0.2	0.3	0.3	0.2	0.3
29	10.8	10.3	10.5	4.3	2.7	3.5	0.3	0.2	0.3	0.4	0.2	0.3
30	12.2	10.6	11.5	4.3	2.3	3.1	0.3	0.2	0.3	4.3	0.3	1.8
31	11.0	10.1	10.4	---	---	---	0.3	0.2	0.3	4.5	0.3	2.7
Month	17.9	7.9	12.9	11.0	2.3	5.6	9.8	0.2	3.5	8.4	0.2	1.3

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	0.3	0.2	0.3	2.0	1.2	1.5	7.5	4.8	6.7	19.7	14.6	16.9
2	0.3	0.2	0.3	1.4	0.5	0.9	4.8	2.7	3.7	19.2	14.2	16.7
3	0.3	0.2	0.3	1.1	0.2	0.6	4.9	1.7	3.0	19.7	14.5	17.0
4	0.3	0.2	0.3	1.4	0.2	0.7	8.1	1.4	4.5	19.3	14.7	16.9
5	0.3	0.2	0.3	2.1	0.4	1.2	8.4	4.5	6.1	19.9	14.4	17.1
6	0.3	0.2	0.3	2.8	0.3	1.6	8.6	3.0	5.7	19.6	14.8	17.1
7	0.3	0.3	0.3	3.6	2.2	2.8	12.3	6.0	8.6	20.4	15.3	17.8
8	0.3	0.3	0.3	5.3	1.8	3.3	12.0	8.4	9.9	19.3	16.3	17.8
9	0.3	0.2	0.3	5.7	1.7	3.6	13.3	9.0	10.8	20.0	16.7	18.1
10	0.3	0.2	0.3	6.5	3.0	4.6	10.0	7.3	8.7	18.7	16.6	17.7
11	0.4	0.2	0.3	6.0	4.7	5.4	7.3	4.9	6.1	18.1	14.8	16.5
12	0.3	0.2	0.3	6.0	4.6	5.5	7.6	4.1	5.7	14.8	12.1	13.6
13	0.3	0.2	0.3	4.6	2.7	3.8	7.7	6.1	6.9	12.5	10.6	11.5
14	0.3	0.2	0.3	3.4	0.6	2.0	8.0	5.5	6.7	14.0	10.1	12.0
15	0.8	0.3	0.4	3.3	0.9	2.0	12.6	5.6	9.1	17.1	11.9	14.4
16	1.3	0.2	0.7	2.2	0.8	1.7	---	---	---	---	---	---
17	0.6	0.2	0.3	2.9	0.3	1.3	---	---	---	---	---	---
18	0.3	0.2	0.3	1.1	0.2	0.5	---	---	---	---	---	---
19	0.3	0.2	0.3	2.9	0.4	1.5	15.5	10.7	14.0	---	---	---
20	0.4	0.3	0.3	2.9	0.3	1.5	10.7	6.7	8.6	---	---	---
21	0.3	0.2	0.3	2.9	0.2	1.4	10.0	5.1	7.3	---	---	---
22	0.3	0.2	0.3	2.4	0.4	1.4	12.2	5.3	8.6	---	---	---
23	0.4	0.2	0.3	4.4	1.1	2.6	14.3	8.3	11.2	---	---	---
24	1.3	0.3	0.8	4.7	1.5	3.1	12.6	10.3	11.6	---	---	---
25	2.1	1.2	1.6	5.4	2.5	3.9	13.2	8.1	10.6	---	---	---
26	3.1	0.5	1.7	7.6	3.1	5.1	13.7	8.7	11.1	---	---	---
27	1.1	0.4	0.8	7.0	4.1	5.5	15.4	9.0	12.1	---	---	---
28	2.2	0.8	1.6	7.2	4.2	5.7	15.9	10.3	13.3	---	---	---
29	---	---	---	8.7	5.2	6.7	15.2	12.4	13.7	---	---	---
30	---	---	---	9.6	4.6	7.0	17.4	13.5	15.4	---	---	---
31	---	---	---	8.6	5.4	7.2	---	---	---	---	---	---
Month	3.1	0.2	0.5	9.6	0.2	3.1	---	---	---	---	---	---

0422026250 NORTHRUP CREEK AT NORTH GREECE, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	---	---	---	---	---	---	---	---	---	23.8	22.3	23.0
2	---	---	---	---	---	---	---	---	---	24.1	22.6	23.2
3	---	---	---	---	---	---	---	---	---	22.7	20.4	21.2
4	---	---	---	---	---	---	---	---	---	21.6	19.3	20.5
5	---	---	---	---	---	---	---	---	---	21.1	18.2	19.6
6	---	---	---	---	---	---	---	---	---	19.2	16.8	18.0
7	---	---	---	---	---	---	---	---	---	19.0	18.0	18.4
8	---	---	---	---	---	---	---	---	---	19.5	17.8	19.0
9	---	---	---	---	---	---	---	---	---	19.3	16.4	17.8
10	---	---	---	---	---	---	---	---	---	23.0	19.3	21.1
11	---	---	---	---	---	---	---	---	---	24.1	22.2	23.1
12	---	---	---	---	---	---	---	---	---	23.4	20.9	22.1
13	---	---	---	---	---	---	---	---	---	20.9	17.2	18.8
14	---	---	---	---	---	---	---	---	---	17.4	16.5	16.9
15	---	---	---	---	---	---	---	---	---	17.7	15.6	16.7
16	---	---	---	---	---	---	---	---	---	17.4	15.2	16.3
17	---	---	---	---	---	---	---	---	---	16.1	14.0	15.1
18	---	---	---	---	---	---	---	---	---	17.0	14.6	15.8
19	---	---	---	---	---	---	---	---	---	18.2	15.6	16.9
20	---	---	---	---	---	---	---	---	---	19.8	17.2	18.5
21	---	---	---	---	---	---	---	---	---	19.8	17.7	18.9
22	---	---	---	---	---	---	---	---	---	17.7	15.4	16.3
23	---	---	---	---	---	---	22.7	20.7	21.5	15.6	14.6	15.1
24	---	---	---	---	---	---	21.7	19.3	20.5	15.6	13.7	14.7
25	---	---	---	---	---	---	22.1	19.2	20.7	16.0	13.8	14.9
26	---	---	---	---	---	---	22.2	21.3	21.8	16.3	14.1	15.2
27	---	---	---	---	---	---	23.3	21.7	22.5	16.3	14.8	15.6
28	---	---	---	---	---	---	24.0	22.5	23.2	16.9	14.6	15.8
29	---	---	---	---	---	---	24.4	22.0	23.1	17.3	15.5	16.5
30	---	---	---	---	---	---	23.9	21.9	23.0	17.7	16.4	17.1
31	---	---	---	---	---	---	24.1	23.1	23.5	---	---	---
Month	---	---	---	---	---	---	---	---	---	24.1	13.7	18.1

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

[N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; <, less than]

Begin date	Begin time	Discharge, instantaneous, ft ³ /s (00061)	Suspended solids, water, unfiltered, mg/L (00530)	Chloride, water, filtered, mg/L (00940)	Ammonia plus organic	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, unfiltered, mg/L as N (00630)	Orthophos- phate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)
					nitrogen, water, unfiltered, mg/L as N (00625)				
10-29-2012	1750	13	14	91.9	0.51	0.056	0.426	0.055	0.108
10-29-2012	2245	61	529	79.6	2.3	.065	.466	.208	.654
10-30-2012	0745	25	656	64.2	2.6	.065	.423	.178	.766
12-06-2012	1315	9.9	3	132	.36	.027	.986	.006	< .005
03-04-2013	1505	17	4	280	3.2	.550	1.22	.009	.021
07-15-2013	1540	14	11	58.4	.52	.019	1.07	.060	.111