



Water-Data Report 2007

01367800 PAPAKATING CREEK AT PELLETTOWN, NJ

HUDSON RIVER BASIN

LOCATION.--Lat 41°09'46", long 74°40'31" referenced to North American Datum of 1983, Frankford Township, Sussex County, NJ, Hydrologic Unit 02020007, on upstream left wingwall of bridge on County Route 565 (Pellettown Road) in Pellettown, 1.5 mi southeast of Wykertown, 3.9 mi northeast of Branchville, and 4.5 mi upstream of West Branch Papakating Creek.

DRAINAGE AREA.--15.8 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1999-2003. October 2003 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 414.28 ft above NAVD of 1988 (levels from New Jersey Geological Survey benchmark).

REMARKS.--Records good, except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Satellite gage-height and air-temperature telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 28	1415	342	5.30
Nov 8	1845	424	5.73
Mar 2	1215	422	5.72
Apr 16	0030	*1,210	*8.50

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[*e*, estimated]

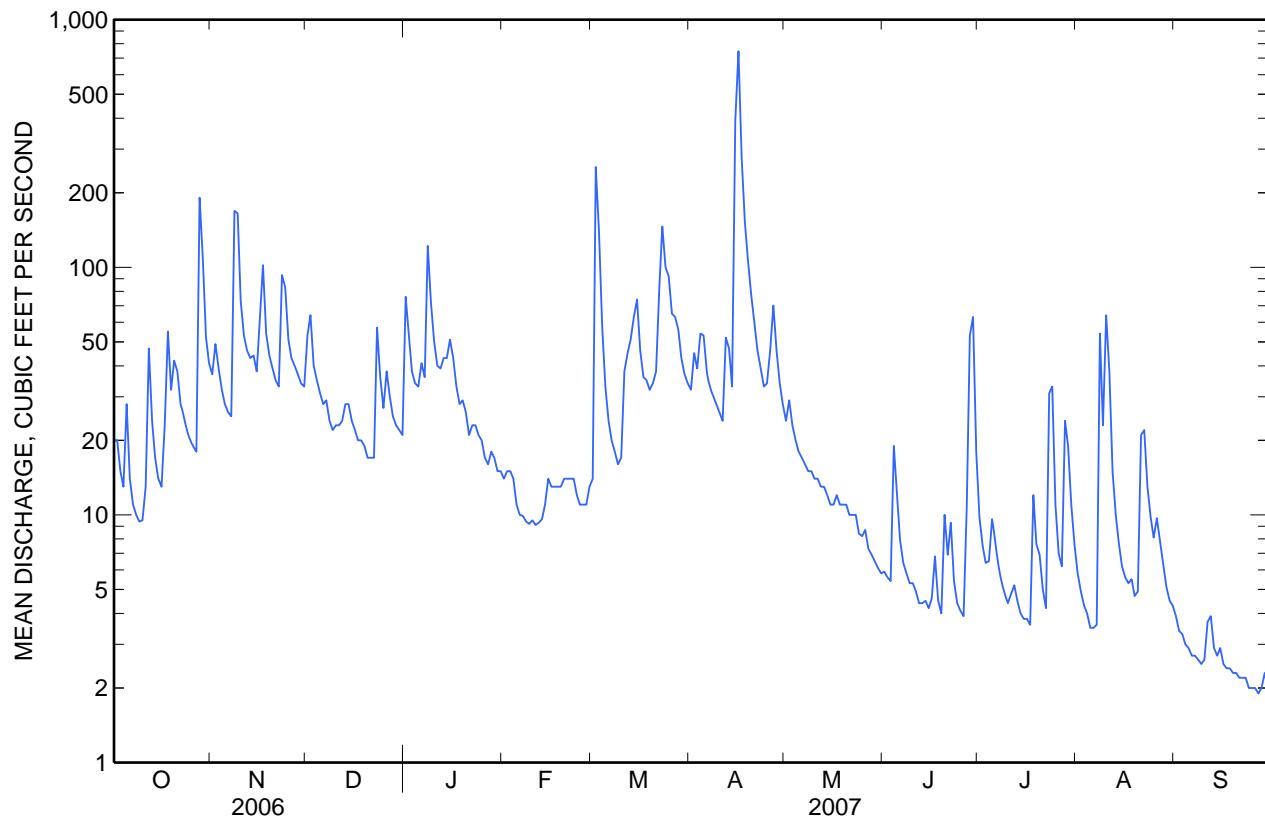
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	20	37	53	76	e14	14	32	24	5.9	9.8	5.8	3.9
2	20	49	64	54	e15	254	45	29	5.6	7.5	4.9	3.4
3	15	39	40	38	e15	e140	39	23	5.4	6.4	4.3	3.3
4	13	32	35	34	e14	e58	54	20	19	6.5	4.0	3.0
5	28	28	31	33	e11	e33	53	18	12	9.6	3.5	2.9
6	14	26	28	41	10	e24	38	17	7.9	7.8	3.5	2.7
7	11	25	29	36	9.9	20	33	16	6.4	6.2	3.6	2.7
8	10	169	e24	122	9.4	18	30	15	5.8	5.4	54	2.6
9	9.4	165	e22	72	9.2	16	28	15	5.3	4.8	23	2.5
10	9.5	73	23	50	9.5	17	26	14	5.3	4.4	64	2.6
11	13	53	23	40	9.1	38	24	14	4.9	4.8	38	3.7
12	47	46	24	39	9.3	e45	52	13	4.4	5.2	15	3.9
13	24	43	28	43	9.6	51	47	13	4.4	4.5	10	2.9
14	17	44	28	43	11	63	33	12	4.5	4.0	7.7	2.7
15	14	38	24	51	14	74	391	11	4.2	3.8	6.2	2.9
16	13	61	22	43	13	e46	746	11	4.6	3.8	5.6	2.5
17	23	102	20	e33	13	e36	276	12	6.8	3.6	5.3	2.4
18	55	54	20	e28	13	e35	152	11	4.5	12	5.5	2.4
19	32	44	19	e29	13	e32	107	11	4.0	7.6	4.7	2.3
20	42	39	17	e26	14	e34	78	11	10	6.9	4.9	2.3
21	38	35	17	e21	14	e38	60	10	6.9	5.0	21	2.2
22	28	33	17	e23	14	82	46	10	9.3	4.2	22	2.2
23	25	93	57	e23	14	146	39	10	5.4	31	13	2.2
24	22	83	36	e21	e12	100	33	8.4	4.4	33	9.8	2.0
25	20	51	27	e20	e11	92	34	8.2	4.1	11	8.1	2.0
26	19	43	38	e17	11	65	46	8.7	3.9	7.0	9.7	2.0
27	18	40	30	e16	11	63	70	7.3	11	6.2	7.8	1.9
28	191	37	25	e18	13	56	46	6.9	53	24	6.3	2.0
29	109	34	23	e17	---	43	34	6.5	63	19	5.1	2.3
30	52	33	22	e15	---	37	28	6.1	18	11	4.5	2.0
31	41	---	21	e15	---	34	---	5.8	---	7.6	4.3	---
Total	992.9	1,649	887	1,137	336.0	1,804	2,720	397.9	309.9	283.6	385.1	78.4
Mean	32.0	55.0	28.6	36.7	12.0	58.2	90.7	12.8	10.3	9.15	12.4	2.61
Max	191	169	64	122	15	254	746	29	63	33	64	3.9
Min	9.4	25	17	15	9.1	14	24	5.8	3.9	3.6	3.5	1.9
Cfsm	2.03	3.48	1.81	2.32	0.76	3.68	5.74	0.81	0.65	0.58	0.79	0.17
In.	2.34	3.88	2.09	2.68	0.79	4.25	6.40	0.94	0.73	0.67	0.91	0.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	48.6	40.8	48.1	50.9	27.1	41.2	55.2	22.7	23.8	12.7	13.9	24.1
Max	97.5	55.0	76.2	77.0	38.7	58.2	90.7	42.2	66.3	25.7	23.1	72.0
(WY)	(2006)	(2007)	(2004)	(2006)	(2006)	(2007)	(2007)	(2004)	(2006)	(2006)	(2004)	(2004)
Min	24.1	24.1	28.6	28.8	12.0	15.7	27.5	12.8	5.65	6.41	1.95	1.44
(WY)	(2005)	(2005)	(2007)	(2004)	(2007)	(2006)	(2006)	(2007)	(2005)	(2005)	(2005)	(2005)

01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2006	Water Year 2007		Water Years 2003 - 2007	
Annual total	12,976.6		10,980.8		
Annual mean	35.6		30.1		34.1
Highest annual mean				40.3	2006
Lowest annual mean				27.6	2005
Highest daily mean	422	Jun 28	746	Apr 16	746 Apr 16, 2007
Lowest daily mean	5.0	Aug 21	1.9	Sep 27	0.77 Sep 12, 2005
Annual seven-day minimum	6.4	Aug 18	2.0	Sep 24	0.87 Sep 7, 2005
Maximum peak flow			1,210	Apr 16	1,210 Apr 16, 2007
Maximum peak stage			8.50	Apr 16	8.50 Apr 16, 2007
Instantaneous low flow			1.7	Sep 28	0.69 Sep 12, 2005
Annual runoff (cfsm)	2.25		1.90		2.16
Annual runoff (inches)	30.55		25.85		29.35
10 percent exceeds	73		55		64
50 percent exceeds	22		17		21
90 percent exceeds	10		3.9		4.2



01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-63, 1999 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). Cooperative Network Site Descriptor: Agricultural Land Use Indicator, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 2.

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 2006 TO SEPTEMBER 2007**

Part 1 of 3

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

Date	Time	Turbdty white light, det ang 90+/-30 dis- charge, corrctd	UV absorb- ance, 254 nm, wat flt units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg (61726)	Dis- solved oxygen, mg/L (00025)	Dis- solved oxygen, percent of sat- uration (00300)	pH, water, unfltrd field, std units	Specif- ic conduc- tance, μS/cm (00400)	Temper- ature, wat unf μS/cm (25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)
Nov 13...	0920	43	3.1	.151	.114	752	9.9	87	7.9	240	10.5	9.3	78
Feb 15...	1000	15	2.5	.039	.030	748	10.7	74	7.6	355	-1.5	.2	120
Jun 06...	0845	8.5	5.4	.151	.114	748	8.0	81	8.0	339	18.0	15.8	110
Aug 02...	0830	5.2	7.0	.142	.108	754	--	--	7.9	383	25.0	21.4	130

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 3

[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 CaCO ₃ (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 non- filter- able, mg/L (00530)	Ammonia + org-N, water, filtrd, mg/L as N (00623)
Nov 13...	25.3	3.48	1.57	17.0	60	25.6	E.06	9.1	13.7	134	147	5	.25
Feb 15...	40.8	5.43	1.35	19.0	92	34.3	E.05	9.1	24.6	196	202	<1	.19
Jun 06...	37.2	4.90	1.27	20.6	96	34.8	E.09	8.8	17.4	186	206	6	.38
Aug 02...	43.6	5.89	1.68	22.4	111	37.4	E.08	9.5	19.6	210	225	7	.30

01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 3

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

	Nitrate + nitrite	Partic- ulate nitro- gen,	Total nitro- gen,	Total nitro- gen,	Ortho- phosphate, water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00666)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Boron, water, fltrd, µg/L (01020)	
Date	Ammonia water, fltrd, mg/L as N (00631)	water fltrd, mg/L as N (49570)	water, susp, mg/L (00602)	water, fltrd, mg/L (00600)	water, unfltrd mg/L (00671)	water, fltrd, mg/L (00666)	water, unfltrd mg/L (00665)	carbon, suspnd sedimnt total, mg/L (00694)	carbon, suspnd sedimnt total, mg/L (00688)	carbon, suspnd sedimnt total, mg/L (00689)	water, fltrd, mg/L (00681)	Boron, water, fltrd, µg/L (01020)	
Nov 13...	.028	.50	.04	.75	.79	.017	.024	.035	.3	<.1	.3	3.8	12
Feb 15...	.042	1.48	.03	1.7	1.7	E.009	E.006	.015	.2	<.1	.2	1.4	11
Jun 06...	.021	.76	.06	1.1	1.2	.019	.029	.046	.5	<.1	.5	4.2	16
Aug 02...	.021	.66	.07	.96	1.0	.024	.033	.050	.6	<.1	.6	3.7	17