



Water-Data Report 2006

**01403540 STONY BROOK AT WATCHUNG, NJ**

RARITAN RIVER BASIN

LOCATION.--Lat 40°38'11", long 74°27'05" referenced to North American Datum of 1983, Watchung Borough, Somerset County, NJ, Hydrologic Unit 02030105, on right bank at Watchung Borough Administration Building in Watchung, 150 ft downstream from bridge on Mountain Boulevard, 400 ft downstream from East Branch Stony Brook, and 2.9 mi upstream from confluence with Green Brook.

DRAINAGE AREA.--5.51 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR NJ-86-1: 1973 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 162.24 ft above NGVD of 1929. Prior to Oct. 1, 1996, at datum 10.00 ft higher.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Occasional regulation from Watchung and Best Lake directly upstream from station and other small lakes. Several measurements of water temperature were made during the year. Satellite gage-height and rain gage telemetry at station. Channel significantly enlarged and modified in 1991, and modified again in 1997 when the right wall was replaced.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1973, reached a stage of 24.5 ft, from floodmark, adjusted to current datum, discharge, 10,500 ft<sup>3</sup>/s (highest since 1896), from slope-area measurements of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 08	2245	*1,420	*14.00
Oct 12	1130	922	13.30
Nov 30	0215	335	12.12
Dec 16	0715	728	12.98
Jan 18	1315	346	12.15
Jun 28	0700	517	12.57
Jul 05	0945	1,050	13.50
Jul 12	2330	406	12.31
Jul 21	1815	1,060	13.52

## Water-Data Report 2006

## 01403540 STONY BROOK AT WATCHUNG, NJ—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**  
**DAILY MEAN VALUES**  
[*e*, estimated]

<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	1.8	4.4	13	5.8	8.6	5.4	3.2	5.5	3.2	3.8	2.3	2.6
<b>2</b>	1.8	4.2	10	16	7.8	6.8	2.9	5.3	10	3.4	2.1	38
<b>3</b>	1.7	3.8	7.9	105	20	6.7	8.3	5.0	27	3.9	2.0	e28
<b>4</b>	2.0	3.5	7.9	23	31	4.9	7.5	4.8	9.4	2.9	1.9	e6.5
<b>5</b>	1.9	3.5	7.2	16	26	4.6	1.6	4.4	6.8	93	1.8	e5.7
<b>6</b>	1.7	3.7	7.1	13	14	4.4	1.3	4.0	4.9	18	1.7	6.5
<b>7</b>	2.4	3.8	6.5	11	11	4.4	1.2	3.7	14	6.5	1.9	4.3
<b>8</b>	299	3.6	5.8	10	10	4.1	e10	3.5	11	5.3	2.0	3.7
<b>9</b>	56	7.8	6.4	9.6	9.4	4.2	e8.5	3.3	7.6	4.6	1.7	3.5
<b>10</b>	6.8	6.6	5.4	8.2	8.5	4.4	e5.3	3.2	5.7	10	2.5	e3.2
<b>11</b>	6.0	4.1	4.6	14	8.5	4.5	4.8	3.3	4.6	5.3	4.5	e2.5
<b>12</b>	172	3.8	4.4	16	10	5.3	4.6	40	4.3	28	e1.9	2.2
<b>13</b>	120	3.8	4.1	10	8.8	5.1	4.5	6.0	4.0	26	e1.7	2.1
<b>14</b>	126	3.7	3.8	39	8.1	4.7	4.3	4.7	3.6	4.6	e1.7	9.2
<b>15</b>	27	3.7	3.6	23	8.7	4.2	5.0	5.7	3.5	3.4	1.6	25
<b>16</b>	15	17	171	13	15	3.7	4.2	25	3.1	3.1	1.6	12
<b>17</b>	10	28	14	11	36	3.7	3.8	8.9	2.8	2.6	1.5	6.3
<b>18</b>	8.4	10	8.2	94	15	3.6	3.5	6.3	2.6	2.5	1.4	4.5
<b>19</b>	6.9	4.2	6.5	21	11	3.5	6.4	12	2.6	5.7	1.4	3.8
<b>20</b>	5.5	5.2	5.3	14	9.8	3.4	2.0	7.7	2.8	2.9	1.5	3.3
<b>21</b>	4.7	6.6	4.5	12	9.2	3.4	3.1	5.6	2.4	92	1.3	3.0
<b>22</b>	8.1	57	4.0	11	8.9	3.4	8.2	4.7	2.1	35	1.2	2.8
<b>23</b>	16	15	3.7	42	8.7	3.2	69	4.2	2.1	24	1.1	3.2
<b>24</b>	11	10	3.8	18	7.9	3.1	30	3.9	8.4	20	1.1	3.1
<b>25</b>	67	7.3	15	14	8.1	2.9	14	3.6	5.7	13	1.2	2.7
<b>26</b>	19	6.4	19	11	7.2	3.4	10	4.8	5.3	3.9	e5.0	2.5
<b>27</b>	10	6.1	8.0	10	5.7	3.2	8.2	3.7	4.5	3.2	e3.5	2.2
<b>28</b>	7.9	5.7	6.4	9.9	5.7	2.8	6.9	3.1	60	3.1	e9.0	2.1
<b>29</b>	6.6	7.0	11	9.9	---	2.8	6.1	2.8	6.9	3.0	6.0	6.3
<b>30</b>	6.0	68	8.0	10	---	2.7	5.8	2.5	4.8	2.7	5.7	3.6
<b>31</b>	4.8	---	6.1	9.4	---	2.5	---	2.3	---	2.5	3.3	---
<b>Total</b>	1,033.0	317.5	392.2	629.8	338.6	125.0	254.2	203.5	235.7	437.9	77.1	204.4
<b>Mean</b>	33.3	10.6	12.7	20.3	12.1	4.03	8.47	6.56	7.86	14.1	2.49	6.81
<b>Max</b>	299	68	171	105	36	6.8	69	40	60	93	9.0	38
<b>Min</b>	1.7	3.5	3.6	5.8	5.7	2.5	1.2	2.3	2.1	2.5	1.1	2.1
<b>Cfsm</b>	6.05	1.92	2.30	3.69	2.19	0.73	1.54	1.19	1.43	2.56	0.45	1.24
<b>In.</b>	6.97	2.14	2.65	4.25	2.29	0.84	1.72	1.37	1.59	2.96	0.52	1.38

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2006, BY WATER YEAR (WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	6.74	9.15	12.2	13.5	11.9	16.7	15.2	11.1	7.12	6.25	4.03	5.56
<b>Max</b>	33.3	25.6	37.1	37.5	20.1	45.0	38.3	37.8	29.1	32.1	18.4	30.8
(WY)	(2006)	(1996)	(1984)	(1979)	(1988)	(1994)	(1983)	(1989)	(2003)	(1975)	(2000)	(1999)
<b>Min</b>	0.81	1.48	1.21	1.08	1.86	4.03	3.89	2.83	1.80	0.55	0.75	0.87
(WY)	(1995)	(2002)	(1999)	(1981)	(2002)	(2006)	(1985)	(2005)	(1999)	(1999)	(1998)	(1983)

**01403540 STONY BROOK AT WATCHUNG, NJ—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2005</b>		<b>Water Year 2006</b>		<b>Water Years 1975 - 2006</b>	
<b>Annual total</b>	4,014.18		4,248.9			
<b>Annual mean</b>	11.0		11.6		9.95	
<b>Highest annual mean</b>					16.0	1984
<b>Lowest annual mean</b>					3.96	2002
<b>Highest daily mean</b>	299	Oct 8	299	Oct 8	814	Sep 16, 1999
<b>Lowest daily mean</b>	0.92	Aug 7	1.1	Aug 23, 24	0.00	Sep 18, 1982
<b>Annual seven-day minimum</b>	0.93	Aug 12	1.3	Aug 19	0.06	Sep 13, 1982
<b>Maximum peak flow</b>			<sup>a</sup> 1,420	Oct 8	<sup>a</sup> 5,380	Sep 16, 1999
<b>Maximum peak stage</b>			14.00	Oct 8	<sup>b</sup> 20.40	Jul 14, 1975
<b>Instantaneous low flow</b>			1.1	Many days	0.00	Sep 13, 1982
<b>Annual runoff (cfsm)</b>	2.00		2.11		1.81	
<b>Annual runoff (inches)</b>	27.10		28.69		24.53	
<b>10 percent exceeds</b>	17		20		20	
<b>50 percent exceeds</b>	4.4		5.3		4.6	
<b>90 percent exceeds</b>	1.3		2.2		1.1	

<sup>a</sup> From rating curve extended above 500 ft<sup>3</sup>/s on basis of slope-area computation of peak flow.

<sup>b</sup> Adjusted to current datum.

