

## **Appendix C**

# **Allegheny and Ohio River Mean Flow Estimates**

## **FLOW DATA FOR THE ALLEGHENY AND OHIO RIVERS**

Flow records are presented for 5 stations along the Allegheny and Ohio Rivers (Table C-1). Tables C-2 through C-6 and Figures C-2 through C-6 present long term (period-of-record) averages of monthly mean, maximum, and minimum daily discharge values, which are calculated as follows. Measurements of daily mean discharge are averaged for each calendar month in each water year (October 1 - September 30). Then, the monthly means for each calendar month are averaged over all years in the station's period-of record. Similarly, daily maximum (and, minimum) discharge measurements are averaged for all the days in a month. Then, the values for the same calendar month from all years in the station's period-of-record are averaged to obtain the long-term monthly mean of maximum (and, minimum) daily discharge. High and low values in each column in each table are highlighted.

**Table C-1**  
**USGS Discharge Gaging Stations Measuring Flow above and Within the Study Reach**

Station #	Station name	Drainage area (mi <sup>2</sup> )	Elevation (ft NGVD)	River mile*	Period of record (WY)	Record years
03025500	Allegheny R at Franklin PA	5982	955.84	A-124.4	1915-1997	83
03031500	Allegheny R at Parker PA	7671	845.14	A-83.4	1933-1997	65
03036500	Allegheny R at Kittanning PA	8973	771.32	A-45.8	1904-1997	94
03049500	Allegheny R at Natrona PA	11410	737.11	A-24.3	1939-1997	59
03086000	Ohio R at Sewickley PA	19500	680.00	O-13.3	1934-1997	64

Source: Coll and Siwicki, 1998.

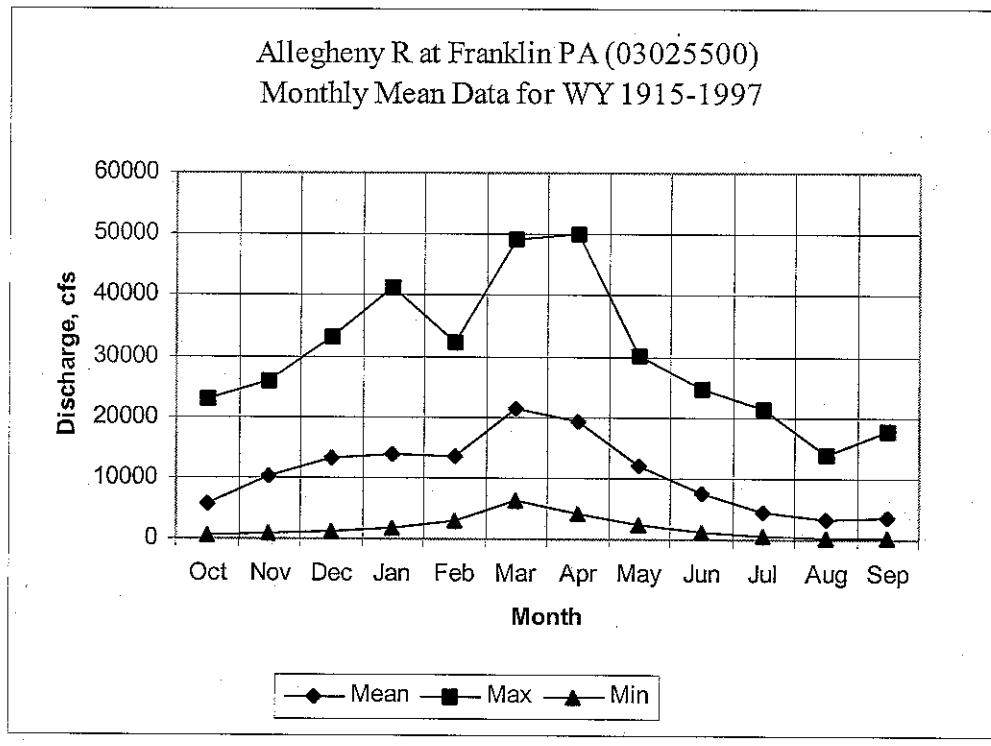
\* A- indicates Allegheny River; O- indicates Ohio River.

**Table C-2**  
**Station 03025500, Allegheny R at Franklin, mile 124.4**  
**Monthly mean data for Water Years 1915-1997**  
**(83 WY)**

Month	Mean flow, cfs	Maximum		Minimum	
		flow, cfs	WY	flow, cfs	WY
Oct	5625	22900	1991	515	1931
Nov	10150	26030	1986	771	1931
Dec	13390	33270	1928	1125	1961
Jan	13840	41420	1937	1732	1961
Feb	13650	32340	1976	2929	1963
Mar	21310	49250	1936	6383	1969
Apr	19340	49920	1940	4203	1946
May	12150	30070	1943	2554	1985
Jun	7472	24820	1989	1106	1934
Jul	4484	21440	1972	555	1934
Aug	3201	3880	1977	414	1930
Sep	3574	17730	1977	435	1930

Source: Coll and Siwicki, 1998.

**Figure C-2**  
**Station 03025500, Allegheny R at Franklin, mile 124.4**



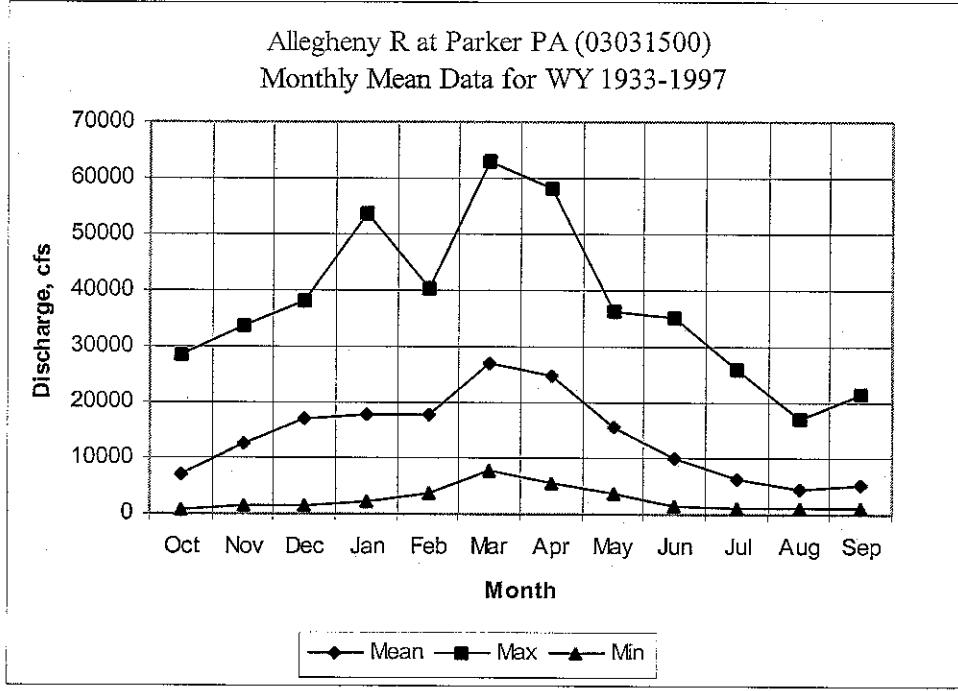
Source: Coll and Siwicki, 1998.

**Table C-3**  
**Station 03031500, Allegheny R at Parker, mile 83.4**  
**Monthly mean data for Water Years 1933-1997**  
**(65 WY)**

Month	Mean	Maximum		Minimum	
		flow, cfs	WY	flow, cfs	WY
Oct	7113	28650	1991	802	1964
Nov	12620	33760	1986	1655	1961
Dec	17220	38040	1978	1332	1961
Jan	17630	53560	1937	2111	1961
Feb	17890	40460	1976	3788	1934
Mar	27130	65020	1936	1746	1969
Apr	24870	58110	1940	5651	1646
May	15580	36220	1943	3610	1934
Jun	10040	35340	1989	1508	1934
Jul	6183	26090	1972	1069	1934
Aug	4515	16890	1994	1034	1934
Sep	5040	21370	1977	951	1936

Source: Coll and Siwicki, 1998.

**Figure C-3**  
**Long Term Monthly Mean, Maximum, and Minimum Discharge, Allegheny River at**  
**Parker, Pa, Mile 83.4**



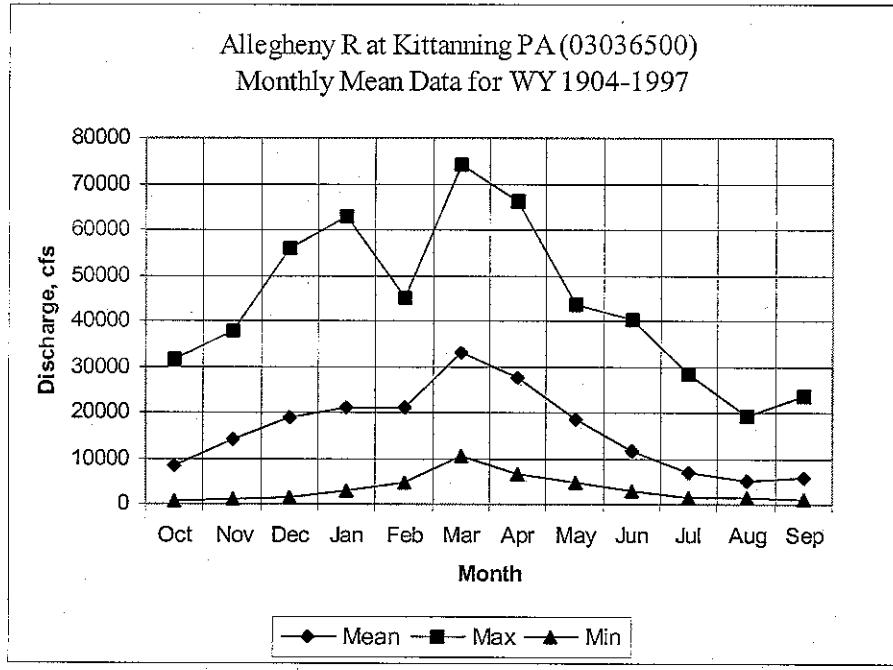
Source: Coll and Siwicki, 1998.

**Table C-4**  
**Station 03036500, Allegheny R at Kittanning, mile 45.8**  
**Monthly mean data for Water Years 1904-1997**  
**(94 WY)**

Month	Mean	Maximum		Minimum	
		flow, cfs	WY	flow, cfs	WY
Oct	8535	31750	1991	8535	1924
Nov	14300	37830	1986	1155	1909
Dec	19000	55850	1928	1636	1961
Jan	20970	62840	1937	2752	1961
Feb	21000	45020	1990	4688	1963
Mar	32910	74100	1936	10550	1915
Apr	27640	66140	1940	6585	1946
May	18470	43650	1919	4860	1941
Jun	11500	40230	1989	2893	1936
Jul	7068	28200	1972	1511	1966
Aug	5119	19250	1977	1274	1910
Sep	5643	23500	1926	930	1909

Source: Coll and Siwicki, 1998.

**Figure C-4**  
**Long Term Monthly Mean, Maximum, and Minimum Discharge, Allegheny River at**  
**Kittanning, Pa, Mile 45.8**



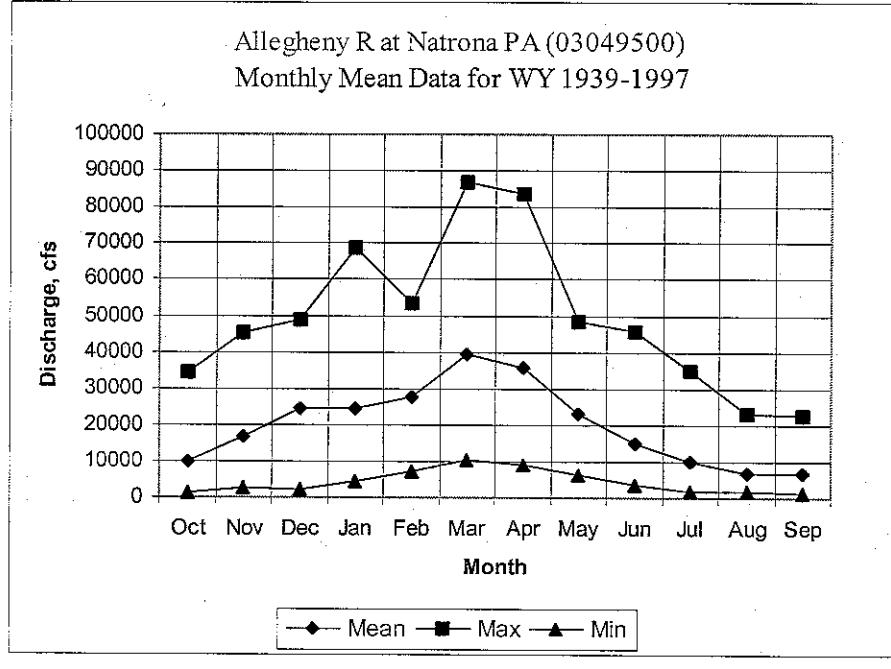
Source: Coll and Siwicki, 1998.

**Table C-5**  
**Station 03049500, Allegheny R at Natrona, mile 24.3**  
**Monthly mean data for Water Years 1939-1997**  
**(59 WY)**

Month	Mean	Maximum		Minimum	
		flow, cfs	WY	flow, cfs	WY
Oct	9912	34470	1991	1112	1964
Nov	16700	45230	1986	2686	1954
Dec	24210	48690	1978	2316	1961
Jan	24600	68600	1952	4520	1961
Feb	27450	53390	1976	7167	1963
Mar	39180	87080	1945	10410	1969
Apr	35560	83780	1940	9000	1946
May	23010	48400	1943	6129	1941
Jun	14890	45820	1989	3759	1991
Jul	9830	34630	1972	1944	1966
Aug	6702	23020	1956	1786	1962
Sep	7005	22690	1990	1444	1939

Source: Coll and Siwicki, 1998.

**Figure C-5**  
**Long Term Monthly Mean, Maximum, and Minimum Discharge, Allegheny River at**  
**Natrona, Pa, Mile 24.3**



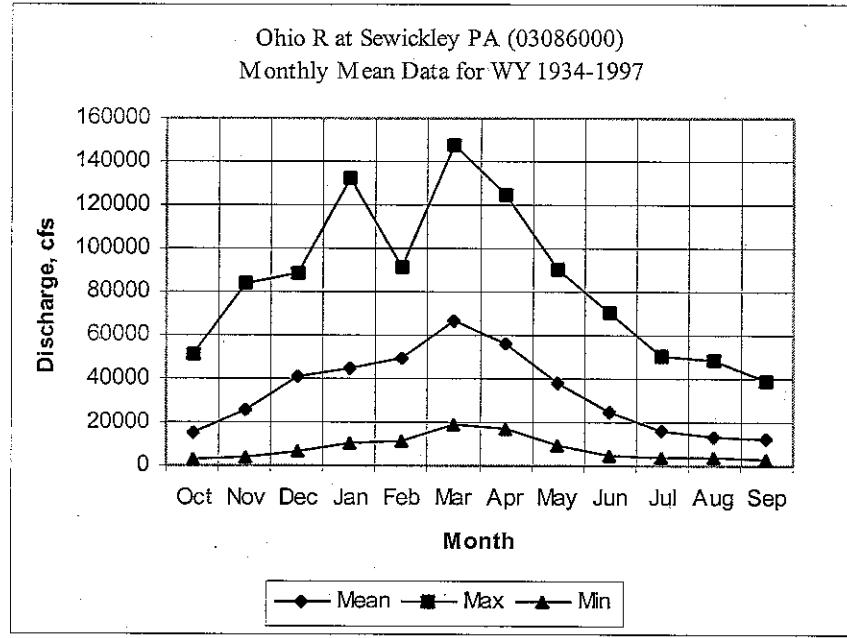
Source: Coll and Siwicki, 1998.

**Table C-6**  
**Station 03086000, Ohio R at Sewickley, mile 13.3**  
**Monthly mean data for Water Years 1934-1997**  
**(64 WY)**

Month	Mean	Maximum		Minimum	
		flow, cfs	WY	flow, cfs	WY
Oct	15430	51010	1955	5073	1964
Nov	26150	83490	1986	3991	1954
Dec	40700	88890	1973	6705	1961
Jan	44980	132000	1937	10470	1977
Feb	49770	91830	1939	11610	1934
Mar	66370	147900	1936	18670	1969
Apr	56280	124500	1940	16790	1946
May	38350	90380	1996	9593	1934
Jun	24440	70490	1989	5001	1934
Jul	16010	50770	1972	3892	1966
Aug	13240	48180	1956	3565	1957
Sep	11910	89450	1996	3081	1946

Source: Coll and Siwicki, 1998.

**Figure C-6**  
**Long Term Monthly Mean, Maximum, and Minimum Discharge, Ohio River at Sewickley,  
 Pa, Mile 13.3**



Source: Coll and Siwicki, 1998.