



Water-Data Report 2009

01411500 MAURICE RIVER AT NORMA, NJ

MAURICE RIVER BASIN

LOCATION.--Lat 39°29'44", long 75°04'37" referenced to North American Datum of 1983, Pittsgrove Township, Salem County, NJ, Hydrologic Unit 02040206, on right bank just upstream from bridge on Almond Road (County Route 540), 0.6 mi east of Norma, 0.8 mi downstream from Blackwater Branch, and 2.9 mi west of Vineland.

DRAINAGE AREA.--112 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1932 to current year. Monthly discharge only for December 1933, published in WSP 1302.

REVISED RECORDS.--WSP 1382: 1933. WDR NJ-79-1: 1967(P). WDR NJ-82-2: Drainage area. WDR US-2007: 2000, 2003.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Dec 27, 1937. Datum of gage is 46.94 ft above NGVD of 1929.

REMARKS.--Records fair. Occasional regulation by lakes and ponds above station. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 14	0700	*299	*3.23

01411500 MAURICE RIVER AT NORMA, NJ—Continued

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	72	68	132	144	159	121	118	138	117	105	135	192
2	66	64	128	138	156	132	135	138	111	105	139	171
3	61	63	123	133	158	121	158	142	112	103	164	155
4	57	60	116	131	162	118	183	168	125	96	156	135
5	56	61	112	130	157	117	177	184	161	86	143	122
6	54	75	107	130	152	120	176	204	209	85	135	112
7	53	73	104	195	148	133	193	234	197	81	127	108
8	51	71	98	272	150	140	190	248	177	79	113	105
9	53	74	95	289	153	140	181	251	162	77	121	103
10	53	69	93	290	154	134	165	249	154	75	164	111
11	52	67	121	282	154	125	159	229	145	74	180	195
12	50	66	228	261	154	121	159	204	143	77	181	262
13	49	76	277	232	151	115	151	180	140	87	169	277
14	48	103	295	211	147	112	169	162	137	99	150	287
15	47	125	281	193	144	111	193	154	130	103	131	265
16	46	147	261	175	138	109	203	157	127	103	117	230
17	46	147	262	159	135	104	210	155	125	110	107	196
18	46	143	249	151	132	102	202	153	134	104	99	166
19	46	132	232	149	138	102	188	145	152	94	93	149
20	44	124	232	147	129	103	175	138	155	83	91	137
21	45	119	226	142	136	102	190	131	180	123	89	129
22	45	113	210	138	128	102	205	125	188	161	128	124
23	45	105	217	137	122	102	213	121	194	157	189	122
24	44	98	200	140	125	99	206	116	180	148	188	119
25	47	123	193	137	118	97	192	115	161	135	214	114
26	75	128	187	134	117	101	178	110	143	120	208	111
27	71	121	178	131	115	113	165	111	130	106	178	160
28	77	111	170	147	117	123	152	110	120	96	169	183
29	78	106	164	178	---	132	144	134	113	93	212	178
30	75	112	161	175	---	132	140	135	107	130	203	165
31	72	---	156	168	---	125	---	126	---	127	203	---
Total	1,724	2,944	5,608	5,439	3,949	3,608	5,270	4,967	4,429	3,222	4,696	4,883
Mean	55.6	98.1	181	175	141	116	176	160	148	104	151	163
Max	78	147	295	290	162	140	213	251	209	161	214	287
Min	44	60	93	130	115	97	118	110	107	74	89	103
Cfsm	0.50	0.88	1.62	1.57	1.26	1.04	1.57	1.43	1.32	0.93	1.35	1.45
In.	0.57	0.98	1.86	1.81	1.31	1.20	1.75	1.65	1.47	1.07	1.56	1.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2009, BY WATER YEAR (WY)

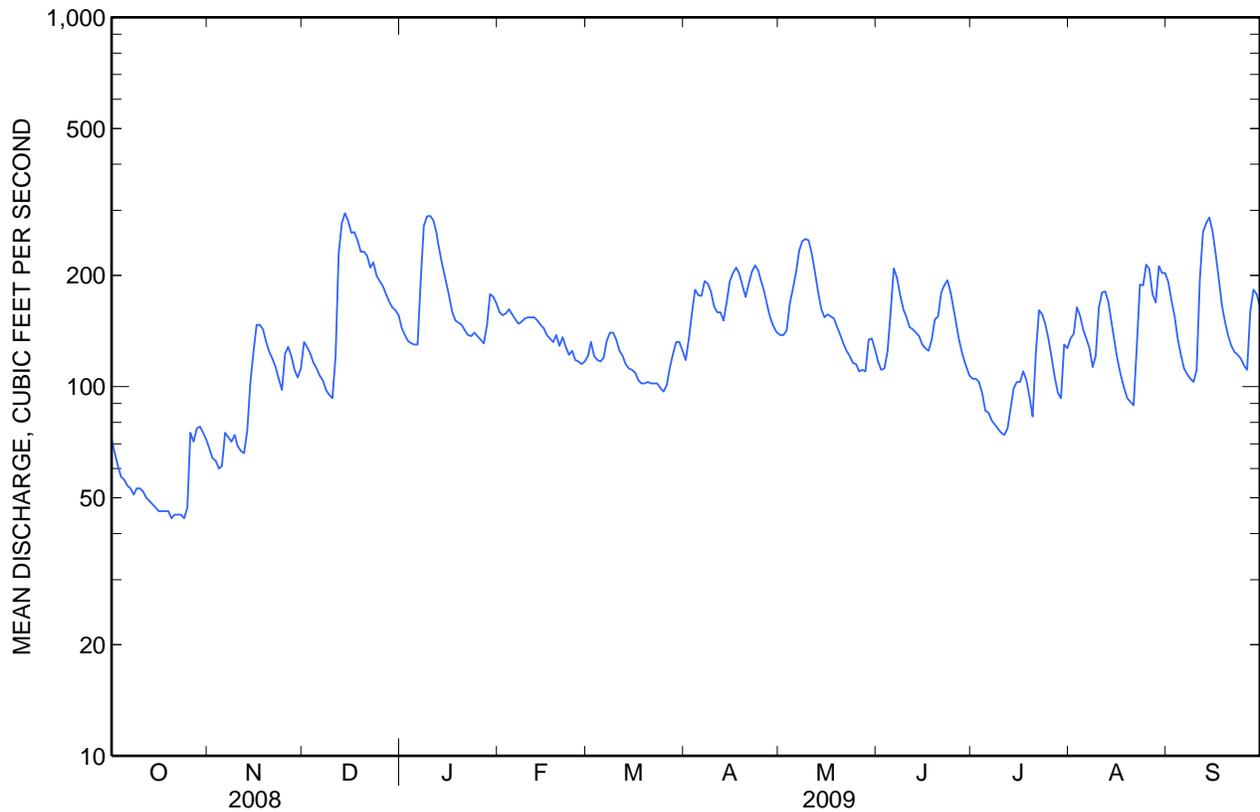
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	112	138	168	189	198	227	226	187	146	122	121	118
Max	266	330	385	380	418	427	437	387	325	333	327	591
(WY)	(1990)	(1973)	(1973)	(1936)	(1939)	(1979)	(1984)	(1958)	(2003)	(1975)	(1958)	(1940)
Min	48.6	46.7	57.1	64.7	69.4	89.9	90.9	79.5	57.7	35.6	32.1	40.6
(WY)	(1966)	(1966)	(1966)	(1966)	(2002)	(2002)	(1966)	(1977)	(1966)	(1966)	(2002)	(1965)

01411500 MAURICE RIVER AT NORMA, NJ—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1933 - 2009	
Annual total	43,278		50,739			
Annual mean	118		139		163	
Highest annual mean					253	1973
Lowest annual mean					67.4	1966
Highest daily mean	295	Dec 14	295	Dec 14	5,260	Sep 2, 1940
Lowest daily mean	41	Aug 9	44	Oct 20, 24	20	Aug 16, 2002
Annual seven-day minimum	43	Aug 30	45	Oct 18	20	Aug 16, 2002
Maximum peak flow			299	Dec 14	^a 7,360	Sep 2, 1940
Maximum peak stage			3.23	Dec 14	8.72	Sep 2, 1940
Instantaneous low flow			43	Many days	20	Aug 15, 2002
Annual runoff (cfsm)	1.06		1.24		1.45	
Annual runoff (inches)	14.37		16.85		19.71	
10 percent exceeds	189		205		277	
50 percent exceeds	121		134		142	
90 percent exceeds	51		73		67	

^a From rating curve extended above 3,000 ft³/s by logarithmic plotting, peak was highest since at least 1867, when Union Lake Dam was built in Millville.



01411500 MAURICE RIVER AT NORMA, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1953, 1962-63, 1965 to September 1997, December 1998 to current year.

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: August and September 2007.

DISSOLVED OXYGEN PERCENT OF SATURATION: August and September 2007.

PH: November 1992 to April 1994, August and September 2007.

SPECIFIC CONDUCTANCE: January 1980 to November 1986, November 1992 to September 1994, August and September 2007.

WATER TEMPERATURE: January 1980 to November 1986, November 1992 to September 1994, August and September 2007.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 17.

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)
Nov 24...	0900	769	1.0	.264	.203	97	10.4	79	6.5	124	3.9	1.7	84
Feb 24...	0900	771	-5.0	.160	.122	125	11.4	85	6.4	125	2.6	3.0	71
May 07...	0830	756	18.0	.680	.533	231	7.2	73	6.1	97	15.8	2.9	84
Aug 26...	0830	763	22.0	.906	.706	214	5.1	61	6.0	95	23.6	2.0	92

01411500 MAURICE RIVER AT NORMA, NJ—Continued

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)
Nov 24...	E69	25	7	5.09	2.92	2.14	10.2	9	.5	16.7	<.08	<.04	8.2
Feb 24...	E71	25	6	5.32	2.86	2.27	11.3	E7	.9	17.6	<.08	<.04	6.8
May 07...	54	20	7	4.25	2.27	1.90	8.68	10	.9	15.0	<.08	<.04	4.8
Aug 26...	E51	19	4	4.02	2.09	2.06	8.32	8	.7	14.9	<.08	<.04	6.9

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)
Nov 24...	11.6	.50	.041	1.57	E.002	.04	E.006	.013	2.1	2.1	.50	6.3
Feb 24...	10.1	.26	.027	2.26	<.010	.07	E.004	.014	2.5	2.6	.88	3.9
May 07...	6.78	.93	.030	.95	<.010	.08	.017	.025	1.9	1.9	.90	13.5
Aug 26...	6.04	.76	.087	.43	E.010	.07	.021	.034	1.2	1.3	.71	16.7