

Figure 1.--Map of the conterminous United States showing areas covered by 18 of the 20 volumes on surface water supply. The area covered by this report is shaded.

- Part 3. Ohio River basin, in two volumes:
 A, Ohio River basin except Cumberland and Tennessee River basins.
 B, Cumberland and Tennessee River basins.
4. St. Lawrence River basin.
 5. Hudson Bay and upper Mississippi River basins.
 6. Missouri River basin, in two volumes:
 A, Missouri River basin above Sioux City, Iowa.
 B, Missouri River basin below Sioux City, Iowa.
 7. Lower Mississippi River basin.
 8. Western Gulf of Mexico basins.
 9. Colorado River basin.
 10. The Great Basin.
 11. Pacific slope basins in California.
 12. Pacific slope basins in Washington and upper Columbia River basin.
 13. Snake River basin.
 14. Pacific slope basins in Oregon and lower Columbia River basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be purchased or consulted as follows:

1. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., who will, on application, furnish lists giving prices. A list of Geological Survey publications may also be obtained by applying to the Director, Geological Survey, Washington, D. C.

2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

3. Sets are available for consultation in the offices of the Water Resources Division of the Geological Survey. Addresses of the offices in the area covered by this report are given on page 2.

Early records of the flow of streams in the United States are published in the reports listed below. In many of these reports records for years earlier than those indicated have been included for some streams.

Streamflow data for the years 1884-1901, in reports of the Geological Survey
 (A = Annual Report; B = Bulletin)

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to September 1890.
12th A, pt. 2do.....	1884 to June 30, 1891.
13th A, pt. 3do.....	1884-92.
14th A, pt. 2	Monthly discharge.....	1888-93.
B 131.....	Descriptions, measurements, gage heights, and ratings.....	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.
WSP 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1895-96.
WSP 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
WSP 16.....	Descriptions, measurements, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1897.
WSP 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
WSP 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge.....	1898.
WSP 35 to 39.	Descriptions, measurements, gage heights, and ratings.....	1898.
21st A, pt. 4	Monthly discharge.....	1898.
WSP 47 to 52.	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
WSP 65, 66..	Descriptions, measurements, gage heights, and ratings.....	1901.
WSP 75.....	Monthly discharge.....	1901.

Reports on surface-water supply containing records from 1899 to date for drainage basins in this report are listed on the following page. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained. Before 1951, records for the Cumberland and Tennessee River basins were included with those of the other rivers of the Ohio River basin.

OHIO RIVER MAIN STEM

105. Allegheny River at Eldred, Pa.

Location.--Lat 41°57'50", long 78°23'10", on right bank at site of former highway bridge, 600 ft upstream from bridge on State Highway 346, 1,000 ft upstream from Knapp Creek, and half a mile north of Eldred, McKean County.

Drainage area.--550 sq mi.

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,416.20 ft above mean sea level, unadjusted.

Average discharge.--21 years, 967 cfs.

Extremes.--Maximum discharge during year, 9,540 cfs Mar. 31 (gage height, 16.64 ft, from floodmark in gage well); minimum, 30 cfs, Oct. 1 (gage height, 1.37 ft).
1939-60: Maximum discharge, 55,000 cfs July 19, 1942 (gage height, 27.6 ft, from floodmark), from rating curve extended above 15,000 cfs on basis of slope-area measurement of peak flow; minimum, 22 cfs Sept. 29, 30, 1959 (gage height, 1.27 ft).

Remarks.--Records good except those for periods of ice effect, no gage-height record, shifting control, or backwater from Knapp Creek, which are fair.

Rating tables, water year 1959-60, except periods of ice effect, shifting-control, or backwater from Knapp Creek (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 11

Feb. 12 to Sept. 30

1.5	41	6.0	1,180	1.3	23	7.0	1,620
2.0	95	8.0	2,030	1.5	39	10.0	3,080
3.0	255	12.0	4,280	2.0	101	13.0	5,000
4.0	497			3.0	270	17.0	10,200
				4.0	520		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	c54	895	1,930	1,740	511	458	a8,000	495	1,100	345	93	58
2	119	1,500	1,580	1,460	456	b360	a7,200	482	875	332	83	64
3	93	1,620	1,460	2,060	b360	b360	a6,500	458	735	295	74	74
4	58	1,220	1,340	2,430	b440	b360	a6,000	432	640	272	87	60
5	46	1,300	1,180	1,830	456	b360	a5,000	395	580	254	214	50
6	59	1,980	1,140	1,540	657	b350	a4,500	370	568	*226	196	48
7	c230	2,230	1,500	1,500	1,140	b320	a4,000	345	445	203	124	46
8	352	1,740	1,460	1,220	822	b310	a3,000	370	395	187	c250	42
9	221	1,380	1,260	1,020	752	b290	a2,000	920	*345	176	322	39
10	293	1,140	*1,140	875	1,040	b280	a1,700	1,740	312	165	176	39
11	162	910	1,020	840	2,760	b280	a1,500	1,940	282	158	*146	46
12	136	858	1,750	755	3,560	b280	a1,700	1,980	c360	166	115	64
13	114	805	5,380	1,880	3,440	b280	1,580	1,940	580	154	97	90
14	105	805	3,800	*2,480	2,480	b280	1,540	1,820	1,180	156	90	83
15	105	1,020	5,620	1,980	1,780	b280	1,460	1,620	3,700	190	91	*72
16	96	910	2,840	2,030	1,620	a280	1,500	1,380	5,060	171	88	60
17	85	875	2,030	1,660	1,120	a300	1,380	1,220	5,270	138	87	52
18	78	858	1,660	1,420	*1,140	a280	1,300	1,780	3,680	126	72	48
19	73	752	1,420	1,340	1,100	a260	1,140	1,540	1,860	126	64	48
20	69	690	1,180	1,170	980	a250	980	1,300	1,260	192	60	52
21	66	660	1,020	980	875	a240	910	1,300	945	173	62	70
22	61	615	910	875	822	a230	875	1,300	752	130	69	63
23	61	555	b900	788	718	a230	788	2,320	670	116	86	52
24	c700	696	1,260	b660	655	*230	700	3,380	980	108	83	47
25	1,780	1,340	1,300	b700	610	220	655	3,980	945	98	72	42
26	1,060	1,180	1,060	1,140	595	203	610	3,680	655	90	63	39
27	735	1,380	910	1,445	520	254	655	2,480	520	114	57	37
28	585	2,480	1,260	585	520	608	*640	1,660	458	151	54	36
29	*456	2,730	2,500	540	520	2,360	550	1,340	395	120	52	36
30	367	2,430	2,580	555	-----	a5,400	520	1,140	382	98	58	37
31	c430	-----	2,180	540	-----	a9,000	-----	1,220	-----	100	64	-----
Total	8,869	37,556	52,590	39,518	32,809	25,193	69,183	46,327	35,869	5,320	3,249	1,594
Mean	286	1,252	1,696	1,275	1,131	813	2,306	1,494	1,196	172	105	53.1
Cfs/m	0.520	2.28	3.08	2.32	2.06	1.48	4.19	2.72	2.17	0.313	0.191	0.097
In.	0.60	2.54	3.56	2.67	2.22	1.70	4.68	3.13	2.43	0.36	0.22	0.11

Calendar year 1959: Max 16,000 Min 22 Mean 1,065 Cfs/m 1.92 In. 26.04
Water year 1959-60: Max 9,000 Min 36 Mean 978 Cfs/m 1.78 In. 24.22

Peak discharge (base, 5,000 cfs).--Mar. 31 (about 12 m.) 9,540 cfs (16.64 ft); June 17 (1 a.m.) 5,790 cfs (13.81 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of high-water marks, observer's gage reading, and records for nearby stations.

b Stage-discharge relation affected by ice.

c Backwater from Knapp Creek.

Note.--Shifting-control method used Oct. 25, Nov. 2-9, Nov. 27 to Dec. 4, Dec. 7, 8, 12-19, Dec. 23 to Jan. 7, Jan. 13-16, Feb. 10-16.

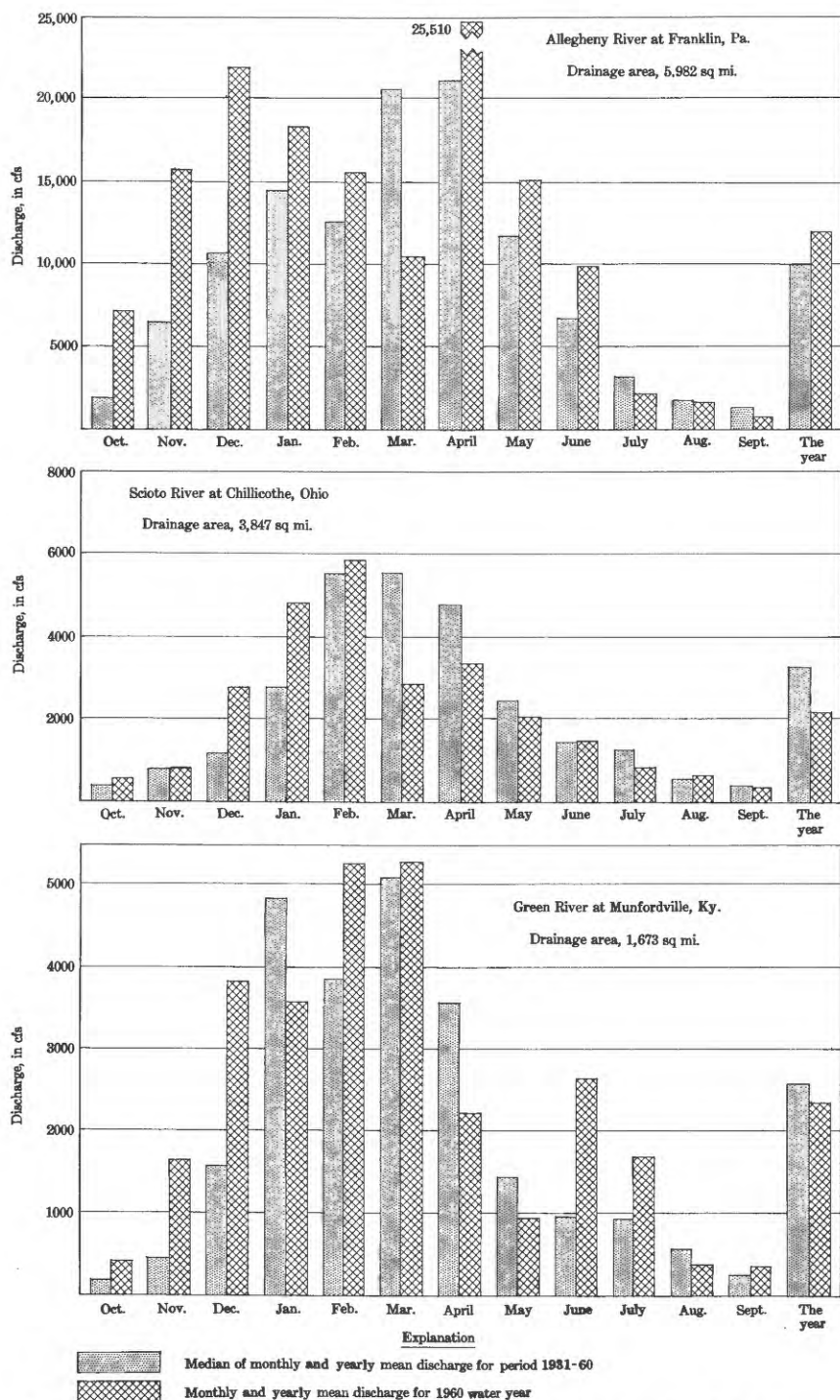


Figure 2. Comparison of discharge at three long-term representative gaging stations during 1960 water year with median discharge for period 1931-60.

