



# 2004 Water Year CONEWANGO CREEK BASIN

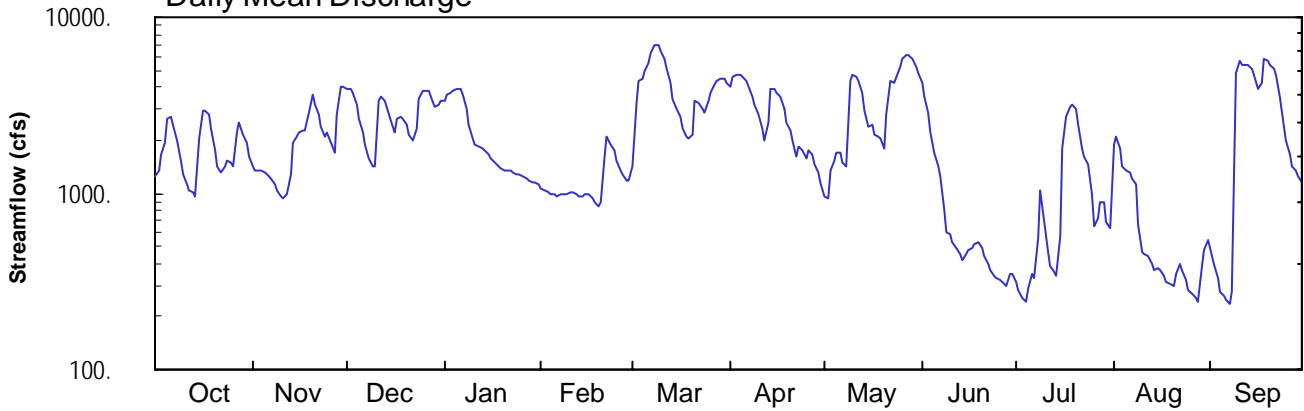
## 03015000 Conewango Creek at Russell, PA

Latitude: 41° 56' 17"  
Warren County

Longitude: 079° 08' 00"  
Datum: 1221.77 feet

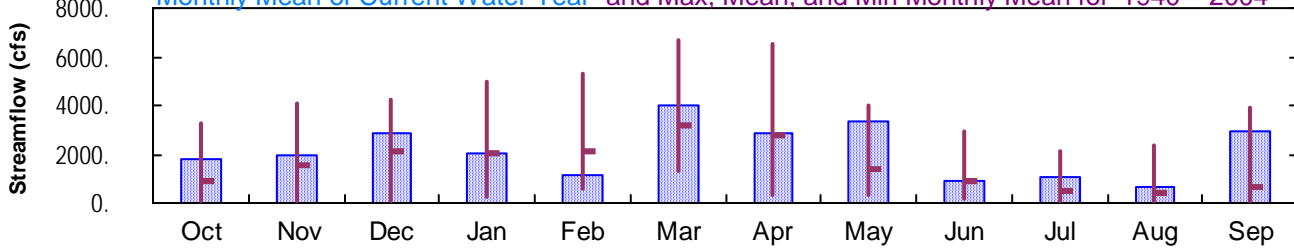
Hydrologic Unit Code: 05010002  
Drainage Area: 816. mi<sup>2</sup>

### Daily Mean Discharge

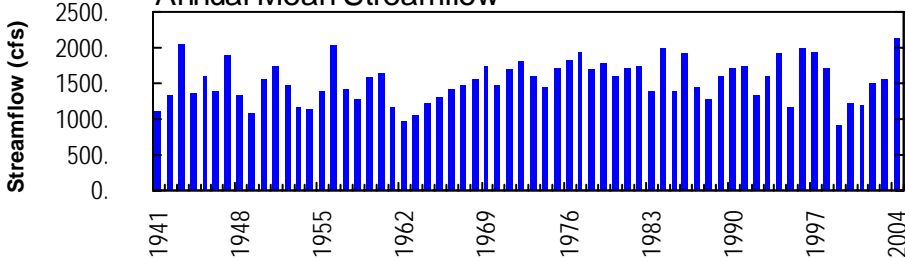


### Monthly Statistics

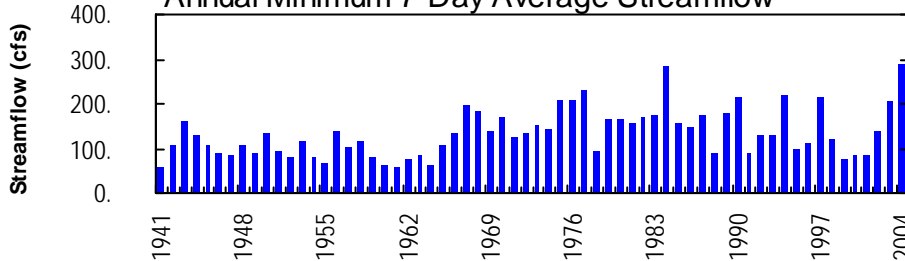
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1940 – 2004



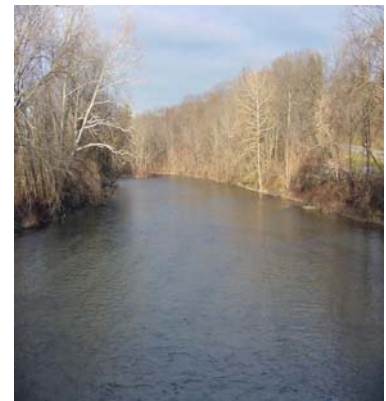
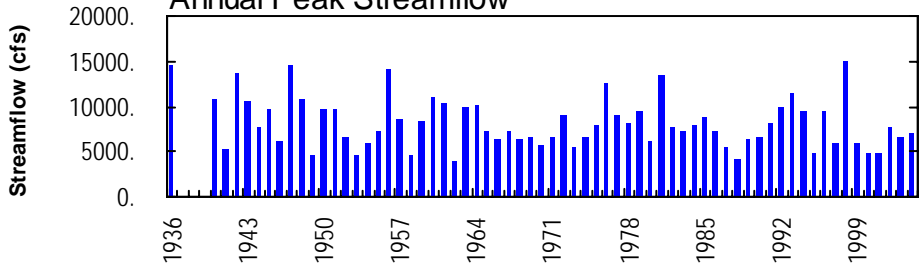
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



**CONEWANGO CREEK BASIN**

**03015000 CONEWANGO CREEK AT RUSSELL, PA  
(Pennsylvania Water-Quality Network Station)**

**LOCATION.**--Lat 41°56'17", long 79°08'00", Warren County, 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<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

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

**REVISED RECORD.**--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.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Flow regulated since November 1949 by Chautauqua Lake (station 03013946). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1400	3970	3330	e1080	1410	4050	964	4260	318	1880	488
2	1350	1350	3910	3580	e1050	3280	4570	928	3520	285	2100	398
3	1670	1350	3690	3690	e1020	4310	4740	1360	2840	258	1780	334
4	1940	1360	3220	3780	e982	4410	4680	1530	2210	242	1440	278
5	2620	1310	2630	3930	e982	4910	4550	1710	1720	293	1350	262
6	2740	1260	2200	3960	e956	5530	4340	1690	1410	352	1320	248
7	2490	1210	1880	3650	e990	6330	3980	1490	1260	328	1220	236
8	2000	1130	1580	3020	e999	7010	3550	1430	815	560	1120	276
9	1520	1030	1410	e2460	e999	6900	3190	4380	597	1040	677	4790
10	1280	969	1420	e2040	e1000	6390	2770	4680	579	694	464	5620
11	1120	937	3370	e1910	e1000	5720	2360	4620	531	466	453	5320
12	1050	992	3560	e1870	e992	5020	2020	4330	487	386	439	5340
13	1010	1280	3360	e1820	e973	4280	2490	3740	447	362	393	5330
14	968	1940	3080	e1730	e961	3470	3890	2930	418	338	366	5120
15	2050	2090	2570	e1650	e979	2990	3890	2410	449	575	375	4680
16	2920	2210	2200	e1570	e983	2690	3760	2460	475	1800	366	3870
17	2940	2290	2670	e1500	e932	2360	3530	2180	494	2720	337	4270
18	2800	2280	2750	e1450	e892	2120	3040	2090	512	3080	314	5750
19	2300	2860	2640	e1400	e851	2030	2500	2060	523	3210	304	5610
20	1750	3610	2430	e1360	e884	2160	2250	1810	486	3050	301	5360
21	1430	3210	2150	e1350	1620	3330	1970	2820	436	2430	351	5140
22	1330	2800	1970	e1340	2080	3230	1620	4360	395	1810	398	4680
23	1410	2380	2320	e1320	1920	3010	1850	4210	365	1630	370	3550
24	1540	2110	3490	e1290	1770	2880	1750	4600	341	1470	321	2400
25	1480	2190	3840	e1270	1530	3390	1590	5280	329	979	286	1970
26	1410	1940	3850	e1250	1360	3710	1770	5860	323	656	266	1640
27	2230	1710	3810	e1210	1270	4120	1670	6140	307	731	254	1440
28	2510	2760	3550	e1170	1200	4320	1470	6060	301	892	244	1330
29	2150	4040	3120	e1160	1200	4430	1300	5720	346	891	387	1260
30	1940	3980	3160	e1150	---	4430	1140	5290	346	685	480	1170
31	1620	---	3340	e1110	---	4240	---	4860	---	640	542	---
TOTAL	56818	59978	89140	63320	33455	124410	86280	103992	27522	33171	20898	88160
MEAN	1833	1999	2875	2043	1154	4013	2876	3355	917	1070	674	2939
MAX	2940	4040	3970	3960	2080	7010	4740	6140	4260	3210	2100	5750
MIN	968	937	1410	1110	851	1410	1140	928	301	242	244	236
CFSM	2.25	2.45	3.52	2.50	1.41	4.92	3.52	4.11	1.12	1.31	0.83	3.60
IN.	2.59	2.73	4.06	2.89	1.53	5.67	3.93	4.74	1.25	1.51	0.95	4.02

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)**

MEAN	857	1591	2118	2015	2098	3146	2808	1416	888	488	423	621
MAX	3276	4070	4261	4986	5320	6715	6503	4016	2926	2142	2391	3891
(WY)	1991	1986	1978	1998	1976	1945	1947	1943	1986	1986	1977	1977
MIN	66.1	119	111	215	533	1344	353	296	177	108	82.4	79.9
(WY)	1964	1961	1961	1961	1963	1960	1946	1985	1949	1963	1954	1941

e Estimated.

**CONEWANGO CREEK BASIN**

**03015000 CONEWANGO CREEK AT RUSSELL, PA--Continued**

<b>SUMMARY STATISTICS</b>	<b>FOR 2003 CALENDAR YEAR</b>		<b>FOR 2004 WATER YEAR</b>		<b>WATER YEARS 1940 - 2004</b>	
ANNUAL TOTAL	650100		787144			
ANNUAL MEAN	1781		2151		1536	
HIGHEST ANNUAL MEAN					2151	
LOWEST ANNUAL MEAN					915	
HIGHEST DAILY MEAN	6600	Mar 24	7010	Mar 8	14700	Jan 10 1998
LOWEST DAILY MEAN	248	Jul 4	236	Sep 7	57	Oct 17 1960
ANNUAL SEVEN-DAY MINIMUM	280	Jun 28	290	Sep 2	59	Oct 12 1960
MAXIMUM PEAK FLOW			7090	Mar 8	<b>a</b> 14900	Jan 10 1998
MAXIMUM PEAK STAGE			8.15	Mar 8	<b>b</b> 10.88	Jan 10 1998
ANNUAL RUNOFF (CFSM)	2.18		2.64		1.88	
ANNUAL RUNOFF (INCHES)	29.64		35.88		25.57	
10 PERCENT EXCEEDS	3670		4420		3800	
50 PERCENT EXCEEDS	1380		1740		1010	
90 PERCENT EXCEEDS	396		374		163	

- a** From rating curve extended above 13,000 ft<sup>3</sup>/s.
- b** From peak-stage indicator.

**CONEWANGO CREEK BASIN**

**03015000 CONEWANGO CREEK AT RUSSELL, PA--Continued  
(Pennsylvania Water-Quality Network Station)**

**WATER-QUALITY RECORDS**

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

**COOPERATION.**--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 2003 TO SEPTEMBER 2004**

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfl lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfl µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003 27...	1200	1028	9813	2340	10.3	7.4	7.3	233	224	8.3	91	27.5	5.5
DEC 22...	1335	1028	9813	1950	12.9	7.4	7.7	241	258	.8	87	27.1	4.6
FEB 2004 12...	1315	1028	9813	E992	12.5	7.2	7.5	290	284	.1	100	32.1	5.4
APR 15...	0830	1028	9813	3910	11.2	7.3	7.3	176	181	5.5	65	20.1	3.7
JUN 07...	1415	1028	9813	1280	7.8	7.4	7.4	254	260	18.9	97	30.1	5.3
AUG 11...	1245	1028	9813	446	7.6	7.6	7.5	282	278	19.8	110	34.3	6.0

Date	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd as N mg/L (00610)	Nitrate water, unfltrd as N mg/L (00620)	Nitrite water, unfltrd as N mg/L (00615)	Ortho-phosphate, water, unfltrd as P mg/L (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003 27...	76	10.5	88	24	.060	.38	<.040	.04	.058	.84	5.3	600	<10
DEC 22...	68	11.8	194	10	.030	.66	<.040	.02	.032	.66	3.5	<200	<10
FEB 2004 12...	80	12.4	168	<2	.090	.85	<.040	.03	.040	1.2	3.2	<200	<10
APR 15...	47	8.6	168	6	.030	.54	<.040	.07	.090	.88	4.6	900	<10
JUN 07...	81	10.2	140	4	.070	.57	<.040	.04	.063	1.2	4.3	200	<10
AUG 11...	91	10.4	212	8	.030	.61	<.040	.04	.069	.94	4.1	500	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003 27...	1000	1.2	80	<50	80
DEC 22...	400	<1.0	50	<50	<10
FEB 2004 12...	380	<1.0	90	<50	<10
APR 15...	1730	1.5	80	<50	<10
JUN 07...	1010	1.1	160	<50	<10
AUG 11...	960	1.5	170	<50	<10

**CONEWANGO CREEK BASIN**

**03015000 CONEWANGO CREEK AT RUSSELL, PA--Continued**

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

**REMARKS.**--Samples were collected a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	10/27/03
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Nematoda (NEMATODES)	
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplunemertea	
Tetrastemmatidae	
<i>Prostoma</i>	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	2
Hydrobiidae	
<i>Ammicola</i>	24
Planorbidae	
<i>Planorbella</i>	3
Bivalvia (CLAMS)	
Veneroidea	
Sphaeriidae	
<i>Pisidium</i>	15
<i>Sphaerium</i>	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbricina	
Tubificida	
Naididae	6
Tubificidae	8
Arthropoda	
Crustacea	
Amphipoda (SCUDS)	
Crangonyctidae	
<i>Crangonyx</i>	2
Gammaridae	
<i>Gammarus</i>	19
Talitridae	
<i>Hyalleana azteca</i>	1
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Caecidotea</i>	2
Insecta	
Ephemeroptera (MAYFLIES)	
Ephemerellidae	
<i>Eurylophella</i>	1
Heptageniidae	
<i>Stenonema</i>	3
Leptophlebiidae	
<i>Paraleptophlebia</i>	1
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	11

**CONEWANGO CREEK BASIN**

**03015000 CONEWANGO CREEK AT RUSSELL, PA--Continued**

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/27/03
Benthic Macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	8
<i>Hydropsyche</i>	1
Limnephilidae	
<i>Hydatophylax</i>	3
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Promoresia</i>	2
Hydrophilidae	
<i>Hydrochus</i>	1
Diptera (TRUE FLIES)	
Ceratopogonidae (BITING MIDGES)	
<i>Probezzia</i>	1
Chironomidae (MIDGES)	
	25
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	1
Total Organisms	147
Total Taxa	27