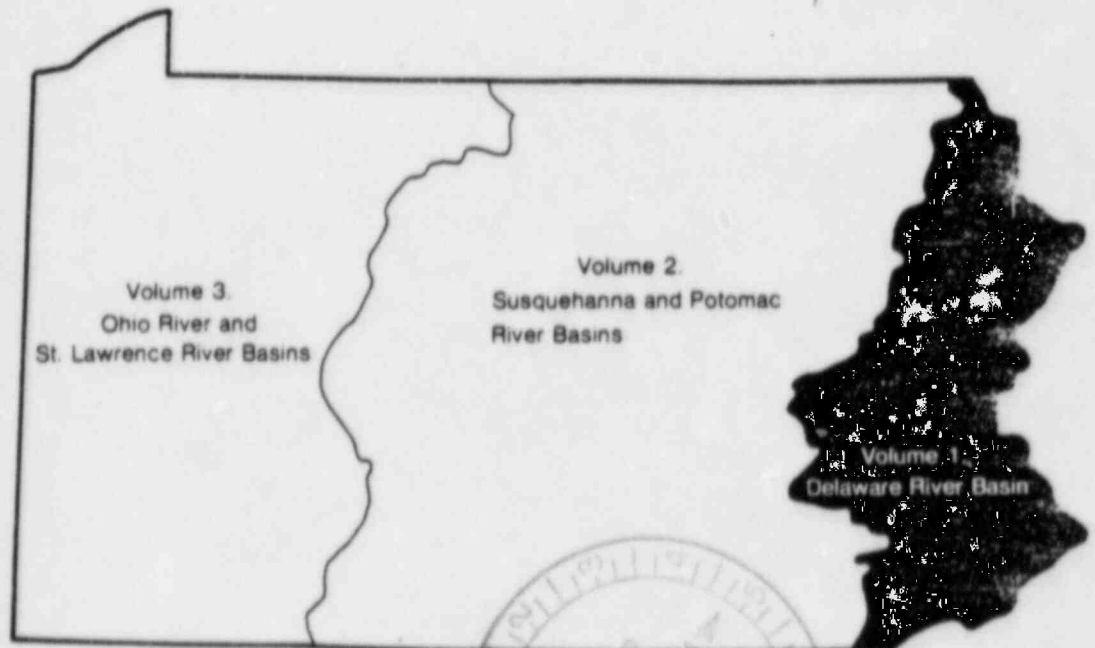


Water Resources Data Pennsylvania Water Year 1982

Volume 1. Delaware River Basin

NUCLEAR REGULATORY COMMISSION

Docket No. 50-352/353 Official Ex. No. 165
In the matter of PECO-Limerick et al
Staff _____ IDENTIFIED
Applicant RECEIVED
Intervenor _____ REJECTED
Constructor _____ DATE 6/19/84
Other _____ WITHOUT
Reporter Mary Simon



U.S. GEOLOGICAL SURVEY WATER DATA REPORT PA-82-1
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the Philadelphia Water Department
and with other State, municipal, and Federal agencies

8411270455 840619
PDR ADOCK 05000352
PDR

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ

(National stream quality accounting network, Pesticide program, and Radiochemical program station)

LOCATION.--Lat 40°13'18", long 74°46'42", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft (137 m) upstream from Calhoun Street Bridge at Trenton, 0.5 mi (0.8 km) upstream from Assunpink Creek, and at mile 134.5 (216 km).
DRAINAGE AREA.--6,790 mi² (17,550 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1913 to current year. October 1912 to February 1913 monthly discharge only, published in WSP 1302. Gage-height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 151: Drainage area. WSP 1302: 1913-20. WSP 1392: 1924, 1928.
GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1945, at datum 7.77 ft (2.368 m) higher. Feb. 24, 1913, to Oct. 2, 1929, nonrecording gage on downstream side of highway bridge at site 500 ft (152 m) downstream.

REMARKS.--Water-discharge records good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinzing Bridge, Toronto, Cliff Lake, Neversink, and Wild Creek Reservoirs (see Delaware River Basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs and to Delaware and Raritan Canal (see Delaware River Basin, diversions). Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply (see Delaware River Basin, diversions).

AVERAGE DISCHARGE.--70 years, 11,671 ft³/s (330.5 m³/s), unadjusted.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 329,000 ft³/s (9,320 m³/s) Aug. 20, 1955, elevation, 29.60 ft (9.017 m) from high-water mark in gage house, from rating curve extended above 230,000 ft³/s (6,510 m³/s); minimum, 1,180 ft³/s (33.4 m³/s) Oct. 31, 1963, elevation, 7.25 ft (2.213 m). Flow in Delaware and Raritan Canal not included.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 29.5 ft (9.0 m) National Geodetic Vertical Datum of 1929, discharge estimated, 295,000 ft³/s (8,350 m³/s). Maximum elevation since 1903, 30.6 ft (9.33 m) National Geodetic Vertical Datum of 1929, Mar. 4, 1904, from floodmark (ice jam).
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50,000 ft³/s (1,420 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)
Jan. 13	1845	51200 1510	14.26 4.346	Apr. 5	1015	*54900 1550	14.39 4.196
Feb. 3	Unknown	54000 1530	*17.44 5.316				

Minimum discharge, 2,760 ft³/s (78.2 m³/s) Oct. 22, gage height, 7.94 ft (2.420 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	9050	5510	5970	7050	5740	19400	18100	12000	14900	4410	4470
2	1400	7290	7240	9890	9100	6470	26420	16100	13500	15500	3990	4440
3	1790	7320	9130	8700	25000	6810	29900	14600	17900	13100	4120	4640
4	1880	7070	8670	20900	34300	5770	43000	13900	17900	13400	3970	5550
5	1950	6530	9140	30800	29100	6430	51300	13000	16800	11200	3860	4940
6	3550	6400	8110	29500	30400	6580	40000	12100	15300	9750	3920	4800
7	1630	7590	7170	25300	23500	7900	33400	11300	15000	8690	3720	4600
8	3540	9290	6760	20100	18200	12000	25500	10800	15000	8060	3770	4490
9	1320	7250	5670	15800	16200	10200	24700	10200	15000	8060	3770	4490
10	3200	6890	5690	13000	14800	4880	21800	8970	14100	7100	13300	4910
11	1670	5930	6450	7550	13100	8100	21800	8310	12100	6580	9750	4500
12	3580	5420	5680	7250	11100	8600	21700	8230	11300	5990	7880	4520
13	1460	5310	5460	9150	10000	12000	20400	7730	11800	7140	5640	4490
14	3290	5390	5330	8100	9210	15100	19500	7210	18600	6790	5480	4460
15	1310	6970	6040	8500	8740	17100	19100	6900	18700	6690	5200	4150
16	3320	6010	7940	7600	8860	19500	14000	6530	16800	5290	4460	4220
17	1070	4440	6540	7600	10500	14900	16600	6090	21000	5740	4630	4720
18	3050	5500	5880	6400	11100	14900	19100	5720	17300	5590	4420	3910
19	1240	5420	5700	6700	10100	18200	32000	5350	15300	5260	4100	3970
20	3290	5440	4900	7200	10300	21000	31400	5360	19800	4970	4300	4350
21	1770	5870	4670	5700	10200	22400	27500	5890	12400	6750	4240	4040
22	2870	4220	4130	6050	9890	24200	23600	6050	11000	6450	4150	4010
23	1140	4570	4520	5400	9430	25300	19800	6040	10100	5470	3990	4230
24	3560	6130	6610	5150	9960	24900	17200	6030	10400	5310	4010	4110
25	4230	5470	7180	6100	9650	24200	15400	6530	9600	4820	4260	4240
26	4200	5600	4210	5550	8330	25600	15300	7270	8630	4610	7570	3990
27	4120	6410	4030	5200	7550	33800	22000	7320	8110	4260	7370	4100
28	7300	5080	7470	5350	7340	33000	28000	6420	7730	4690	5920	4460
29	10800	5110	7200	5250	---	25000	24500	11000	8300	5900	4040	4050
30	16700	5530	7030	5350	---	20600	20700	15200	16300	5300	4770	4390
31	11400	---	5880	5250	---	19300	---	14100	---	4470	4610	---
TOTAL	139490	139030	207540	310960	381260	514580	750700	288240	412770	230130	167090	132910
MEAN	4500	4400	6599	10320	12320	16600	23929	9294	13750	7424	5199	4430
MAX	16700	9050	9330	30800	34300	33400	51000	19100	21000	16900	13300	5550
MIN	2470	6040	4130	5200	7050	6430	15100	5350	7730	4260	3720	1470
CAL YR 1981	TOTAL	289660	MEAN	7216	MAX	60500	MIN	1900				
YR 1982	TOTAL	173370	MEAN	10230	MAX	61000	MIN	2470				

SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National stream-quality accounting network station)

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft (46 m) upstream from Fairmount Dam, 1,500 ft (457 m) upstream from Spring Garden Street Bridge, in Philadelphia, and 8.7 mi (14.0 km) upstream from mouth. Water-quality sampling site 1.6 mi (2.6 km) upstream.

DRAINAGE AREA.--1,893 mi² (4,903 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 241, 261, 301, 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5.74 ft (1.750 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft (12 m) upstream from Fairmount Dam at same datum.

REMARKS.--Records good except for periods of missing record, which are fair. Some regulation by reservoirs above station. Records of daily discharge do not include diversion above station by city of Philadelphia for municipal water supply.

AVERAGE DISCHARGE.--51 years, 2,933 ft³/s (83.06 m³/s), 20.99 in/yr (533 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) June 23, 1972, gage height, 14.65 ft (4.465 m); no flow over dam at times; minimum daily, 0.6 ft³/s (0.02 m³/s) Sept. 2, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869, reached a stage of 17.0 ft (5.18 m), discharge, 135,000 ft³/s (3,820 m³/s), from rating extended above 46,000 ft³/s (1,300 m³/s). Flood of Mar. 1, 1902, reached a stage of 14.8 ft (4.511 m), discharge, 98,000 ft³/s (2,780 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18,000 ft³/s (510 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 5	0200	23800	674	9.25	2.819	June 17	1345	*34900	988	*10.23	3.118
Feb. 4	0330	24900	705	9.35	2.850						

Minimum discharge, 163 ft³/s (4.62 m³/s) Oct. 17, gage height, 5.61 ft (1.710 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	1030	850	1890	3480	1840	2830	3400	5160	4510	1200	927
2	492	927	3040	3370	5050	1800	2810	3200	12500	3370	1100	960
3	570	800	3180	2860	12900	1880	2500	3130	8540	2990	1000	1650
4	470	739	2210	9010	18800	1920	11400	2950	6400	4260	960	1200
5	395	709	1650	15300	9830	1880	9210	2680	5620	3950	940	1060
6	323	960	1420	8870	5990	1840	7170	2460	5650	2990	900	895
7	300	1200	1240	6460	4830	2330	6000	2290	7410	2720	850	800
8	328	1270	1170	4890	4150	0430	4300	2160	6670	2680	820	789
9	351	993	1240	3510	3850	4510	3700	2040	5540	2460	2500	739
10	291	831	1170	2630	3900	3370	3500	1960	4460	2100	4500	709
11	299	600	1030	1610	3040	2860	3700	1760	3750	1800	3500	709
12	301	780	831	1500	2120	2860	4000	1650	3410	1950	2700	679
13	270	769	769	1400	1960	3610	4100	1610	4460	2500	2330	650
14	247	588	800	1350	1840	4310	4000	1570	12100	1900	1800	588
15	237	588	1920	1300	1760	4100	3900	1420	7410	1750	1460	558
16	243	927	3800	1250	2210	3800	3400	1350	5820	1600	1310	558
17	189	1030	2500	1200	2810	3850	3300	1270	24200	1400	1170	558
18	293	1060	1800	1150	2990	4100	3900	1200	11100	1600	1060	619
19	544	863	1380	1100	2680	3850	3500	1170	6870	1400	1170	650
20	417	831	1060	1080	3320	3750	3300	1240	5430	1500	1100	709
21	381	993	927	1030	2990	3610	3130	1500	4510	1700	660	709
22	356	1060	1030	1000	3370	3410	2950	1460	3800	1450	1030	739
23	369	927	1100	990	3220	3130	2720	1760	3560	1300	927	831
24	604	769	3080	985	3130	2770	2550	2040	3410	1200	1650	895
25	803	709	2370	980	3080	2590	2500	2080	2900	1100	1650	863
26	872	709	1960	970	2630	2550	2800	1800	2550	1000	1760	709
27	822	709	1650	960	2210	2550	4300	1500	2370	980	1800	1460
28	2150	588	1610	960	1960	2460	5600	1540	2460	1600	1240	1730
29	2090	619	1650	950	---	2120	4400	3320	4100	2200	1060	1540
30	1690	588	1610	927	---	1960	3700	4940	6520	1500	927	1130
31	1270	---	1420	993	---	2000	---	5210	---	1200	663	---
TOTAL	18240	25366	51267	82255	119880	93040	124970	67660	189080	64660	46237	26593
MEAN	588	846	1654	2653	4281	3001	4166	2183	6303	2086	1492	886
MAX	2150	1270	3800	15300	18800	5430	11400	5210	24200	4510	4500	1730
MIN	189	588	650	927	1760	1800	1500	1170	2370	980	820	558
MEAN†	852	265	281	277	270	263	247	249	257	276	259	245
CFSMI	.45	.59	1.02	1.55	2.40	1.72	4413	2432	6560	2362	1751	1131
IN:‡	.52	.66	1.18	1.79	2.80	1.98	2.60	1.48	3.87	1.44	1.06	.67

CAL YR 1981 TOTAL 554802 MEAN 1520 MAX 13200 MIN 189 MEAN† 1812 CFSMI .96 IN† 12.88
WTR YR 1982 TOTAL 909248 MEAN 2491 MAX 24200 MIN 189 MEAN† 2774 CFSMI 1.47 IN† 19.75

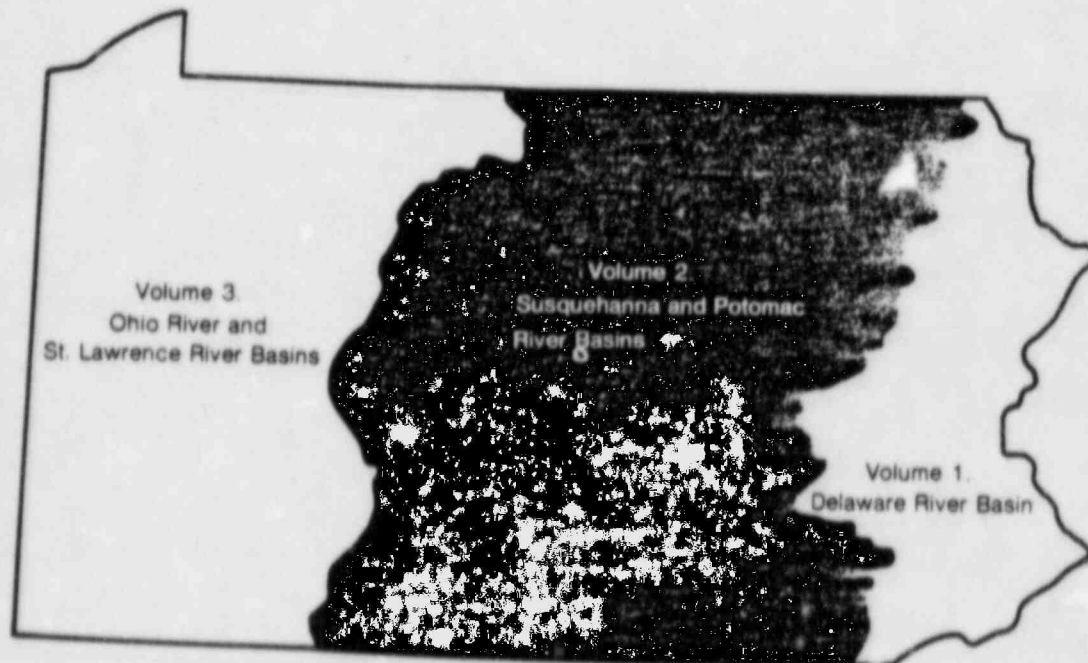
* Diversion, equivalent in cubic feet per second, for municipal water supply, furnished by City of Philadelphia.
† Adjusted for diversion.



Water Resources Data Pennsylvania Water Year 1982

Volume 2. Susquehanna and Potomac
River Basins

by John W. Buchanan



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-82-2
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the U.S. Army Corps of Engineers,
Baltimore District, the Susquehanna River Basin Commission,
and with other State, municipal, and Federal agencies

SUSQUEHANNA RIVER BASIN

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA
(National stream-quality accounting network station)

LOCATION.--Lat 40°15'17", long 76°53'11", Dauphin County, Hydrologic Unit 02050305, on east bank of City Island, 60 ft (18 m) downstream from Market Street Bridge, 3,670 ft (1,120 m) upstream from sanitary dam, in Harrisburg, and 1.7 mi (2.7 km) upstream from Paxton Creek. Water-quality sampling site 600 ft (183 m) upstream.

DRAINAGE AREA.--24,100 mi² (62,400 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1890 to current year.

REVISED RECORDS.--WSP 711: 1929. WSP 1502: 1891-1923, 1926(M), 1928. WSP 1702: 1953 (total runoff in inches), 1958 (1957 calendar year mean discharge).

GAGE.--Water-stage recorder and concrete-slab control. Datum of gage is 290.01 ft (88.395 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1928, nonrecording gage at Walnut Street Bridge, and Oct. 1, 1928 to Aug. 31, 1975, recording gage at site 3,170 ft (966 m) downstream, all gages at same datum.

REMARKS.--Water-discharge records good except those for winter periods which are fair. Flow slightly regulated by 15 flood-control reservoirs, which have a combined capacity of 1,571,000 acre-ft (1.94 km³).

AVERAGE DISCHARGE.--92 years 34,390 ft³/s (974 m³/s), 19.38 in/yr (492 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020,000 ft³/s (28,900 m³/s) June 24, 1972, gage height, 32.57 ft (9.927 m), from floodmark; minimum, 1,600 ft³/s (45.3 m³/s) Nov. 29, 1930, result of freezeup. Minimum daily discharge since construction of sanitary dam and not affected by freezeup, 1,700 ft³/s (48.1 m³/s) Sept. 18, 1964; minimum gage height, 1.83 ft (0.558 m) Sept. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known during period 1786 to 1890, 26.8 ft (8.17 m) at Walnut Street Bridge June 2, 1889, discharge, 654,000 ft³/s (18,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180,000 ft³/s (5,100 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 5	--	ice jam	*17.64 5.377	June 7	2200	*197000 5580	12.50 3.82

Minimum discharge, 4,040 ft³/s (114 m³/s) Sept. 18, 19, 20, gage height, 3.04 ft (0.927 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SE
1	9200	78500	18800	23500	15000	26800	87000	28000	42100	26800	10300	5400
2	8390	56700	18900	24100	18000	27200	79300	28100	41800	50400	13300	5400
3	7870	44300	19700	24900	45000	26800	105000	24000	48200	41600	11100	5300
4	8600	38400	20400	26800	120000	24900	122000	21800	58600	35500	9700	5500
5	11900	32500	20700	41300	105000	23400	131000	20400	66800	29700	8790	5600
6	11700	29000	21800	59900	90000	22900	118000	19400	121000	26100	8180	5500
7	12400	27200	21900	67800	78000	24000	99700	18100	187000	24000	7560	5400
8	13300	26100	21200	62700	64000	22900	82400	17400	174000	20400	7440	5300
9	14000	26600	20200	52800	54000	22000	70200	17100	123000	18100	8160	5100
10	14300	27000	20000	43000	45000	20400	61800	16800	92100	15900	9440	4900
11	16900	25700	20000	30000	40000	19300	58000	18600	74100	15000	11200	4800
12	19800	23900	19000	25000	37000	24300	57800	20200	62600	13800	11800	4600
13	19400	22200	19000	20000	33000	46100	58000	20400	55300	14700	9840	4500
14	16600	20700	18000	17000	31000	78900	58200	18900	67200	13900	8530	4300
15	14500	19300	17800	15000	30000	143000	58200	17800	64800	13800	7680	4200
16	13200	18400	17600	14500	30000	151000	57600	17100	55700	12600	7090	4200
17	12100	18500	17500	14000	31000	134000	56100	15300	52400	10500	6870	4100
18	11100	25300	17300	14000	34000	123000	59600	14300	53300	8790	6540	4100
19	10500	38100	16000	14500	38000	113000	89800	13800	50600	11100	6320	4000
20	10000	33700	13000	16000	42000	112000	70200	13200	54700	10800	6100	4100
21	9890	30000	12000	17000	42000	110000	65800	13300	43800	10800	6000	4200
22	9280	29800	11500	17000	41400	111000	57800	14200	37100	12900	5700	4200
23	9450	32700	11000	16000	40500	123000	50100	14300	32100	13100	5500	4400
24	9040	31600	12000	16000	42000	122000	44800	15600	28300	12100	5500	4800
25	9670	28700	21100	15000	42500	108000	40500	20600	25300	11100	6000	4900
26	10200	26200	38800	14500	38200	106000	37300	30300	23200	12400	6430	4900
27	11200	24000	42000	14000	32100	133000	34100	32900	21800	10800	7090	5400
28	24900	22000	36000	14000	28900	147000	34700	31900	20100	8530	7200	6800
29	71100	20300	30200	14000	---	122000	32500	30500	19300	8790	6100	7500
30	131000	19100	28000	13500	---	92100	29900	35700	21100	9440	5600	7000
31	113000	---	24800	14000	---	74300	---	41000	---	8530	5500	---
TOTAL	664490	896500	645700	771600	1287600	2434100	1987200	659000	1817400	531980	242540	151200
MEAN	21440	29880	20830	24890	45990	78520	65570	21260	60580	17160	7824	5000
MAX	131000	78500	42000	67800	120000	151000	131000	41000	187000	50400	13300	7500
MIN	7870	18400	11000	13500	15000	19300	29900	13200	19300	8530	5500	4000
CFSM	.89	1.24	.86	1.03	1.91	3.26	2.72	.88	2.51	.71	.33	..
IN.	1.03	1.38	1.00	1.19	1.99	3.76	3.04	1.02	2.81	.82	.37	..
CAL YR 1981	TOTAL	9894070	MEAN	27110	MAX	274000	MIN	4140	CFSM	1.13	IN	15.27
WTR YR 1982	TOTAL	12069390	MEAN	73070	MAX	187000	MIN	4040	CFSM	1.37	IN	18.63