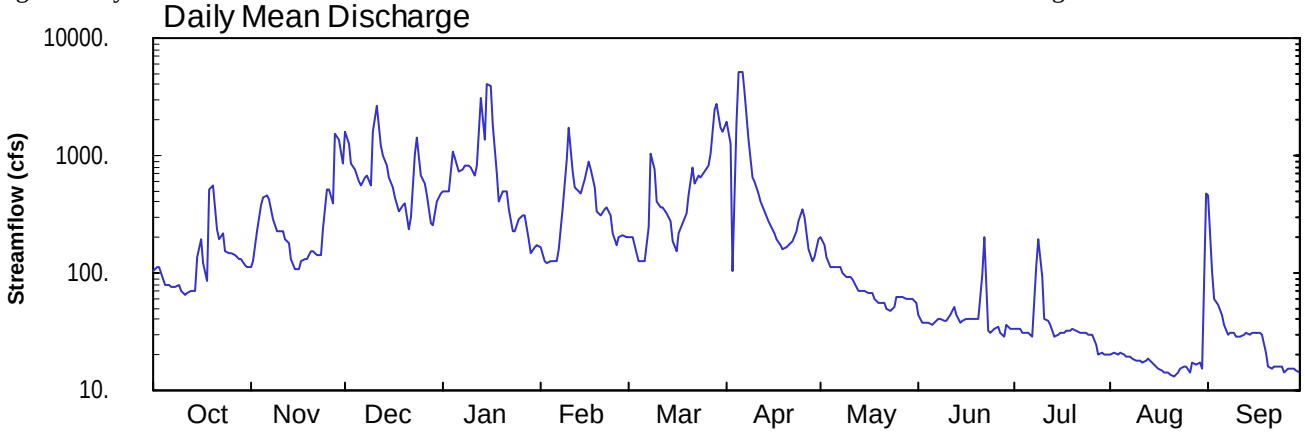
2005 Water Year
CHEMUNG RIVER BASIN
01520000 Cowanesque River near Lawrenceville, PA

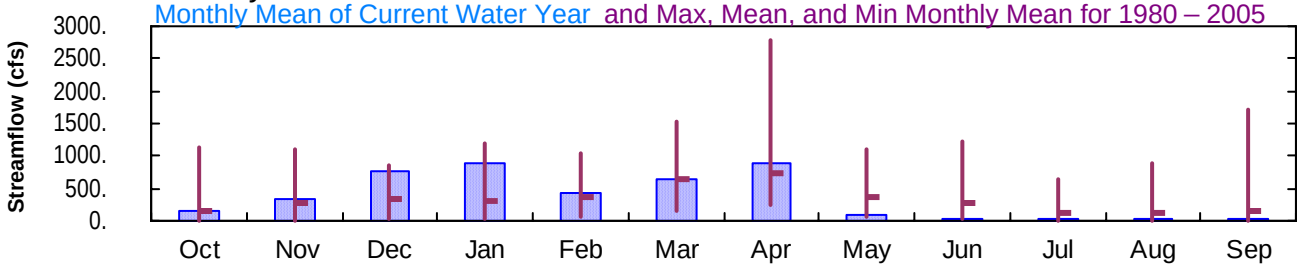
Latitude: 41° 59 ' 48" Longitude: 077° 08 ' 25" Hydrologic Unit Code: 02050104
Tioga County Datum: 983.96 feet Drainage Area: 298. mi²

Daily Mean Discharge

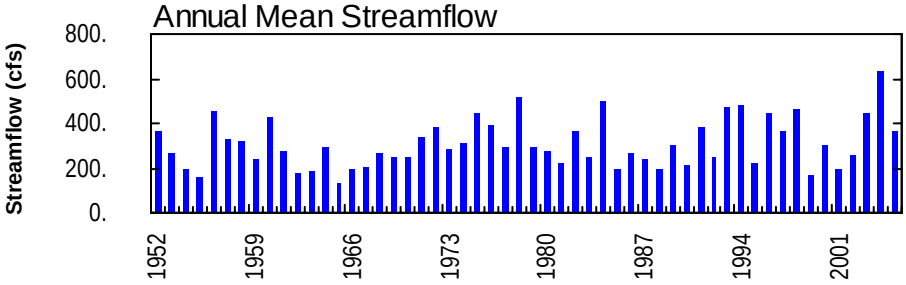


Monthly Statistics

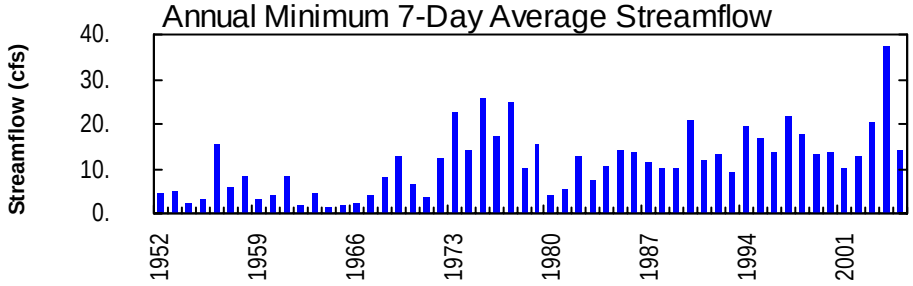
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1980 – 2005



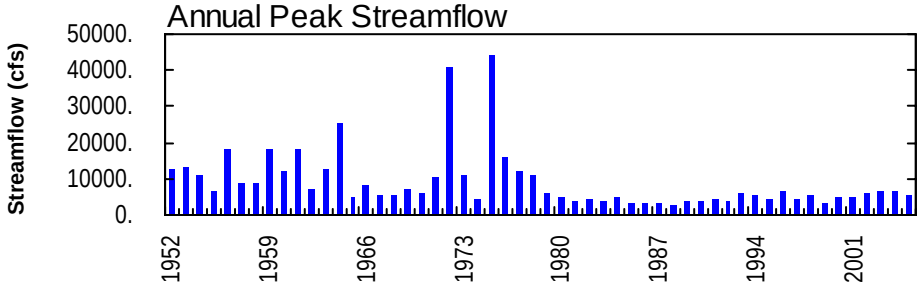
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



CHEMUNG RIVER BASIN

01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 4l°59'48", long 77°08'25", Tioga County, Hydrologic Unit 02050104, on left bank on SR 4022, 0.5 mi downstream from Cowanesque Dam, 0.8 mi upstream from highway bridge on U.S. Route 15 in Lawrenceville, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--298 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1951 to current year. Prior to October 1951 monthly discharge only, published in WSP 1722.

REVISED RECORDS.--WDR PA-72-1: 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 983.96 ft above National Geodetic Vertical Datum of 1929. Prior to July 1976 at site 1.1 mi upstream at datum 14.07 ft higher.

REMARKS.--No estimated daily discharges. Records good except those for May 1 to Sept. 30, which are fair. Flow regulated since December 1979 by Cowanesque Dam (station 01519995). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	110	1590	493	168	205	1920	202	45	33	20	467
2	111	127	1250	498	127	205	1240	171	38	33	21	105
3	114	230	846	500	121	171	102	135	38	33	21	60
4	89	372	761	1090	127	129	1940	114	38	31	21	53
5	79	432	604	979	129	129	5110	114	36	31	20	45
6	78	466	552	736	129	129	5120	114	38	30	19	36
7	77	420	646	762	161	250	3490	112	41	29	20	30
8	77	291	683	822	364	1060	1380	98	41	113	19	31
9	79	226	559	822	928	768	640	91	40	192	18	31
10	71	226	1600	804	1700	415	596	91	40	92	18	29
11	66	224	2630	680	743	366	481	88	44	40	17	29
12	68	192	1240	833	531	366	405	75	51	40	18	30
13	70	176	994	3080	503	323	339	71	44	37	19	31
14	71	130	828	1350	467	272	271	70	38	29	17	30
15	139	107	651	4060	629	186	251	69	40	30	16	31
16	195	107	531	3910	883	153	220	69	41	31	16	31
17	121	124	445	1800	768	219	194	67	40	31	15	31
18	86	133	336	708	527	269	173	60	40	32	14	30
19	517	133	375	415	337	327	158	56	40	32	14	21
20	553	154	389	505	315	466	168	55	40	33	14	16
21	236	151	232	497	342	777	180	55	95	32	13	16
22	191	142	304	343	360	588	187	50	203	31	14	16
23	215	143	1050	231	307	676	223	48	32	31	15	16
24	155	237	1400	225	222	649	281	52	32	30	16	16
25	149	518	689	282	172	746	350	61	33	29	16	14
26	148	515	568	315	206	813	294	61	35	30	14	15
27	142	393	456	315	212	1030	162	62	31	24	17	16
28	133	1540	264	191	205	2480	127	61	29	20	17	15
29	133	1390	260	150	---	2770	138	60	36	21	17	15
30	119	863	404	167	---	1730	197	60	33	20	15	14
31	110	---	477	176	---	1600	---	55	---	20	484	---
TOTAL	4498	10272	23614	27739	11683	20267	26337	2547	1372	1240	995	1320
MEAN	145	342	762	895	417	654	878	82.2	45.7	40.0	32.1	44.0
MAX	553	1540	2630	4060	1700	2770	5120	202	203	192	484	467
MIN	66	107	232	150	121	129	102	48	29	20	13	14

CHEMUNG RIVER BASIN

01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	149	276	345	318	377	640	744	378	278	124	124	152
MAX	1122	1114	864	1198	1027	1527	2773	1115	1222	628	889	1724
(WY)	1991	1997	1991	1996	1981	1994	1993	1996	1989	2003	1994	2004
MIN	13.9	14.3	19.1	23.3	57.6	158	231	48.9	17.4	14.1	11.9	5.09
(WY)	1989	1992	1999	1981	1980	1981	1997	1985	1991	1991	1983	1980

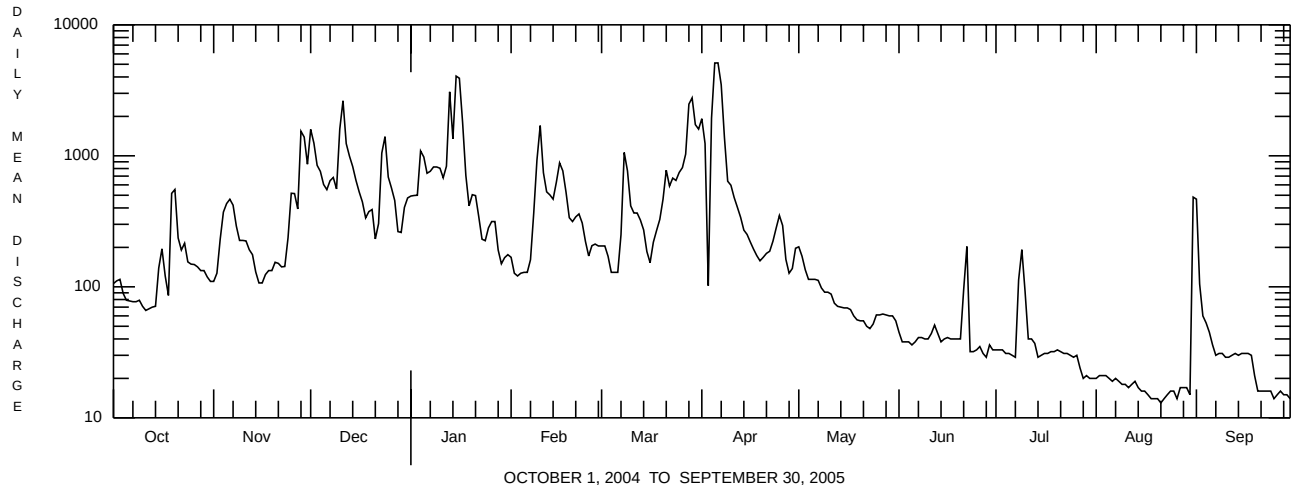
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1980 - 2005	
ANNUAL TOTAL	211050		131884			
ANNUAL MEAN	577		361		325	
HIGHEST ANNUAL MEAN					632	2004
LOWEST ANNUAL MEAN					165	1999
HIGHEST DAILY MEAN	6140	Sep 12	5120	Apr 6	6140	Sep 12 2004
LOWEST DAILY MEAN	34	Jun 26	13	Aug 21	3.4	Sep 13 1980
ANNUAL SEVEN-DAY MINIMUM	38	Jul 4	14	Aug 17	3.9	Sep 10 1980
MAXIMUM PEAK FLOW			5470	Apr 5	6580	Jan 23 1996
MAXIMUM PEAK STAGE			11.94	Apr 5	12.41	Jan 23 1996
10 PERCENT EXCEEDS	1280		830		794	
50 PERCENT EXCEEDS	290		133		110	
90 PERCENT EXCEEDS	75		20		18	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1979, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	121	203	297	288	345	808	707	359	220	61.0	39.1	87.9
MAX	809	826	860	886	1173	1909	1934	797	1366	223	125	1054
(WY)	1956	1978	1973	1952	1976	1964	1958	1960	1972	1977	1977	1975
MIN	3.33	7.95	12.2	13.9	45.6	230	167	55.5	13.8	7.00	3.11	2.52
(WY)	1965	1965	1961	1961	1963	1965	1955	1955	1955	1966	1954	1964

SUMMARY STATISTICS	WATER YEARS 1952 - 1979	
ANNUAL MEAN	294	
HIGHEST ANNUAL MEAN	514	1978
LOWEST ANNUAL MEAN	135	1965
HIGHEST DAILY MEAN	21500	Jun 23 1972
LOWEST DAILY MEAN	.00	Aug 22 1978
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 22 1964
MAXIMUM PEAK FLOW	**a**43700	Sep 26 1975
MAXIMUM PEAK STAGE	**b**18.13	Sep 26 1975
INSTANTANEOUS LOW FLOW	**c**0.8	Aug 31, Sep 1, 27, 1964
ANNUAL RUNOFF (CFSM)	.99	
ANNUAL RUNOFF (INCHES)	13.41	
10 PERCENT EXCEEDS	694	
50 PERCENT EXCEEDS	95	
90 PERCENT EXCEEDS	10	

a From rating curve extended above 6,000 ft^3/s, on basis of slope-area measurement of peak flow.
b From floodmark; site and datum then in use.
c No flow Aug. 22, 1978, during dam construction.



01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

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

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

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 2004 TO SEPTEMBER 2005

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduct-ance, 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)
OCT 2004													
27...	1115	1028	9813	141	30	11.6	7.8	7.9	164	162	12.5	60	17.8
NOV													
30...	1400	1028	9813	1030	30	13.5	7.6	7.9	181	177	7.0	75	21.9
DEC													
28...	1230	1028	9813	260	30	14.3	7.4	7.6	136	140	1.9	56	15.1
JAN 2005													
26...	1130	1028	9813	315	30	14.4	7.5	7.6	151	120	2.3	48	13.3
FEB													
08...	1200	1028	9813	402	30	14.0	7.6	7.8	134	127	2.5	52	15.1
MAR													
09...	1000	1028	9813	632	30	15.9	7.5	7.7	149	143	1.6	55	16.3
APR													
07...	1520	1028	9813	2810	30	15.7	7.4	7.0	107	107	4.1	42	11.4
MAY													
17...	0930	1028	9813	66	30	13.3	9.1	8.6	141	137	16.2	55	16.3
JUN													
23...	1000	1028	9813	33	30	10.0	8.1	8.1	175	176	20.3	66	19.7
JUL													
06...	1700	1028	9813	29	30	11.1	8.9	9.0	172	175	25.2	70	21.4
AUG													
11...	0830	1028	9813	17	30	7.8	7.5	7.2	194	201	23.3	82	24.6
SEP													
13...	0930	1028	9813	31	30	8.3	7.6	7.9	189	194	19.6	78	23.2

Date	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)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Ortho-phosphate, water, unfltrd mg/L as P (70507)
OCT 2004											
27...	3.9	57	10.3	112	12	.020	.030	.550	.550	.016	.08
NOV											
30...	4.9	59	12.0	118	32	.040	.020	.450	.460	.010	.14
DEC											
28...	4.5	40	10.3	132	98	.050	.060	.550	.570	.018	.05
JAN 2005											
26...	3.5	32	10.1	108	64	.060	.170	.570	.600	.024	.04
FEB											
08...	3.6	39	11.7	114	14	.080	.080	.640	.690	.017	.03
MAR											
09...	3.5	42	12.4	104	10	.060	.040	.810	.800	.012	.02
APR											
07...	3.2	30	9.8	72	64	.070	.060	.590	.570	<.010	.02
MAY											
17...	3.4	43	12.4	102	4	.040	.030	.400	.400	.016	.02
JUN											
23...	4.2	57	12.9	122	20	.060	.050	.230	.230	.028	.03
JUL											
06...	4.0	58	13.2	1390	<2	.040	.040	.220	.230	.030	.04
AUG											
11...	5.0	67	13.5	148	<2	.030	.030	.210	.210	.021	.03
SEP											
13...	4.9	66	13.8	132	<2	.030	.030	.120	.100	.016	.02

CHEMUNG RIVER BASIN

01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, fltrd, mg/L (00602)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	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)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2004												
27...	.014	.053	.97	.92	4.1	1200	<10	1080	1.6	40	<50	<10
NOV												
30...	<.010	.061	.74	.71	3.6	1400	<10	2550	1.7	90	<50	<10
DEC												
28...	.016	.127	.98	1.0	3.7	15600	<10	7410	4.0	150	<50	20
JAN 2005												
26...	.021	.123	.74	.79	3.0	5200	<10	5570	3.7	110	<50	20
FEB												
08...	.016	.055	.96	.90	3.0	3000	<10	2190	1.1	100	<50	<10
MAR												
09...	.013	.044	.93	.91	2.4	1100	<10	980	<1.0	60	<50	<10
APR												
07...	.017	.077	2.9	.78	3.2	2300	<10	4090	2.8	100	<50	10
MAY												
17...	.022	.036	.73	.68	3.2	310	<10	320	<1.0	60	<50	<10
JUN												
23...	.030	.036	.61	.61	3.3	<200	<10	150	<1.0	70	<50	<10
JUL												
06...	.036	.055	.58	.43	3.5	<200	<10	70	<1.0	40	<50	<10
AUG												
11...	.029	.037	.87	.37	3.5	<200	<10	100	<1.0	90	<50	<10
SEP												
13...	.014	.038	.45	.42	3.6	<200	<10	120	<1.0	60	<50	<10