



Water-Data Report 2009

01408000 MANASQUAN RIVER AT SQUANKUM, NJ

MANASQUAN RIVER BASIN

LOCATION.--Lat 40°09'41", long 74°09'17" referenced to North American Datum of 1983, Howell Township, Monmouth County, NJ, Hydrologic Unit 02040301, on right bank 50 ft upstream from northbound bridge on County Highway 547 (Lakewood Farmingdale Road) in Squankum, and 0.4 mi downstream from Marsh Bog Brook.

DRAINAGE AREA.--44.0 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1931 to current year. Monthly discharge only for July 1931, published in WSP 1302.

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 18.82 ft above NGVD of 1929. Prior to Aug 13, 1940, water stage recorder at site 80 ft upstream at same datum.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Since 1990, 3.18 mi² controlled by Manasquan Reservoir located on Timber Swamp Brook (see 01407965). Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 12	1230	*1,400	*8.66
Jan 7	2045	755	6.70

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	49	26	169	61	58	45	50	54	37	71	192	37
2	39	26	72	57	58	53	67	56	35	60	131	34
3	35	25	56	58	60	47	103	73	65	54	152	32
4	32	25	52	55	63	45	106	116	63	50	69	31
5	30	26	49	55	53	44	67	135	102	46	57	30
6	30	130	45	56	49	52	89	172	132	43	53	28
7	29	70	43	399	50	82	219	272	61	41	49	28
8	29	45	42	335	67	76	94	145	49	41	43	29
9	29	50	40	135	62	61	75	99	81	39	41	29
10	27	37	40	101	58	55	67	80	64	38	41	28
11	25	34	103	109	59	51	147	69	51	36	38	177
12	25	32	994	91	67	49	131	63	181	171	42	128
13	25	44	248	80	58	46	77	59	83	60	50	62
14	24	106	129	78	50	46	85	56	80	46	38	46
15	25	116	97	73	48	45	283	108	56	40	35	40
16	24	139	93	67	47	44	161	65	54	38	34	107
17	24	69	196	56	46	43	103	58	46	36	32	79
18	24	54	114	57	46	42	85	53	186	35	30	47
19	23	48	164	59	51	42	74	49	141	33	31	41
20	22	44	299	58	48	44	87	47	95	32	29	37
21	23	42	295	54	43	42	263	44	232	72	37	35
22	22	38	204	51	43	41	152	42	214	57	161	34
23	22	36	106	52	46	40	116	40	103	66	71	34
24	22	35	95	57	43	39	89	39	110	105	50	94
25	24	80	114	53	42	39	78	40	112	52	40	47
26	63	58	89	48	42	39	73	37	86	58	36	37
27	28	45	84	47	42	56	64	37	236	101	33	163
28	43	41	82	103	42	61	60	38	124	47	40	93
29	65	39	78	168	---	76	58	93	82	44	73	87
30	31	67	75	77	---	93	54	55	68	129	76	54
31	27	---	71	63	---	58	---	41	---	77	42	---
Total	940	1,627	4,338	2,813	1,441	1,596	3,177	2,335	3,029	1,818	1,846	1,748
Mean	30.3	54.2	140	90.7	51.5	51.5	106	75.3	101	58.6	59.5	58.3
Max	65	139	994	399	67	93	283	272	236	171	192	177
Min	22	25	40	47	42	39	50	37	35	32	29	28
Cfsm	0.69	1.23	3.18	2.06	1.17	1.17	2.41	1.71	2.29	1.33	1.35	1.32
In.	0.79	1.38	3.67	2.38	1.22	1.35	2.69	1.97	2.56	1.54	1.56	1.48

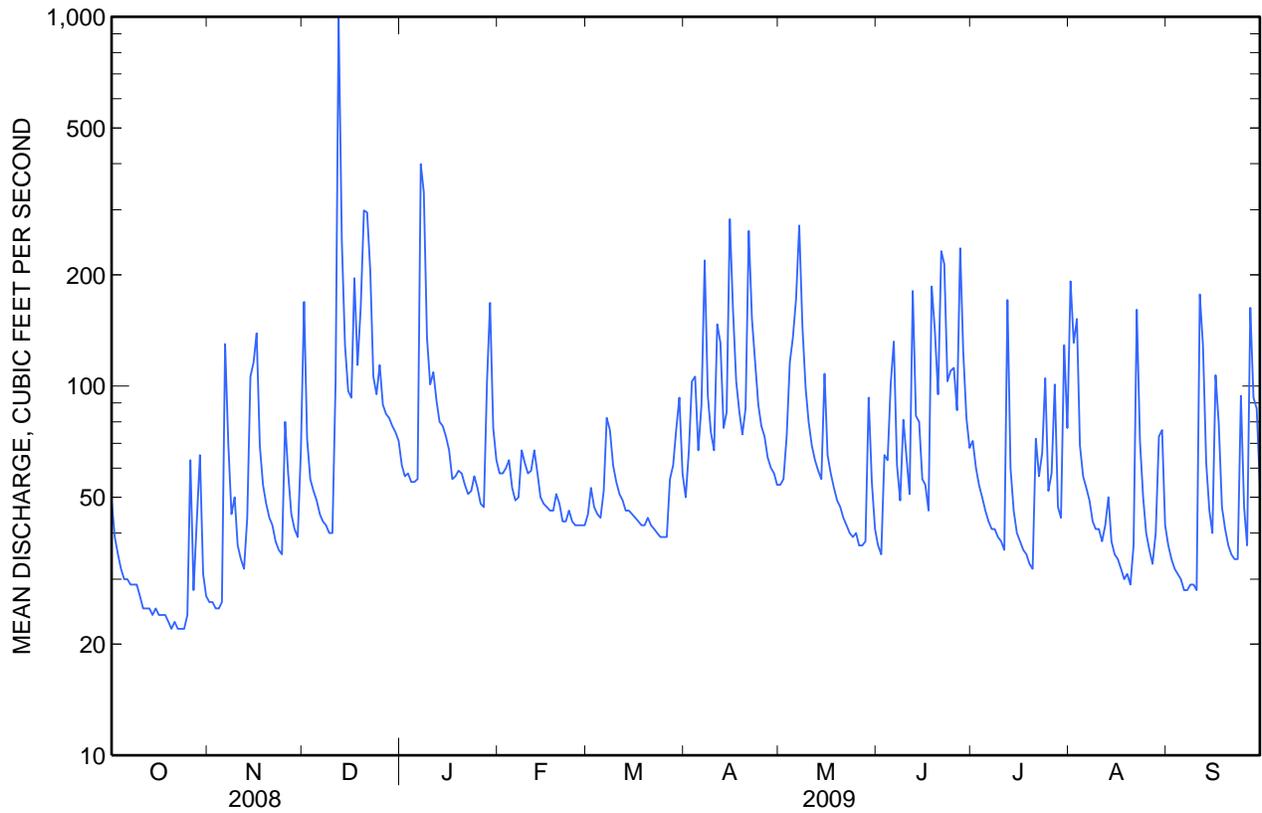
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	51.9	68.8	81.8	89.2	93.8	110	99.8	77.8	58.6	51.1	49.3	51.3
Max	183	231	212	218	214	221	218	204	144	200	108	183
(WY)	(2006)	(1978)	(1978)	(1979)	(1979)	(1984)	(1983)	(1998)	(2003)	(1938)	(1948)	(1938)
Min	20.9	19.2	24.3	30.7	27.7	47.2	38.6	38.8	26.6	17.9	16.7	16.7
(WY)	(2002)	(2002)	(2002)	(1981)	(2002)	(1985)	(1995)	(1955)	(1957)	(2002)	(1932)	(1932)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1932 - 2009	
Annual total	23,289		26,708			
Annual mean	63.6		73.2		73.5	
Highest annual mean					131	1978
Lowest annual mean					31.9	2002
Highest daily mean	994	Dec 12	994	Dec 12	1,720	Nov 8, 1977
Lowest daily mean	17	Sep 3	22	Many days	10	Dec 5, 1998
Annual seven-day minimum	18	Aug 30	23	Oct 18	11	Aug 13, 2002
Maximum peak flow			1,400	Dec 12	2,940	Sep 21, 1938
Maximum peak stage			8.66	Dec 12	12.45	Sep 21, 1938
Instantaneous low flow			22	Oct 19-24	8.1	Aug 6, 1981
Annual runoff (cfsm)	1.45		1.66		1.67	
Annual runoff (inches)	19.69		22.58		22.71	
10 percent exceeds	112		131		129	
50 percent exceeds	48		54		54	
90 percent exceeds	22		31		26	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-81, 1991 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1969 to September 1974.

pH: July 1969 to September 1974.

WATER TEMPERATURE: July 1969 to September 1974.

DISSOLVED OXYGEN: August 1969 to September 1974.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, New Jersey Department of Environmental Protection Watershed Management Area 12.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 3

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

Date	Time	Baro- metric pres- sure, mm Hg (00025)	Temper- ature, air, deg C (00020)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Instan- taneous dis- charge, ft ³ /s (00061)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf μS/cm @ 25 degC (00095)	Temper- ature, water, deg C (00010)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis- solved solids dried @ 180degC wat flt mg/L (70300)
Dec 09...	0800	774	2.0	.065	.055	40	11.9	91	7.3	267	3.2	6.8	156
Feb 25...	0900	777	-1.5	.046	.039	42	11.0	81	7.4	302	2.4	7.1	174
May 18...	0930	769	11.0	.097	.076	54	8.8	83	7.2	257	13.3	12	163
Aug 31...	0900	765	18.5	.247	.200	43	7.9	85	7.2	221	18.5	22	143

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 3

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

Date	Dis- solved solids, sum of consti- tuents, mg/L (70301)	Hard- ness, water, mg/L as CaCO3 (00900)	Sus- pended solids, water, unfltrd mg/L (00530)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Total carbon, suspnd sedimnt total, mg/L (00694)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Silica, water, fltrd, mg/L as SiO2 (00955)
Dec 09...	E150	83	1	27.1	3.71	3.08	14.0	32	.2	31.3	.17	<.04	15.6
Feb 25...	161	72	3	23.4	3.40	2.79	22.1	29	.2	41.9	.14	<.04	14.1
May 18...	E144	71	13	22.5	3.49	2.78	16.9	27	.9	36.5	.13	<.04	14.0
Aug 31...	124	67	9	22.1	2.81	3.04	12.2	32	.9	24.8	.15	E.03	13.7

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 3

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

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water, fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Phos- phorus, water, fltrd, mg/L as P (00666)	Phos- phorus, water, unfltrd mg/L as P (00665)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd mg/L (00600)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)
Dec 09...	33.9	.17	.058	.35	E.002	E.02	E.005	.027	.52	E.54	.24	1.3
Feb 25...	34.1	.25	.053	.41	<.010	E.02	E.004	.025	.66	E.68	.22	1.1
May 18...	29.7	.19	.037	.39	E.006	.05	.009	.050	.58	.62	.90	2.3
Aug 31...	24.5	.28	<.010	.28	<.010	.05	.035	.100	.56	.61	.91	4.2