Water-Data Report 2008

03015000 CONEWANGO CREEK AT RUSSELL, PA

Allegheny Basin
Conewango Subbasin

LOCATION.--Lat 41°56′17″, long 79°08′00″ referenced to North American Datum of 1927, Warren County, PA, Hydrologic Unit 05010002, on left bank of highway bridge on SR 957 at Russell, 0.5 mi upstream from Akeley Run, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--816 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October, November 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1083: 1936 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,221.77 ft above National Geodetic Vertical Datum of 1929. Prior to Apr 10, 1941, nonrecording gage at same site and datum. Satellite telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the U.S. Army Corps of Engineers, Pittsburgh District and the Pennsylvania Department of Environmental Protection.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since November 1949 by Chautauqua Lake. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 10.9 ft from floodmark, discharge, 14,600 ft^3/s.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	191	308	3,300	3,090	2,610	e1,230	3,800	956	383	2,860	624	198
2	180	283	2,740	2,630	2,790	e1,210	4,200	800	450	1,700	635	194
3	176	265	3,790	e2,140	2,550	e1,260	4,420	898	451	1,240	652	188
4	172	252	3,960	e1,910	2,310	3,180	4,900	1,540	399	1,110	594	181
5	165	244	3,980	e1,780	3,450	3,940	5,420	1,330	391	941	544	180
6	163	285	3,900	1,850	6,070	3,840	5,400	1,080	370	792	749	174
7	362	641	3,600	2,660	7,180	3,650	5,180	882	338	678	620	167
8	569	956	3,110	3,190	7,600	3,240	4,900	842	311	603	542	164
9	382	837	2,610	3,520	7,560	2,690	4,470	947	299	646	633	182
10	297	695	2,350	3,710	7,050	2,270	3,970	884	287	720	978	197
11	252	625	2,360	4,220	e6,030	2,110	3,440	868	271	680	1,260	184
12	228	573	4,590	4,370	e4,870	2,020	3,200	912	248	610	1,480	178
13	217	1,000	4,670	4,210	e4,170	1,920	3,090	906	232	739	1,460	199
14	212	1,140	4,510	3,960	e3,490	2,280	2,890	839	259	1,130	1,210	390
15	205	971	4,400	3,520	e2,750	3,100	2,500	851	327	857	997	564
16	196	1,240	4,190	2,970	e2,200	3,340	2,110	906	386	675	860	469
17	187	1,350	3,760	2,450	e1,910	3,010	1,820	905	348	571	784	359
18	184	1,320	3,250	2,110	e2,990	2,770	1,650	1,050	344	516	684	300
19	192	1,260	2,830	e1,810	e3,410	3,550	1,520	1,180	362	383	448	263
20	194	1,220	2,520	e1,490	e3,310	4,450	1,420	1,150	384	307	339	235
21	189	1,310	2,260	e1,260	e3,070	4,330	1,300	1,060	356	310	313	217
22	185	2,630	2,070	e1,490	e2,600	4,300	886	978	358	317	292	205
23	638	3,570	3,460	e1,440	e2,200	4,140	702	1,040	337	725	268	194
24	1,580	3,370	5,060	e1,370	e1,840	3,760	655	1,020	318	1,640	251	188
25	1,050	3,150	4,970	e1,310	e1,600	3,020	604	897	308	1,760	240	180
26	711	3,030	4,950	e1,260	e1,500	2,920	573	787	291	1,250	227	172
27	530	4,090	4,870	e1,220	e1,390	3,000	636	701	292	1,180	214	169
28	467	3,880	4,580	e1,210	e1,290	3,390	969	538	407	976	204	170
29	437	3,750	4,400	e1,200	e1,260	3,250	1,430	451	1,630	749	201	169
30	383	3,630	3,950	2,500	---	2,910	1,220	414	2,830	646	201	182
31	338	---	3,520	2,650	---	3,110	---	391	---	762	201	---
Total	11,232	47,875	114,510	74,500	101,050	93,190	79,275	28,003	13,967	28,073	18,705	6,812
Mean	362	1,596	3,694	2,403	3,484	3,006	2,642	903	466	906	603	227
Max	1,580	4,090	5,060	4,370	7,600	4,450	5,420	1,540	2,830	2,860	1,480	564
Min	163	244	2,070	1,200	1,260	1,210	573	391	232	307	201	164
Cfsm	0.44	1.96	4.53	2.95	4.27	3.68	3.24	1.11	0.57	1.11	0.74	0.28
In.	0.51	2.18	5.22	3.40	4.61	4.25	3.61	1.28	0.64	1.28	0.85	0.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	882	1,614	2,164	2,097	2,112	3,141	2,801	1,377	854	487	422	625
Max	3,385	4,070	4,261	4,986	5,320	6,715	6,503	4,016	2,926	2,142	2,391	3,891
(WY)	(2007)	(1986)	(1978)	(1998)	(1976)	(1945)	(1947)	(1943)	(1986)	(1986)	(1977)	(1977)
Min	66.1	119	111	215	533	1,344	353	296	177	108	82.4	79.9
(WY)	(1964)	(1961)	(1961)	(1961)	(1963)	(1960)	(1946)	(1985)	(1949)	(1963)	(1954)	(1941)

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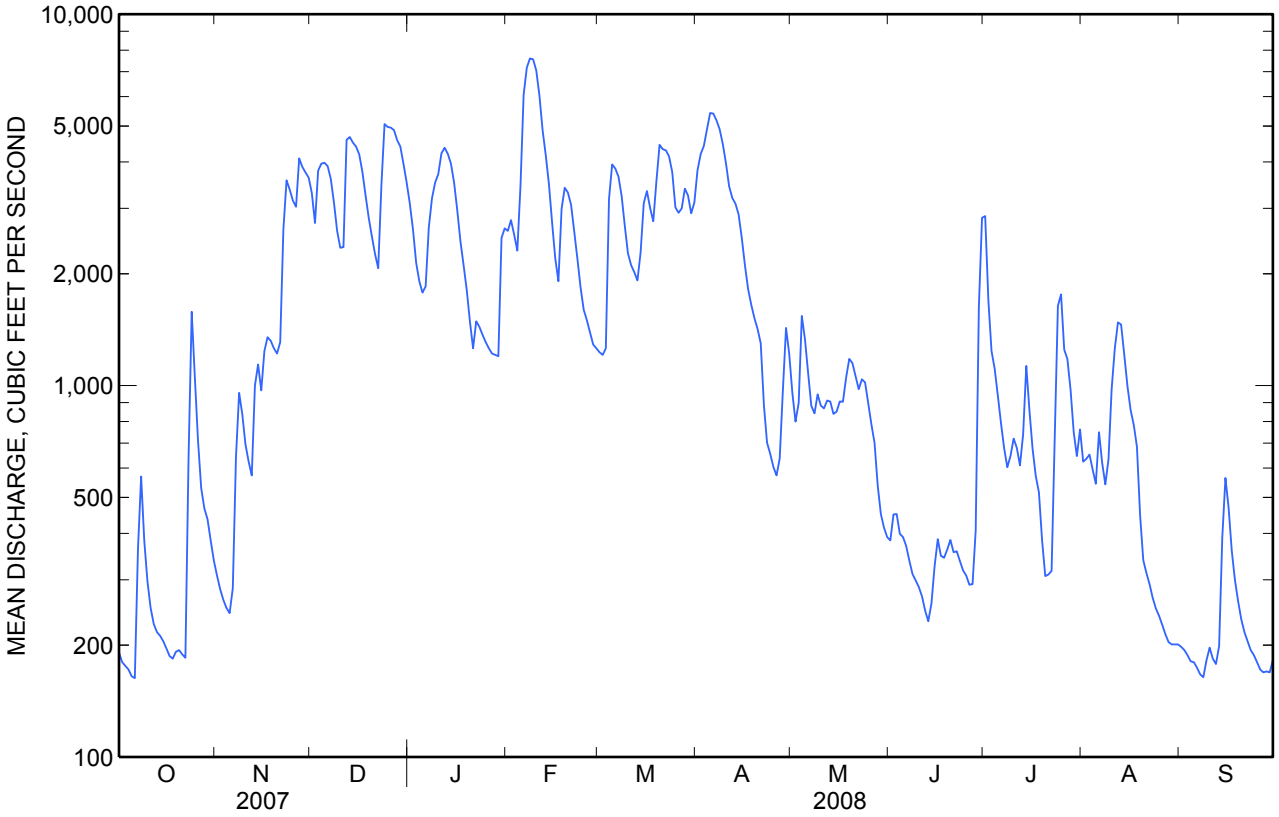
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1940 - 2008	
Annual total	619,840		617,192			
Annual mean	1,698		1,686		1,545	
Highest annual mean					2,151	2004
Lowest annual mean					915	1999
Highest daily mean	8,990	Mar 18	7,600	Feb 8	14,700	Jan 10, 1998
Lowest daily mean	133	Aug 5	163	Oct 6	57	Oct 17, 1960
Annual seven-day minimum	145	Aug 1	176	Sep 24	59	Oct 12, 1960
Maximum peak flow			7,680	Feb 8	[a]14,900	Jan 10, 1998
Maximum peak stage			8.44	Feb 8	[b]10.88	Jan 10, 1998
Annual runoff (cfsm)	2.08		2.07		1.89	
Annual runoff (inches)	28.26		28.14		25.72	
10 percent exceeds	4,810		3,970		3,810	
50 percent exceeds	721		1,060		1,020	
90 percent exceeds	168		201		165	

[a] From rating curve extended above 13,000 ft³/s.

[b] From peak-stage indicator.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Analyses for pH, water temperature, specific conductance, and dissolved oxygen were performed on site. All other sample analyses were performed at the Pennsylvania Department of Environmental Protection laboratory in Harrisburg, Pa.

COOPERATION.--Water-quality samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 1 of 3
[Remark codes: <, less than.]

Date	Time	Instantaneous discharge, ft3/s (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)
Oct													
16...	1230	193	8.0	7.7	8.0	384	392	14.6	140	44.3	7.7	112	13.6
Dec													
10...	1430	2,360	15.3	7.2	7.6	237	246	1.3	82	25.4	4.6	64	14.9
Feb													
12...	1630	5,420	13.3	7.3	7.6	184	189	.0	62	19.0	3.5	44	10.5
Apr													
15...	1515	2,440	11.8	7.7	7.8	220	224	8.9	77	23.7	4.2	61	10.4
Jun													
16...	1445	398	7.9	7.7	8.0	353	363	23.2	140	43.1	7.3	112	12.9
Aug													
25...	1445	241	9.2	8.0	8.1	336	346	22.1	130	40.7	7.3	111	12.4

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 3
[Remark codes: <, less than.]

Date	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total non-filter-able, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L as P (00665)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)
Oct													
16...	244	14	.250	.90	<.040	1.8	.07	.102	<200	<4	460	<1.0	220
Dec													
10...	166	14	.030	.53	<.040	.95	.03	.042	200	<4	530	<1.0	60
Feb													
12...	124	4	<.020	.58	<.040	.87	.01	.037	400	<4	640	<1.0	30
Apr													
15...	146	14	<.020	.36	<.040	.73	.02	.035	300	<4	660	<1.0	60
Jun													
16...	228	14	<.100	.76	<.040	1.3	.04	.098	<200	<4	530	<1.0	140
Aug													
25...	214	10	.020	.63	<.040	1.1	.03	.062	300	<4	700	<1.0	170

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007
TO SEPTEMBER 2008
Part 3 of 3
[Remark codes: <, less than.]

Date	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
Oct		
16...	<50	<10
Dec		
10...	<50	<10
Feb		
12...	<50	<10
Apr		
15...	<50	<10
Jun		
16...	<50	<10
Aug		
25...	<50	<10