



Water-Data Report 2010

01408500 TOMS RIVER NEAR TOMS RIVER, NJ

TOMS RIVER BASIN

LOCATION.--Lat 39°59'11", long 74°13'24" referenced to North American Datum of 1983, Toms River Township, Ocean County, NJ, Hydrologic Unit 02040301, on left bank 500 ft downstream from bridge on County Route 527 (Oak Ridge Parkway), 1.9 mi downstream from Union Branch, and 2.6 mi northwest of community of Toms River.

DRAINAGE AREA.--123 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October and November 1928, published in WSP 1302.

REVISED RECORDS.--WSP 1702: 1938. WDR NJ-76-1: 1975(M). WDR NJ-77-1: 1976.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.10 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Diversions by Ciba-Geigy Inc., 800 ft upstream July 1966 through 1990; the effluent was returned by pipeline directly into the Atlantic Ocean, thus bypassing station. Occasional regulation also occurs from an unknown source. 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 450 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 30	2030	488	6.31
Dec 11	1845	612	7.17
Dec 28	0730	1,650	10.84
Jan 1	0045	491	6.44
Jan 28	0215	525	6.66
Feb 25	2100	997	8.90
Mar 3	1030	465	6.27
Mar 15	0615	*2,360	*12.25
Mar 25	0145	751	7.86
Mar 31	2215	1,950	11.47
Apr 4	0515	682	7.52
Apr 28	1615	533	6.71

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	221	380	177	477	272	547	1,660	382	210	99	97	72
2	187	294	176	436	257	492	1,060	332	228	97	114	70
3	175	250	254	409	252	465	782	311	211	96	107	70
4	173	223	290	377	249	462	655	301	189	94	100	70
5	168	207	341	343	245	459	584	295	178	92	95	67
6	158	196	402	316	251	446	540	284	167	91	91	65
7	149	187	379	298	251	426	508	260	158	89	88	66
8	141	182	360	291	250	405	479	245	151	88	86	64
9	139	177	432	283	245	380	466	227	151	90	85	62
10	142	175	501	273	266	358	459	218	196	104	83	62
11	134	172	579	262	275	338	446	211	206	102	82	62
12	133	183	552	254	295	329	432	233	190	99	82	64
13	130	207	448	250	306	518	409	252	173	100	83	69
14	127	264	407	246	301	1,280	392	261	165	168	81	70
15	136	278	400	244	287	2,230	378	313	160	326	80	67
16	176	290	412	244	300	1,670	367	310	153	375	81	68
17	190	267	373	259	289	1,160	359	310	147	387	81	94
18	208	231	322	345	276	844	348	330	142	268	81	96
19	199	210	285	384	275	682	338	391	136	174	82	86
20	193	209	263	413	283	582	337	422	132	149	79	80
21	178	207	280	386	296	529	322	433	128	140	78	74
22	164	204	278	332	307	494	339	375	123	127	86	72
23	152	194	270	290	381	569	336	304	120	119	89	70
24	150	194	257	266	572	687	316	273	118	112	93	72
25	206	195	251	307	894	732	339	260	117	113	96	70
26	207	191	441	393	904	645	402	247	113	123	96	67
27	226	189	952	467	756	557	465	230	109	112	92	80
28	330	184	1,530	512	633	500	521	227	107	106	86	94
29	400	178	1,020	442	---	606	511	231	105	103	82	98
30	466	175	689	353	---	1,040	451	234	102	104	78	123
31	464	---	527	299	---	1,750	---	225	---	100	75	---
Total	6,222	6,493	13,848	10,451	10,168	22,182	15,001	8,927	4,585	4,347	2,709	2,244
Mean	201	216	447	337	363	716	500	288	153	140	87.4	74.8
Max	466	380	1,530	512	904	2,230	1,660	433	228	387	114	123
Min	127	172	176	244	245	329	316	211	102	88	75	62
Cfsm	1.63	1.76	3.63	2.74	2.95	5.82	4.07	2.34	1.24	1.14	0.71	0.61
In.	1.88	1.96	4.19	3.16	3.08	6.71	4.54	2.70	1.39	1.31	0.82	0.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	158	198	228	247	252	292	283	240	185	155	156	149
Max	393	475	447	506	455	716	573	541	463	439	359	414
(WY)	(2006)	(1973)	(1973)	(1978)	(1973)	(2010)	(1984)	(1998)	(1968)	(1938)	(1990)	(1971)
Min	83.3	84.2	93.6	104	103	143	120	118	96.8	71.0	57.9	63.0
(WY)	(1942)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(1992)	(1977)	(1999)	(1966)	(1995)

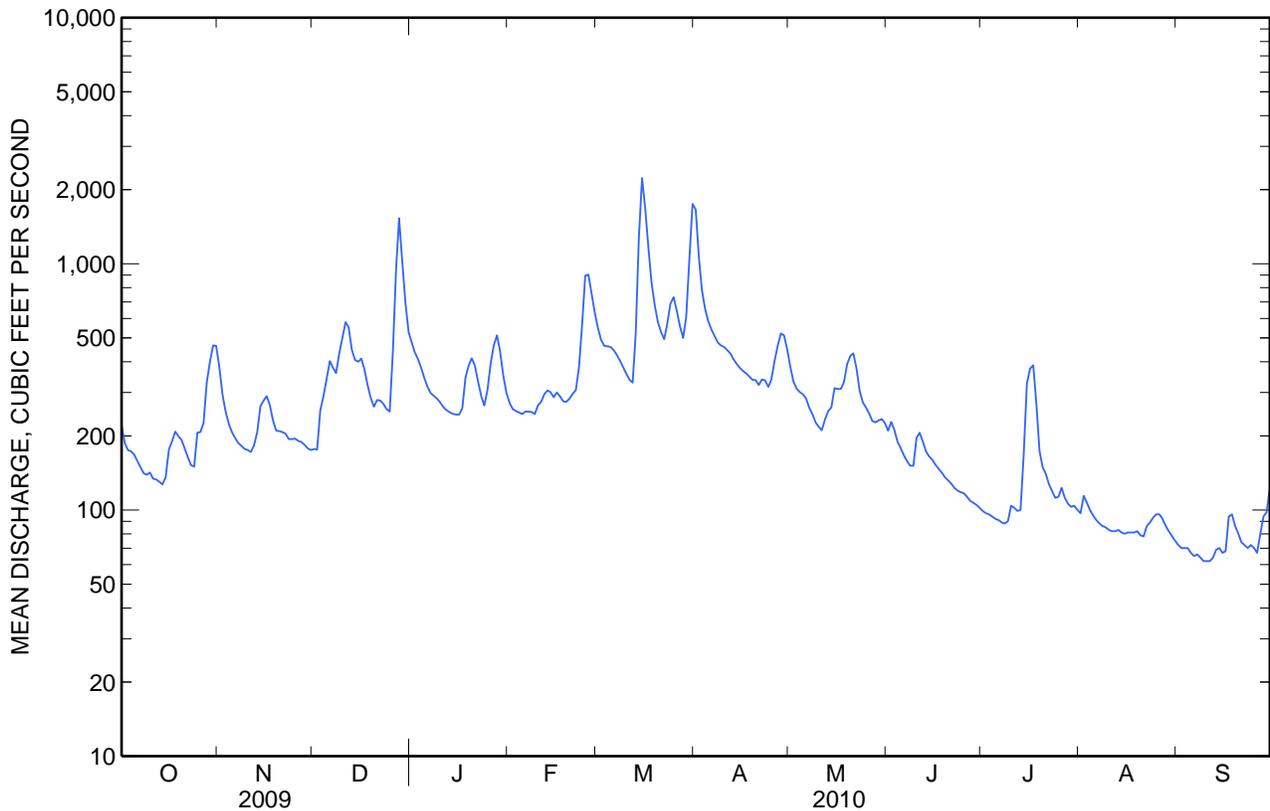
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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1929 - 2010	
Annual total	84,361		107,177			
Annual mean	231		294		212	
Highest annual mean					335	1978
Lowest annual mean					111	2002
Highest daily mean	1,530	Dec 28	2,230	Mar 15	2,230	Mar 15, 2010
Lowest daily mean	108	Jul 20	62	Sep 9-11	42	Aug 21, 2002
Annual seven-day minimum	125	Jul 15	64	Sep 6	44	Sep 10, 1995
Maximum peak flow			2,360	Mar 15	2,360	Mar 15, 2010
Maximum peak stage			12.25	Mar 15	^a 12.50	Sep 23, 1938
Instantaneous low flow			61	Sep 9-12	^b 37	Aug 4, 2001
Annual runoff (cfsm)	1.88		2.39		1.72	
Annual runoff (inches)	25.51		32.41		23.37	
10 percent exceeds	347		519		354	
50 percent exceeds	196		245		183	
90 percent exceeds	141		82		96	

^a From floodmark.

^b From temporary regulation from unknown source.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to November 2009, discontinued.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1974 to September 1981.

WATER TEMPERATURE: November 1963 to May 1966, November 1974 to September 1981.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 13. Sampling station was permanently relocated to 01408505 in March 2010.

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 2009 TO SEPTEMBER 2010

Part 1 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, per centimeter (50624)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, per centimeter (61726)	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
11-24-2009	0800	768	10.0	.382	.302	193	10.0	89	5.9

WATER-QUALITY DATA

WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Specific conductance, water, unfiltered, μS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, milligrams per liter (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)
11-24-2009	104	10.2	2.3	73	< 58	12.9	3	3.04	1.28

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (90410)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)
11-24-2009	1.40	12.1	< 8	.93	18.9	< .08	< .06	5.2	8.20	.40

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophos- phate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphoru s, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)	Organic carbon, suspended sediment, total, mg/L (00689)
11-24-2009	.151	.58	E .008	.04	.011	.020	.98	1.0	.93

01408500 TOMS RIVER NEAR TOMS RIVER, NJ—Continued

**WATER-QUALITY DATA
WATER YEAR OCTOBER
2009 TO SEPTEMBER
2010**

Part 5 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Organic carbon, water, filtered, mg/L (00681)
11-24-2009	7.1