



Water-Data Report 2006

01482500 SALEM RIVER AT WOODSTOWN, NJ

DELAWARE RIVER BASIN

LOCATION.--Lat 39°38'38", long 75°19'49" referenced to North American Datum of 1983, Woodstown Borough, Salem County, NJ, Hydrologic Unit 02040206, on right end of Memorial Lake Dam at Woodstown, 0.3 mi upstream from Chestnut Run and 0.3 mi downstream from Salem County railroad bridge.

DRAINAGE AREA.--14.6 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March to September 1940, December 1941 to January 1984, June to December 1989, October 2002 to current year. Operated as crest-stage gage 1985-95. Prior to 1952, published as "Salem Creek at Woodstown".

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 29.49 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated and daily discharges below 5 ft³/s, which are fair. Occasional regulation from lake gate operations or other activities upstream. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 09	0145	860	12.31
Oct 13	0530	*1,210	*12.59
Jul 06	0945	1,050	12.49

01482500 SALEM RIVER AT WOODSTOWN, NJ—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.9	12	e30	18	19	14	8.8	7.0	3.0	21	4.1	9.6
2	2.1	12	e15	18	19	14	8.8	7.0	4.0	10	4.1	66
3	2.1	12	e10	103	19	14	8.8	7.0	6.5	32	3.6	38
4	2.7	12	e13	e32	23	14	9.0	7.0	6.9	26	3.0	15
5	4.0	14	e20	e15	30	14	9.1	7.0	15	15	2.6	29
6	5.5	15	e15	e17	26	13	8.8	6.4	16	445	2.1	46
7	6.1	15	e13	14	21	12	8.8	5.4	11	79	2.1	18
8	84	15	e12	14	19	12	16	4.9	6.7	46	2.5	12
9	279	17	e17	14	16	12	29	4.1	15	32	2.1	10
10	20	e20	e12	12	14	12	13	4.1	16	19	2.1	7.7
11	16	e14	e10	13	14	10	10	4.2	9.6	11	2.3	6.3
12	21	e10	e15	16	18	10	9.6	9.3	5.2	10	2.1	5.4
13	421	e10	e11	15	21	10	8.8	8.4	4.1	10	2.1	5.4
14	91	e11	e9.7	27	21	10	10	5.8	4.1	10	2.1	9.4
15	33	e11	e11	29	21	9.9	10	9.4	4.1	9.5	2.1	12
16	18	e15	e180	16	26	8.8	9.8	15	3.6	8.1	2.1	9.1
17	13	e20	e50	13	35	8.8	7.9	12	2.1	7.0	2.7	7.0
18	11	e11	e21	55	32	8.8	7.0	7.3	2.6	7.0	3.3	7.0
19	10	e9.8	e15	54	26	8.8	7.0	5.4	3.0	6.7	4.1	7.0
20	10	e9.1	e10	23	22	8.8	6.4	5.4	2.8	5.4	4.1	6.1
21	12	e15	12	19	20	8.8	4.8	5.2	2.1	5.4	3.7	5.4
22	24	e110	10	16	19	8.8	12	4.1	2.9	7.5	3.6	5.4
23	31	e45	12	70	19	8.8	73	4.1	3.0	20	2.8	5.4
24	17	e23	12	83	19	8.8	46	3.8	6.2	15	2.7	9.1
25	74	e14	14	46	19	8.8	28	3.0	78	9.7	3.4	19
26	50	e11	32	35	16	10	16	4.1	53	7.0	2.7	10
27	21	e11	e19	25	14	10	12	4.1	48	7.2	5.2	6.4
28	16	e11	e17	21	14	9.0	10	4.1	176	21	12	5.7
29	13	e13	e17	20	---	8.8	8.0	4.1	69	15	36	7.0
30	12	e73	e24	21	---	8.8	7.0	4.1	38	9.1	104	7.0
31	12	---	19	21	---	8.8	---	3.8	---	6.1	16	---
Total	1,333.4	590.9	677.7	895	582	324.3	423.4	186.6	617.5	932.7	247.4	406.4
Mean	43.0	19.7	21.9	28.9	20.8	10.5	14.1	6.02	20.6	30.1	7.98	13.5
Max	421	110	180	103	35	14	73	15	176	445	104	66
Min	1.9	9.1	9.7	12	14	8.8	4.8	3.0	2.1	5.4	2.1	5.4
Cfsm	2.95	1.35	1.50	1.98	1.42	0.72	0.97	0.41	1.41	2.06	0.55	0.93
In.	3.40	1.51	1.73	2.28	1.48	0.83	1.08	0.48	1.57	2.38	0.63	1.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	13.1	19.2	23.5	25.0	27.8	29.2	25.4	17.2	15.2	14.9	13.3	15.4
Max	43.0	50.9	52.6	82.7	55.7	52.4	65.7	38.5	45.6	66.1	47.5	172
(WY)	(2006)	(1973)	(1973)	(1978)	(1971)	(2003)	(1983)	(1983)	(1983)	(1984)	(1958)	(1940)
Min	3.11	3.91	4.99	5.22	11.5	9.33	7.67	4.99	2.75	0.98	0.55	2.66
(WY)	(1966)	(1966)	(1966)	(1966)	(1980)	(1966)	(1966)	(1955)	(1954)	(1955)	(1966)	(1964)

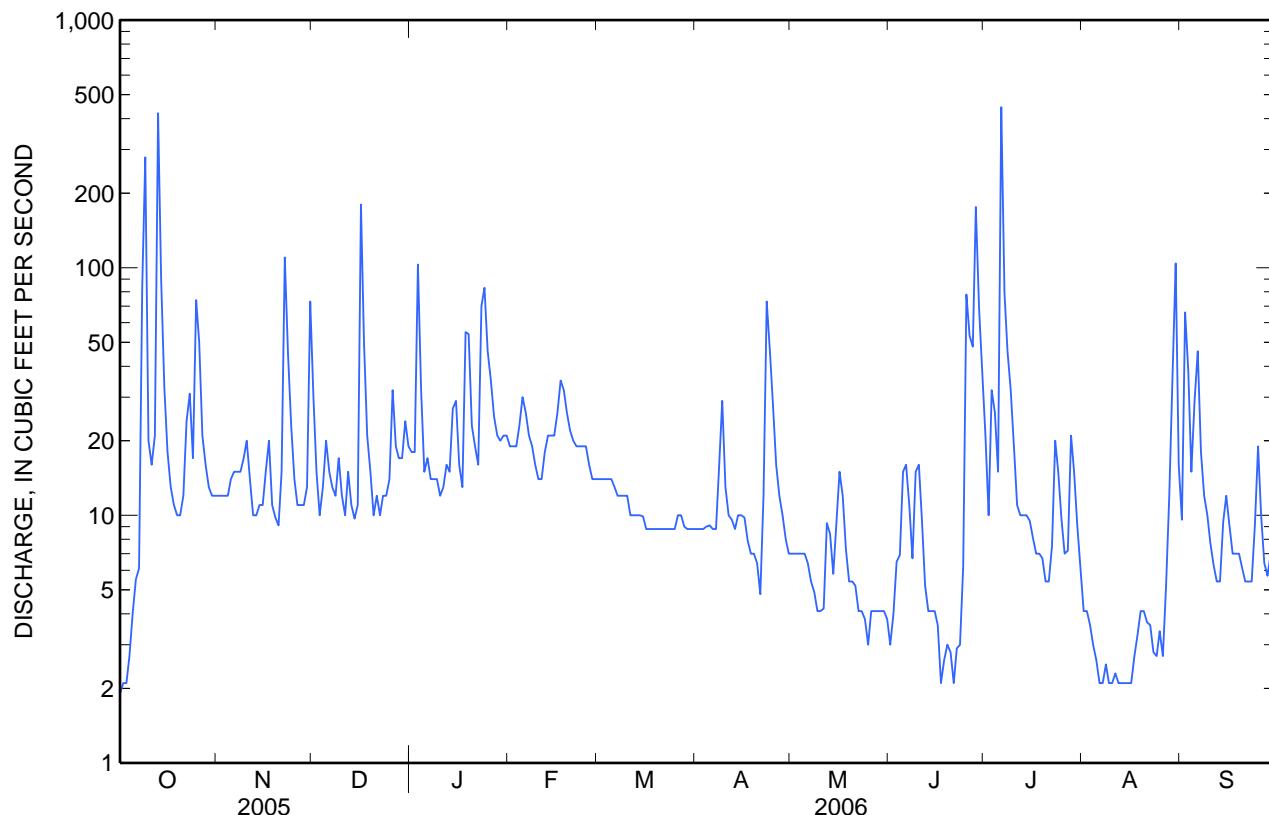
01482500 SALEM RIVER AT WOODSTOWN, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2005	Water Year 2006	Water Years 1940 - 2006
Annual total	7,801.5	7,217.3	
Annual mean	21.4	19.8	19.6
Highest annual mean			30.8
Lowest annual mean			5.71
Highest daily mean	421	Oct 13	4,460
Lowest daily mean	1.4	Sep 30	0.00
Annual seven-day minimum	2.0	Sep 25	0.20
Maximum peak flow		1,210	^a 22,000
Maximum peak stage		12.59	^b 17.98
Instantaneous low flow		°0.00	°0.00
Annual runoff (cfsm)	1.46	1.35	1.34
Annual runoff (inches)	19.88	18.39	18.22
10 percent exceeds	33	32	35
50 percent exceeds	14	11	12
90 percent exceeds	4.1	3.8	4.4

^a From rating curve extended above 220 ft³/s on basis of slope-area measurement of peak flow at site 0.5 mi downstream.

^b From floodmark.

^c No flow short periods during many days just after waste gate was closed and water was below spillway.



01482500 SALEM RIVER AT WOODSTOWN, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1973 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia plus organic nitrogen (00623), filtered nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570). Bacteria samples were collected synoptically over a 30-day period during the summer.

COOPERATIVE NETWORK SITE DESCRIPTOR: Agricultural Land Use Indicator, New Jersey Department of Environmental Protection (NJDEP)
Watershed Management Area 18.

COOPERATION.--Samples were collected in cooperation with the NJDEP. Bacteria samples were provided by the local county health department under the direction of the NJDEP through the County Environmental Health Act. Determinations of filtered ammonia, filtered orthophosphorus, BOD, total suspended residue, fecal coliform, E. coli, and enterococcus bacteria were performed by the NJ Department of Health and Senior Services.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Turbdty white Instan- taneous dis- charge, corrctd	UV absorb- ance, det ang 90+/-30	UV absorb- ance, 254 nm, wat flt	Baro- metric pres- sure, wat flt	Dis- solved oxygen, mm Hg	Dis- solved oxygen, mg/L	pH, water, unfltrd percent of sat- uration	Specif. conduct- ance, field, std units	Temper- ature, wat unf uS/cm	Temper- ature, air, deg C	Temper- ature, water, deg C	Hard- ness, water, mg/L as CaCO3
		cfs (00061)	NTRU (63676)	/cm (50624)	/cm (61726)	(00025)	(00300)	(00301)	(00400)	25 degC (00095)	(00020)	(00010)	(00900)
Nov 30...	1010	E73	140	.411	.333	760	9.5	91	--	217	15.5	13.4	66
Feb 16...	1150	26	16	.162	.127	770	12.4	96	7.2	281	13.5	5.0	85
May 25...	1120	3.0	10	.173	.130	762	9.4	103	8.6	266	26.0	19.9	93
Aug 09...	0920	2.1	67	.299	.228	762	6.9	87	8.4	255	24.0	27.4	85

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Calcium water, filtrd, mg/L (00915)	Magnes- ium, water, filtrd, mg/L (00925)	Potas- sium, water, filtrd, mg/L (00935)	Sodium, water, filtrd, mg/L (00930)	ANC, fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor- ide, water, filtrd, mg/L (00940)	Fluor- ide, water, filtrd, mg/L (00950)	Silica, water, filtrd, mg/L (00955)	Sulfate water, filtrd, mg/L (00945)	Residue water, filtrd, sum of consti- tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia water, filtrd, mg/L as N (00623)
Nov 30...	14.6	7.08	10.4	7.97	25	19.7	.12	7.6	29.7	125	140	86	1.1
Feb 16...	19.3	8.96	5.88	12.0	25	28.4	E.07	7.8	37.3	155	178	10	.93
May 25...	21.7	9.40	5.38	9.26	40	26.0	.13	4.1	35.8	142	159	16	.70
Aug 09...	20.3	8.24	6.94	9.07	59	24.5	.16	7.3	23.3	136	169	28	.93

01482500 SALEM RIVER AT WOODSTOWN, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	Ammonia water, filtd, mg/L (00608)	Nitrite + nitrate water, mg/L (00631)	Particulate nitrogen, mg/L (49570)	Total nitrogen, mg/L (00602)	Total nitrogen, mg/L (00600)	Ortho-phosphate, water, filtd, mg/L (00671)	Phosphorus, water, filtd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, filtd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
Nov 30...	.178	2.62	.37	3.7	4.1	.179	.22	.54	2.9	<.1	2.8	10.1	2.5
Feb 16...	.252	4.64	.22	5.6	5.8	.027	.037	.133	1.5	<.1	1.5	4.9	2.3
May 25...	.064	1.36	.27	2.1	2.3	.075	.074	.149	1.8	<.1	1.8	5.2	E1.8
Aug 09...	.029	<.06	.88	--	--	.096	.148	.40	5.2	<.1	5.1	8.7	E1.4

**WATER-QUALITY
DATA
WATER YEAR
OCTOBER 2005 TO
SEPTEMBER 2006**

Part 4 of 4

[Remark codes:
<, less than;
E, estimated.]

Date	Boron, water, filtd, ug/L (01020)
Nov 30...	73
Feb 16...	18
May 25...	20
Aug 09...	27

01482500 SALEM RIVER AT WOODSTOWN, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

[Remark codes: <, less than; >, greater than.]

Date	Time	Instan- taneous dis- charge, (00061)	Temper- ature, water, deg C (00010)	Enter- coccii, m-E MF, water, col/		E coli, m-TEC MF, water, col/	Fecal coli- form, ECbroth MPN/ 100 mL (31615)
				100 mL (31649)	100 mL (31633)		
Jun							
07...	0930	10	22.6	50	<10	500	
14...	1040	4.1	22.4	70	10	300	
21...	0930	2.1	26.9	50	<10	80	
28...	0930	196	23.6	7,800	39,000	>16,000	
Jul							
12...	0850	10	28.3	100	220	500	