State of Maryland
Board of Natural Resources
Department of Geology, Mines and Water Resources Joseph T. Singewald, Jr.. Director

Bulletin 1

## SUMMARY OF RECORDS OF SURFACE WATERS OF MARYLAND AND THE POTOMAC RIVER BASIN

1892-1943

Prepared in cooperation with the
U. S. Geological Survey


Baltimore, Maryland - 1944

# COMMISSION ON <br> geology, mines and water resources 


Paga
Introduction ..... 1
Cooparation. ..... 2
cknowladgament 3. ..... 2
2
2
Explanation o
2
15
15
oaging-station records.
oaging-station records.
Wicomico Rivar Basin ..... 15
Fast Branch Wicomico River near Salisbury, Md. ..... 18
18
Elk Rivar Rasin
Elk Rivar Rasin ..... 18
20
Susquehanna River Basin
20
20
Broad Craek at M1ll Green, Md. ..... 22
actoraro Creek near Rising Sun, Md.
25
Dear Craek above Kellogg Eranch, at Rocks, Md ..... 26
26
Dear Craek above Kellogg Eranch, at Rocks, Md ..... 26
30

Daar Craak near Churchvilla, Md ..... | 30 |
| :--- |
| 32 |

Ounpowder Rivar Basin. ..... 32
Little Gunpowder Palls at Laurel Brook, Md. ..... 36
Littla Gunpowder Falls near Belair, Md. ..... 37 ..... 37
39
39
Ounpowder Falls at Glancoa, Md.
Ounpowder Falls at Glancoa, Md.
Patapsco River Besin ..... 39 ..... 43
47
North Branch Patapsco River near Reisterstown, Md..
North Branch Patapsco River near Reisterstown, Md..
Patapsco River at Woodstock, Md ..... 50Pinay Run near Sykesville, Md.
South River Basin ..... 53
North RIvar near Annapolis, Md. ..... 56
Pacon Ridge Eranch at Chesterfiald, Md. ..... 56
56
Patuxent Rivar Basin. ..... 56
Patuxent River near Burtonsville, ..... 64
67
Ifttle Patuxent River at Savage, Md. ..... 68
Potomac Rivar Basin. ..... 68
North Branch Potomac Rivar at Eloomington, Md
North Branch Potomac River at Piadmont, ..... 72
North Branch Potomac River at Pinto, Md. ..... 75
76
North Branch Potomac River at Cumbarland, Md. ..... 78
North Branch Potomac Rivar near Cumberland, Md North Branch Potomac Rivar near
Potomac Rivar at Paw Paw, W. Va ..... 81
Potomac RIvar at Hancock, Md. ..... 83
Potomac River at Shapherdstown, W. Va ..... B9
Potomac River at Point of Rocks, Md. ..... 101
Potomac River nasr Washington, D. C.
104
104
Savage River at Bloomington, Md. ..... 108
Georgas Creek at Franklin, Md
112
112
Ooorges Creek at Westernport, Md.
Ooorges Creek at Westernport, Md.
112
112
Naw Craek near Keyser, W. Va. ..... 113
Chosapeake \& Ohio Canal at Cumberland, Md. ..... 117
Fvitta Creek near Bedford Valley, Pa ..... 118
Evitts Craak near Cumberland, Md. ..... 121
Pattarson Craek naer Headsville, W. Va ..... 124Patterson Creek at, Alaska, W. Va
South Branch Potomac River at Franklin, W. Va ..... 124
South Eranch Potomac Rivar near Petersburg, W. Va. ..... 125
South Eranch Potomac River near Springfiald, W. Va ..... 129
North Fork of South Branch Potomac River at Cabins, W. Va ..... 135
South Fork of South Eranch Potomac River naar Moorefiald, W. Va ..... 139
Town creak naar Olatown, Md. ..... 142
Cacapon River at Yallow Spring, W. Va
Cacapon River at Yallow Spring, W. Va
143
143
Cacapon River at Capon Bridga, W. Va...
Cacapon Rivar near Great Cacapon, W. Va ..... 144
Licking Craak near Sylvan, Pa ..... 48
Pack Craek near Jones Springs, W. Va ..... 152 ..... 152
Back Creek near 1 edmasy11le, W. Va ..... 154
Conococheague Creek at Falrview, Md.
158
158
Opequon Craak near Martinsburg, W. Va ..... 15 B
Antiatam Creek naar Sharpsburg, Md.
164
164
Chesapake 2: Ohio Canal at Point of Rocks, Md. ..... 166
sorth river near burketown, Va.
sorth river near burketown, Va. ..... 170
North River at Port Republic, Va. .....
171 .....
171
South Fork Shenandoah River near Lymnwood, Va
South Fork Shenandoah River near Lymnwood, Va
174
174
South Fork Shenandoah River near Luray, Va...........
South Fork Shenandoah River near Front Royal, Va ..... 177
Shenandoah River at Millville, W. Va ..... 189
Cooks Creak at Mount Crawford, Va ..... 189
Middle River near Grottoas, Va
193
193
Lewis Craek naar Staunton, Va
South River at Waynasboro, Va ..... 194
South River at Basic City, Va ..... 198
South Rlvar at Harriston, Va. ..... 198
203
South Rivar at Port Rapublic, Va. ..... 204
Elk Run at Elkton, Va
Elk Run at Elkton, Va ..... 204
Hawksbill Creek naar Luray, Va
Hawksbill Creek naar Luray, Va
205
205
North Fork Shanandoah Rivar at Cootes Store, Va
North Fork Shanandoah Rivar at Cootes Store, Va ..... 209
North Fork Shenandoah Rivar naar Riverton, Va. ..... 214 ..... 214
Gaging-station records-Continued.
Potomac RIver Basin--Continued.
Potomac RIver Basin--Continued.
Cedar Creek near Winchester, Va ..... Page
Passage Creek at Buckton, Va ..... 215
Getoctin Creek near Jefferson, Md ..... 217
Monocacy River at Fildgeport, Md. ..... 220
Monocacy River near Frederick, Md ..... 221
Monocacy River at Jug Bridge, near Frederick ..... 222 ..... 222
Owens Creek at Lantz, Md. ..... 230 ..... 230
Linganore Creek near Frederick, Md ..... 233 ..... 236
Gooee Creek near Leosburg, Va.
Gooee Creek near Leosburg, Va.
Great Seneca Creek near Gaithersburg, Md ..... 239
Seneca Creek at Dawsonvillo, Md. ..... 43 ..... 43
Difficult Run near Great Falls, Va245
248
25
Rock Creek at Sherrill Drive, Weehington, D. C.
Rock Creek at Q street, Washington, D. C. (Lyons Milii). ..... 250 ..... 250
Northeast Branch Anacostia River at Riverdale, Md. ..... 254
Northeast Branch Anacostia River at Hyattsyili Ma ..... 255
Northweet Branch Anacostia River near Colesvillé, Md ..... 25
Northweet Branch Anacostia River near Hyattsville, Md. ..... 257
262
Northweet Branch Anacostia River at Bladensburg, Md. ..... 262
Boaverdam Branch Anacostia River at Kenilworth, D. ..... 264
Occoquan Greek near Occoquan, Va ..... 264
Monongahela River Beein. ..... 265
Youghiogheny River near Oakland, Md. ..... 268
268
Youghiogheny River at Friendsvile, M ..... 268
269
Big Piney Run near Salisbury, Pa ..... 69
Miscellaneous discharge measuroments ..... 27
Appendix. ..... 990
Index.
Index. ..... 293

## INTRODUCTION

The purpoee of thie report is to bring together in one volume the records of monthly and jearly diecharge for all gaging etations in Maryland and in the basin of the Potomac River for which recorde of flow have been collsctsd prior to October 1, 1943. The potomac River basin comprises not only the greater part of Maryland, but portions of Virginia, West Virginia, and Penneylvania, and all of the District of Columbia. Inclusion of the records of flow for all gaging stations in the entire basin materially increaee the utility and value of the summary. There are about 11,900 monthly recorde in all, equivalent to about 990 years.

The 0oological Survey, United States Department of the Interior, began to collect records of stream flow in Maryland in June 1894 with the ostablismment of a gaging station on the Potomac River at cumberland. This station wae discontinued in 1897. A etation wae eetablished on the Potomac at Point of Rocks in February 1895 and hae been in operation ever eince. This record is now nearly 50 yeare in length, which makee it one of the longeet continuous records of stream flow in the United states. A gaging station wae establiehed on Rock Creek at Lyone Mill near a Street, Dietrict of Columbia, in July 1892, but wae diecontinued in 1894. Rock Creek may be considered a Maryland etream as 80 percent of its drainage area is in Maryland.

## COOPERATION

The state of Maryland began cooperation with the U. s. Geological Survey in inveetigatione of the surfaca water resourcee of the State in 1896 through the payment of the services of gage readere by Prof. Willam Bullock Clark, State Geologist. Additional gaging etations on Broad Croek at Mill Greon, Deer Creok near Cnurchville, Little Gunpowder Falls near Belair, and Gunpowder Falls at Glencoe were establiohed in 1904. These etreams were coneldered as poesible sources of edditional water supply for the city of Baltimore, but State cooperation in their maintenance was terminated in 1909, and the stations were discontinued. Cooperation by the State wae resumed in 1924.

The city of Baltimore began cooperation in the investigation of etream flow in 1926 to detemine the source of an additional water supply for that city. The stations on Deer Creek at Rocke, Little Gunpowder Falls at Laurel Brook, and the North Branch Patapeco River near Reisteretown and near Marriottsulle are so maintained.

In 1929 reprssentatives of the city of Cumberland and the industries within the LukeCumberland area formed a voluntary organization called the Upper Potomac River Board, under the eponsorehip of the Maryland State Department of Health. Thie Board, through the Maryland Oeological Survey, started investigations of the flow of streams in the upper potomac basin in cooperation with the U. S. Geological Survey. The stations on the Savage River and the North Branch of Potomac River at Bloomington, Evitte Creek and Wills Creak near Cumberland, and Georges creek at Franklin were eetablished in con-
nection with this investigation.
Other cooperating agencies in the area covered by the summary are the Statss of Penneylvania, West Virginia, Virginia, the Corps of Engineers, U. S. Army, the citiea of Salisbury and Annapolis, and the Washington Suburban Sanitary Commission. The Washington Suburban Sanitary Commseion is cooperating by the operation of the stationa on Patuxent River near Burtonsville, Northwest Branch Anacostia River near Colesville, Seneca Creek at Dawsonville, and Little Patuxent River at Savage. Acknowledgment of the cooperation by the different agencies has been made in the coological Survey annual water-supply papers.

As the result of the cooperation by these varlous agencies, 39 gaging etations were being operated at the end of the 1943 water year. Three of these stations are outsids of the State, two on streams tributary to the Potomac River and one on a stream tributary to the Casselman River. Eight of the stations on the Potomac River from Pinto to Washington and in or near tha District of Columbia are maintained by Federal funds; the remaining 31 stations are operated in cooperation with the agencies mentioned.

## ACKNOWLEDGMENTS

The records in the summary have been complied and arranged for publication under the direction of A. H. Horton, district engineer, by V. R. Bennion, associate engineer, and assistants.

## EXPLANATION OF DATA

This compilation includes a brief description of each gaging station and tables giving the following data: Monthly maximum, minimum, and mean daily diecharge in cubic foet per second, discharge in second-feet per square mile, equivalent depth in inches on the drainage basin, and million gallons per day per square mile. However, at gaging stations where the natural flow is appreciably affected by storage reservoirs, diversions, or regulation, figures of discharge in second-feet and million gallons per day per equare mile, and the depth in inchee on the drainage basin are omitted, as the unit figuree would be mieleading. Records of the annual flow for each etation are given in a separate tabls for general uss.

Measurements of the flow of streams at places where there are no gaging stations are listed in the table headed "Miscellaneoue measurements."

The records of diechargs and other data in this summary may be accepted as correct where they differ from those previously published. The monthly figures usually will bs sufficient for the uee of practically all who may need information about stream flow. Those requiring information of the daily flow and its distribution during the month may consult the bibliography for the reports containing detailed data.

## BIBLIOGRAPHY

The blbllography on pages $3-14$ includes referencee to all the publicatione containing the detailed records of flow at each gaging station for which monthly rocords are includod in the sumary. Many, if not all, of those publications may be consulted in most public libraries and in officee of the U. S. Geological Survey. Water-supply papers and other publications of the U. S. Geological Survey may be purchased at nominal cost from the Superintendent of Documents, Goverment Printing office, Washington, D. C., who will, upon application, furnioh liets of thase etill available.

Bibllography of stream-flow data in Maryland and Potomac River Baain
Publications of the U. S. Geological Survey are indicated by the abbreviations: A, Annual Report; W, Water-Supply Paper; and of the Virginia Geological Survey by the abbreviation: B, Bulletin 31.


Susquehanna River Basin


3ibllography of stream-flow data in Maryland and Potomac R1ver Basin--Continuad

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| Octoraro Crael at Rowlancsville, Md. | $\begin{aligned} & 1897 \\ & 1898 \\ & 1899 \end{aligned}$ | $\begin{aligned} & \text { 19th A, part 4, p. } 128 \\ & \text { 20th A, part 4, p. } 111 \\ & \text { 21st A, part 4, p. } 93 \end{aligned}$ |

Gunpowder River Rasin

| Gunpowder Falls at Glencoe, Md. | $\begin{aligned} & 1905-6 \\ & 1907-8 \\ & 1909 \end{aligned}$ | $\begin{aligned} & \text { W 203, p. } 40 \\ & \text { W } 241, \text { p. } 319 \\ & \text { W 261, p. } 277 \end{aligned}$ |
| :---: | :---: | :---: |
| Little Gunpowder Fills near Eelair, Md. | $\begin{aligned} & 1905-6 \\ & 1907-8 \\ & 1909 \end{aligned}$ | $\begin{aligned} & \text { W 203, p. } 42 \\ & \text { W } 241, \mathrm{p} .322 \\ & \text { W 261, p. } 278 \end{aligned}$ |
| Little Gunpowder Falls at Laurel Brook, Md. | $\begin{aligned} & 1927-32 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 726, p. 306 <br> W 741, p. 328 <br> W 756, p. 326 <br> W 781, p. 365 <br> W 801, p. 348 <br> W 821, p. 387 <br> W 851, p. 430 <br> W 871, p. 428 <br> W 891, p. 494 <br> W 921, p. 505 <br> W951, p. 521 <br> W 971 |



Ribllograpliy of stream-flow data in Maryland anc Potomac River Basin--Continued

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| Bacon RIdge Branch at Chesterfield, Mは. | 1943 | W 971 |
| North RIver near Annapolis, Md...... | 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 | W 726, p. 313 W 741, p. 332 W 756, p. 330 W 781, p. 369 W 801, p. 352 W 821, p. 391 W 851, p. 434 W 871, p. 432 W 891, p. 498 W 921, p. 509 W 951, W. 971. |


| Little Patuxent River at Guilford, Md. | $\begin{aligned} & 1932 \\ & 1933 \\ & 1931 \\ & 1935 \\ & 193 \mathrm{f} \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 726, p. 315 W 741, p. 334 W 756, p. 332 W 781, p. 371 W 801, p. 354 W 821, p. 393 W 851, p. 436 W 871, p. 434 W 891, p. 500 W 921, p. 511 W 951, p. 527 W 971 |
| :---: | :---: | :---: |
| Little Patuxent River at Savage, Md. | $\begin{aligned} & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{aligned} & \text { W 891, p. } 501 \\ & \text { W 921, p. } 512 \\ & \text { W 951, p. } 528 \\ & \text { W 971, } \end{aligned}$ |
| Patuxent R1ver near Burtonsville, Md. | $\begin{aligned} & 1911-12 \\ & 1913 \\ & 1914 \\ & 1915 \\ & 1916 \\ & 1917 \\ & 1918 \\ & 1919-20 \\ & 1921 \\ & 1922 \\ & 1923 \\ & 1924 \\ & 1925 \\ & 1926 \\ & 1927 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |

Potomac River Basin
Antietam Creek near Sharpsburg, Md.. $1897-1905$ W 192, p. 82


Bibliography of atream-flow data in Maryland and Potomac River Basin--Continued

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| Back Creek near Redeosville, W. Va.. | $\begin{aligned} & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \end{aligned}$ | W 661, $p .210$ <br> $W 681$, $p .227$ <br> W 696, p. 249 <br> W 711, $p .275$ |
| Back Creek near Jones Springs, W. Va. | $\begin{aligned} & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{array}{lll} \text { W 851, } & \text { p. } & 453 \\ \text { W 871, } & \text { p. } 453 \\ \text { W 891, } & \text { p. } 520 \\ \text { W 921, } & \text { p. } 536 \\ \text { W 951, } & \text { p. } & 550 \\ \text { W } 971 & & \end{array}$ |
| Beaverdam 8ranch Anacostia River at Kenllworth Avenue, Washington, D. C. | 1911-12 | W 321, p. 230 |
| Cacapon River at Capon Briage, W. Va. | $\begin{aligned} & 1930 \\ & 1931-32 \end{aligned}$ | $\begin{aligned} & \text { W } 696, \text { p. } 246 \\ & \text { W } 726, \text { p. } 331 \end{aligned}$ |
| Cacapon River near Great Cacapon, W. Va. | $\begin{aligned} & 1923 \\ & 1924 \\ & 1925 \\ & 1926 \\ & 1927 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| Cacapon River at Yellow Sprine, W. Va. | $\begin{aligned} & 1940-41 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{aligned} & \text { W 921, p. } 532 \\ & \text { W 951, p. } 547 \\ & \text { W } 971 \end{aligned}$ |
| Catoctin Creek near Jefferson, Md... | $\begin{aligned} & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \end{aligned}$ | W 661, p. 220 <br> W 681, p. 233 <br> W 696, p. 260 <br> W 711, p. 288 |
| Cedar Creek near Winchester, Va..... | $\begin{aligned} & 1937-38 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{array}{lll} \text { W 851, } & \text { p. } & 465 \\ \text { W 871, } & \text { p. } 466 \\ \text { W 891, } & \text { p. } 538 \\ \text { W 921, } & \text { p. } 548 \\ \text { W 971, } & \text { p. } & 565 \end{array}$ |
| Chesapeake \& Ohio Canal at Cumberland, Md. | $\begin{aligned} & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \end{aligned}$ | W 696, p. 232  <br> $W$ 711, p. 257 <br> $W$ 726, p. 325 <br> $W$ 741, p. 345 <br> $W$ 756, p. 343 |
| Chesapeake \& Ohio Canal at Point of Rocks, Md. | $\begin{aligned} & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \end{aligned}$ | W 711, p. 278 W 726, p. 338 W 741, p. 355 W 756, p. 353 W 781, p. 391 W 801, p. 372 |
| Conococheague Creek at Fairview, Md. | $\begin{aligned} & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 661, p. 211 W 681, p. 228 W 696, p. 250 W 711, p. 276 W 726, p. 336 W 741, p. 353 W 756, p. 351 W 781, p. 389 W 801, p. 370 W 821, p. 408 W 851, p. 454 W 871, p. 454 W 891, p. 521 W 921, p. 537 W 951, p. 551 W 971 |

Bibliography of stream-flow data in Maryland and Potomac River Basin--Continued
Potomac River Basin--Continued.

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| Cooks Creek at Mount Crawford, Va... | 1905-6 | W 203, p. 67 |
| Difflcult Run near Great Falls, Va.. | 1935 | W 781, p. 407 |
|  | 1936 | W 801, p. 388 W 821, p. 425 |
|  | 1938 | W 851, p. 476 |
|  | 1939 | W 871, p. 473 |
|  | 1940 | W 891, p. 545 |
|  | 1941 | W 921, p. 555 |
|  | 1943 | W 971, |
| Elk Run at Elkton, Va............... | 1905-6 | W 203, p. 68 |
| Evitts Creak noar Bedford Valley, | 1932-33 | W 741, p. 346 |
| Pa . | 1934 | W 756, p. 344 |
|  | 1935 | W 781, p. 382 |
|  | 1936 | W 801, p. 365 |
|  | 1937 | W 821, p. 403 |
|  | 1938 | W 851, p. W $871, \mathrm{p} .446$ |
|  | 1940 | W 991, p. 513 W 921, p. 524 |
|  | 1942 | W 951, p. 539 |
|  | 1943 | W 971 |
| Evitts Creek near Cumberland, Md.... | 1929 | W 681, p. 221 |
|  | 1930 | W 696, p. 240 |
|  | $\begin{aligned} & 1931 \\ & 1932-33 \end{aligned}$ | $\begin{aligned} & \text { W 711, p. } 267 \\ & \text { W } 726, \mathrm{p} \cdot 326 \end{aligned}$ |
| Georges Creok at Franklin, Md...... | 1930 | W 696, p. 237 |
|  | 1931 | W 711, p. 264 |
|  | 1932 | W 726, p. 323 |
|  | 1933 | W 741, p. 343 |
|  | 1935 | W 781, p. 380 |
|  | 1936 | W 801, p. 363 |
|  | 1937 | W 821, p. 401 |
|  | 1938 | W 851, p. 444 |
|  | 1939 | W 871, p. 444 W 891, p. 511 |
|  | 1941 | W 921, p. 522 |
|  | 1943 | $\text { W } 971 \text {, }$ |
| Georges Creek at Westernport, Md.... | 1905-6 | W 203, p. 55 |
| Goose Creek near Leesburg, Va....... | 1909-13 | B 31, p. 114 |
|  | 1930-31 | W 711, p. 291 |
|  | -1932 | W 726, p. 355 |
|  | 1933 | W 741, p. 368 |
|  | 1934-38 | W 851, p. 471 |
|  | 1939 | W 871, p. 471 |
|  | 1940 | W 891, p. 543 |
|  | 1942 | W 951, p. 571 |
|  | 1943 | W 971 |
| Great Seneca Creek near Gaithersburg, Md. | 1925 | W 601, p. 255 |
|  | 1926 | W 621, p. 260 |
|  | 1927 | W 641, p. 176 |
|  | 1928 | W $661, p .222$ $W$ |
|  | 1930 | W 696, p. 263 |
|  | 1931 | W 711, p. 293 |
| Hawksbill Creek near Luray, Va...... | 1905-6 | W 203, p. 70 |
| Lewis Creek near staunton, Va....... | 1905-6 | W 203, p. 65 |
| Licking Creek near Sylvan, Pa....... | 1930-32 | W 726, p. 334 |
|  | 1933 | W 741, p. 352 |
|  | 1934 | $\text { W 756, p. } 350$ |
|  | 1935 | W 781, p. 388 |
|  | 1936 | W 801, p. 369 |
|  | 1937 | W 821, p. 407 |
|  | 1939 | W 871, p. 452 |
|  | 1940 | W 891, p. 519 |
|  | 1941 | W 921, p. 535 |
|  | 1942 | W 951, p. 549 |

Bibliography of stream-flow deta in Meryland and Potomac River Basin--Continued

| Gaging station | Yeer | Publication |
| :---: | :---: | :---: |
| Linganore Creek near Frederick, Md.. | $\begin{aligned} & 1932 \\ & 1934-35 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| Madle River neer Grottoes, Ve...... | $\begin{aligned} & 1825-27 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1834 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| Monocecy River ot Bridgeport, Md.... | $\begin{aligned} & 1942 \\ & 1943 \end{aligned}$ | $\begin{aligned} & \text { W } 951, p \cdot 567 \\ & \text { W } 971 \end{aligned}$ |
| Monocecy River neer Frederick, Md... | $\begin{aligned} & 1897-1927 \\ & 1928 \\ & 1929 \\ & 1930 \end{aligned}$ | $\begin{array}{lrr} \text { B 31, } & \text { p. } 91 \\ \text { W 661, } & \text { p. } 221 \\ \text { W 681, } & \text { p. } 240 \\ \text { W 696, } & \text { p. } 261 \end{array}$ |
| Monocecy River at Jug Bridge, near Frederick, Md. | $\begin{aligned} & 1930-31 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 711, p. 289 <br> W 726, p. 352 <br> W 741, p. 366 <br> W 756, p. 364 <br> W 781, p. 402 <br> W801, p. 383 <br> W 821, p. 420 <br> W 851, p. 468 <br> W 871, p. 468 <br> W 891, p. 540 <br> W 921, p. 550 <br> W 951, p. 568 |
| New Creek near Keyser, W. Va........ | $\begin{aligned} & 1930 \\ & 1931 \end{aligned}$ | $\begin{aligned} & W 696, \text { p. } 238 \\ & W 711, \end{aligned}$ |
| North Brench Potomec River et 8loomingt on, Md. | $\begin{aligned} & 1925 \\ & 1926 \\ & 1927 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 601, p. 241 W 621, p. 243 W 641, p. 165 W 681, p. 216 W 696, p. 231 W 711, p. 256 W 726, p. 316 W 741, p. 335 W 756, p. 333 W 781, p. 372 W 801, p. 355 W 821, p. 394 W 851, p. 437 W 871, p. 435 W 891, p. 502 W 921, p. 513 W 951, p. 529 W 971, |
| North Brench Potomac River et end neer Cumberlend, Md. | $\begin{aligned} & 1894-98 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |

Bitliography of stream-flow data in Maryland and Potomac River Basin--Continued
Potomac River Basin--Continued

| Oaging station | Year | Publication |
| :---: | :---: | :---: |
| North 8ranch Potomac RIver at Pledmont, W. Va. | $\begin{aligned} & 1899-1900 \\ & 1901 \\ & 1902 \\ & 1903 \\ & 1904-5 \\ & 1906 \end{aligned}$ |  |
| North Branch Potomac River at pinto, Md. | $\begin{aligned} & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 871, p. 436 W 891, p. 503 W 921, p. 514 W 951, p. 530 W 971 |
| Northesst Branch Anacostia River at Hyattsville, Md. | 1911-12 | W 321, p. 225 |
| Northeast 8ranch Anacostia River at Riverdsle, Md. | $\begin{aligned} & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 851, p. 478 W 871, p. 475 W 891, p. 547 W 921, p. 557 W 951, p. 575 W 971 |
| Northweet Branch Anacostia River at 8ladensburg, Md. | 1911-12 | W 321, p. 228 |
| Northweet 8ranch Anacostia River near Colesville, Md. | 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 | W $581, p .238$ W 601, p. W 621, |
| Northwest 8ranch Anacostia River near Fyattsville, Md. | $\begin{aligned} & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| North Fork Shenandoah River at Cootee Store, Va. | $\begin{aligned} & 1925-27 \\ & 1928-32 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| North Fork Shenandoah River near Riverton, Va. | 1899-1906 | $831, \mathrm{p} .84$ |
| North Fork Shenandoah River near Strasburg, Va. | $1925-27$ 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 |  |

Bibliography of stream-flow data in Maryland and Potomac River Basin--Contimued
Potomac River Basin-=Continued

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| North Fork of South Branch Potomac River at Cabins, W. Va. | $\begin{aligned} & 1940-41 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{aligned} & \text { W 921, p. } 529 \\ & \text { W 951, } \\ & \text { W 971. } \end{aligned}$ |
| North River near Burketown, Va.... | $\begin{aligned} & 1926-27 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1938 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | B 31, $p$. 32 <br> $W$ 661, $p$. <br> W 681, $p$. 230 <br> $W$ 696, $p$. |
| North River at Port Republic, Va... | 1895-99 | B 31, p. 34 |
| Occouman Creak near Occoquan, Va... | $\begin{aligned} & 1913-16 \\ & 1921-23 \\ & 1937-42 \\ & 1943 \end{aligned}$ | $\begin{array}{lll} \text { B 31, } & \text { p. } & 118 \\ \mathrm{~B} & 31, & \text { p. } \\ \text { W 951, } & \text { p. } & 578 \\ \text { W 971. } & \end{array}$ |
| Opequon Creek near Martinsburg, W. Va. | 1905-6 | W 203, p. 58 |
| Owens Creek at Lantz, Md...... | $\begin{aligned} & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 726, p. 353 <br> W 741, p. 367 <br> W 756, p. 365 <br> W 781, p. 403 <br> W 801, p. 384 <br> W B21, p. 421 <br> W 851, p. 469 <br> W 871, p. 469 <br> W 891, p. 541 <br> W 921, p. 551 <br> W 951, p. 569 <br> W 971 |
| Passa-e Creek at Buckton, Va.... | $\begin{aligned} & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 726, p. 351 <br> W 741, p. 365 <br> W 756, p. 363 <br> W 781, p. 401 <br> W 801, p. 382 <br> W 821, p. 419 <br> W 851, p. 467 <br> W 871, p. 467 <br> W 891, p. 539 <br> W 921, p. 549 <br> W 951, p. 566 <br> W 971 |
| Patterson Creek at Alaska, W. Va.. | $\begin{aligned} & 1930 \\ & 1931 \end{aligned}$ | $\begin{aligned} & \text { W 696, p. } 241 \\ & \text { W 711, p. } 268 \end{aligned}$ |
| Patterson Creek near Headsville, W. Va. | 1938 1939 1940 1941 1942 1943 |  |
| Potomac River at Hancock, Md....... | $\begin{aligned} & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1.40 \\ & 1941 \\ & 1942-43 \end{aligned}$ | Wr74, p. 337 <br> W 756, p. 335 <br> W 7EI, p. 374 <br> W 801, p. 357 <br> W 821, p. 396 <br> W 851, p. 439 <br> W 871, p. 439 <br> W 891, p. 506 <br> W 921, p. 517 <br> W 971 |
| Potomac River at Paw Paw, W. Va..... | $\begin{aligned} & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{aligned} & \text { W } 871, p .438 \\ & \text { W } 891, p .505 \\ & \text { W } 921, p .516 \\ & \text { W } 951, p .552 \\ & \text { W } 971 \end{aligned}$ |

Bibllography of tream-flow data in Maryland and Potomac River Rasin--Continued

| Gaging station | Year | Publication. |
| :---: | :---: | :---: |
| Potomac Rlver at Point of Rocks, Md. | $\begin{aligned} & 1895-1927 \\ & 1928 \\ & 1928 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 16.41 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| Potomac River at Shepherdstow, Md.. | $\begin{aligned} & 1928 \\ & 1989-31 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 19: 8 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 661, p. 203 W 711, p. 258 W 726, p. 318 W 741, p. 338 W 756, p. 336 W 781, p. 375 W 801, p. 358 W 821, p. 397 W 851, p. 440 W 871, p. 440 W 891, p. 507 W 921, p. 518 W 951, p. 533 W 971. |
| Potomac River near Washington, D. C. | $\begin{aligned} & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| Rock Creek at Q Street (Lyons M111), Washington, D. C. | $\begin{aligned} & 1892-95 \\ & 1930 \\ & 1931-32 \\ & 1933 \end{aligned}$ | $\begin{array}{ll} W & 192, \\ W & \text { p. } 173 \\ W & 696, \\ \text { W } 726, & \mathrm{p} \cdot 358 \\ \text { W 741, } & \text { p. } 371 \end{array}$ |
| Rock Creok at Sherrill Drlve, Washingt on, D. C. | $\begin{aligned} & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ | W 696, p. 264 W 711, p. 295 W 726, p. 357 W 741, p. 370 W 756, p. 368 W 781, p. 408 W 801, p. 389 W 821, p. 426 W 851, p. 477 W 871, p. 474 W 891, p. 546 W 921, p. 556 W 951, W 971.574 |
| Savage R1ver at Ploomington, Md.... | $\begin{aligned} & 1905-6 \\ & 1925 \\ & 1926 \\ & 1927 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |

Bibllography of stream-flow data in Maryland and Potomac River Basin--Continued

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| Seneca Creek at Dawsonville, Md..... | 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 | W 711, $p .294$ <br> W 726, $p .356$ <br> W 741, p. 369 <br> W 756, p. 367 <br> W 781, $p .406$ <br> W 801, $p .387$ <br> W 821, p. 424 <br> W 851, p. 475 <br> W 871, 472 <br> W 891, $p .544$ <br> W921, p. 554 <br> W951, $p .572$ <br> W 971  |
| Shenandoah River at Millville, W.Va. | $\begin{aligned} & 1895-1909 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| South Branch Potomac River near Franklin, W. Va. | $\begin{aligned} & 1940-41 \\ & 1942 \\ & 1943 \end{aligned}$ | $\begin{aligned} & \text { W 921, p. } 526 \\ & \text { W 951, p. } 541 \\ & \text { W } 971 \end{aligned}$ |
| South Branch Potomac River near Petersburg, W. Va. | 1928 <br> 1930 <br> 1931 <br> 1932 <br> 1933 <br> 1934 <br> 1935 <br> 1936 <br> 1937 1938 <br> 1939 <br> 1940 <br> 1941 1942 | W 661, p. 205 W 681, p. 222 W 696, p. 242 W 711, p. 269 W 726, p. 327 W 741, p. 347 W 756, p. 345 W 781, p. 383 W 801, p. 366 W 821, p. 404 W 851, p. 448 W 871, p. 448 W 891, p. 515 W 921, p. 527 W 951, p. 542 W 971, |
| South Branch Potomac R1ver near Springfield, W . Va . | $\begin{aligned} & 1894-1906 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| South Fork Shenandoah River near Front Royal, Va. | $\begin{aligned} & 1899-1906 \\ & 1930-31 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \\ & 1937 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |

Bibllography of stream-flow data in Maryland and Potomac Rivar Basin--Continued
Potomac River Beain-=Continued

| Gaging station | Year | Publication |
| :---: | :---: | :---: |
| South Fork Shanandoah River nagr Luray, Va. | $\begin{aligned} & 1925-27 \\ & 1928 \\ & 1929 \\ & 1930 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| South Fork Shenandoah Rivar naar Lynnwood, Va. | $1930-31$ 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 | W 711, p. 280  <br> W 726 p. 340  <br> W 741, p. 357  <br> W 756, p. 355  <br> W 781, p. 393  <br> W 801, p. 374  <br> W 821, p. 411  <br> W 851, 457  <br> W 871, p. 457  <br> W 891, p. 524  <br> W 921, p. 540  <br> W951, p. 554  <br> W 971.   |
| South Fork of South Branch Potomac River naar Moorefleld, W. Va. | $\begin{aligned} & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 2934 \\ & 1935 \\ & 1938 \\ & 1939 \\ & 1940 \\ & 1941 \\ & 1942 \\ & 1943 \end{aligned}$ |  |
| South River at Basic City, Va. | 1905-6 | W 203, p. 63 |
| South River at farriston, Va.... | $1925-27$ 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 |  |
| South River at Port Republic, Va | 1895-99 | B 31, p. 70 |
| South Rivar at Waynesboro, Va... | $\begin{aligned} & 1928-29 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933-40 \\ & 1941-42 \\ & 1943 \end{aligned}$ | W 681, $p .235$  <br> W 696, $p .256$  <br> W 711, $p .284$  <br> W 726, p. 344  <br> W 891, p. 529  <br> W 951, $p .559$  <br> W 971   |
| Town Creek naar Oldtown, Md..... | $\begin{aligned} & 1928 \\ & 1929 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \end{aligned}$ | W 661, p. 208 <br> W 681, p. 225 <br> W696, p. 245 <br> W 711, p. 272 <br> W 726, p. 330 <br> W 741, p. 350 <br> W 756, p. 348 <br> W 781, p. 386 |
| Wills Creek near Cumberland, Md. | $\begin{aligned} & 1905-6 \\ & 1930 \\ & 1931 \\ & 1932 \\ & 1933 \\ & 1934 \\ & 1935 \\ & 1936 \end{aligned}$ | W 203, p. 58 <br> W 696, p. 239 <br> W 711, p. 266 <br> W 726, p. 324 <br> W 741, p. 344 <br> W 756, p. 342 <br> W 781, p. 381 <br> W 801, $p .364$ |

Bibliography of etream-flow data in Maryland and Potomac River Baein--Continued

| Gaging station | That | Publication |
| :---: | :---: | :---: |
| Wills Creek near Cumberland, Md... Continued | $\begin{aligned} & 1937 \\ & 1058 \\ & 1980 \\ & 1940 \\ & 1941 \\ & 1948 \\ & 1948 \end{aligned}$ |  |



## OAGINO STATION RECORDS

WICOMICO RIVER 8ASIN
Eat Branch WIcomico River naar Saliabury, Md.
Location. - Water-otage recordar upstream from splliway of Schumakar Dam, lat. $38^{\circ} 21^{\prime \prime} 05^{\prime \prime}$, long. 75 品 $4^{\prime} 11^{\prime \prime}$, threa-quarters of a mile upstream from Beaglin branch and 2 m 11 es southeast of Salisbury, Wicomico County. Datum of gage is 8.93 foet above mean sea level (city of Salisbury bench mark).
Drainage area. - 17.3 squara milee.
Records avallabla.- October 1929 to Sept amber 1943.
Extremee.- Maximum gaga height, 14.02 faet, Aug. 23, 1933; minimum dally discharga recorded, 0.6 second-foot during several periode in 1938 and 1939 (leakage undar dam and through flood gatae).

Monthly diecharga of East Branch Wicomico River near Salisbury, Md.

| Month | Diecharga in orcond-fagt |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inchae } \end{aligned}$ | Discharge in million gallone per day par equara mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Par } \\ \text { squara } \\ \text { m110 } \end{gathered}$ |  |  |
|  |  |  |  |  |  |  |
|  | 19.0 | 7.6 | 11.8 | -. 688 | - 0.76 | . 441 |
|  | 28.3 | 7.8 | 14.5 | . 838 | . 97 | . 542 |
|  | 24.0 | 8.4 | 15.3 | . 884 | 1.02 | . 571 |
|  | 34.1 | 12.8 | 20.2 | 1.17 | 1.22 | . 756 |
|  | 58.4 | 8.4 | 21.1 | 1.22 | 1.41 | . 789 |
|  | 20.0 | 8.4 | 11.7 | . 676 | .75 | . 437 |
|  | 15.3 | 6.6 | 9.08 | . 525 | . 61 | . 339 |
|  | 14.4 | 5.4 | 7.62 | - 440 | - 49 | . 284 |
|  | 9.1 | 3.8 | 5.67 | . 328 | . 38 | . 212 |
|  | 7.2 6.6 | 3.3 2.0 | 4.92 3.75 | . 2884 | . 33 | . 184 |
|  |  |  |  |  |  |  |
|  | 6.6 | 2.0 | 3.52 | . 203 | . 23 | . 131 |
|  | 7.2 | 2.4 | 4.02 | . 232 | .26 | . 150 |
|  | 6.5 | 2.8 | 3.78 | . 218 | . 25 | . 141 |
|  | 7.2 | 2.8 | 4.17 | . 241 | . 28 | . 156 |
|  | $6 \cdot 6$ | 2.8 | 3.96 | . 229 | . 24 | . 148 |
|  | 7.2 | 2.4 | 4.60 | . 266 | . 31 | . 172 |
|  | 20.0 | 7.2 | 11.5 | . 665 | . 74 | . 430 |
|  | 27.1 | 6.6 | 13.3 | . 769 | . 89 | . 497 |
|  | 14.4 | 5.4 | 8.23 | . 476 | . 53 | . 308 |
|  | 8.4 | 3.3 | 5.05 | . 292 | . 34 | . 189 |
|  | 22.0 | 3.3 | 8.41 | . 486 | . 56 | . 314 |
|  | 24.0 | 4.3 | 8.26 | . 477 | . 53 | . 308 |
|  | 27.1 | 2.0 | 6.57 | . 380 | 5.16 | . 246 |
| October.............. | 12.8 | 5.4 | 7.93 | . 458 | . 53 |  |
| Novambar | 11.2 | 4.8 | 6.86 | . 397 | . 44 | . 257 |
| Dacambar | 12.0 | 4.3 | 7.05 | -408 | . 47 | . 264 |
| January. | 76.1 | 4.8 16.2 | 21.7 | 1.25 | 1.44 | . 8.847 |
| Fabruary | 98.2 | 12.0 | 31.0 | 1.79 | 2.06 | 1.16 |
| April. | 57.8 | 16.2 | 26.8 | 1.55 | 1.73 | 1.00 |
| May. | 86.0 | 9.1 | 23.5 | 1.36 | 1.57 | . 879 |
| June | 24.0 | 9.8 | 14.3 | . 827 | . 92 | . 535 |
| July... | 12.0 | ${ }_{6}^{6.6}$ | 8.00 | - 462 | . 53 | -299 |
| August. | 11.2 | 4.3 | 7.01 6.39 | . 405 | . 47 |  |
| Saptamber. |  | 3.3 | 6.39 | . 369 |  |  |
| The yee | 98.2 | 3.3 | 15.2 | . 879 | 11.98 | . 568 |
| October. . . . . . . . ${ }^{\text {a }}$. | 18.0 | 4.8 | 8.56 |  | . 57 |  |
| Novamber | 31.8 | 8.4 | 17.0 | . 983 | 1.10 | . 635 |
| Dacambar | 59.3 | 9.8 | 23.5 | 1.36 | 1.57 | . 879 |
| January. | 68.2 | 18.0 | 31.9 | 1.84 | 2.12 | 1.19 |
| Fabruary. | - 111 | 23.0 | 48.1 | 2.78 | 2.90 | 1.80 |
| March. . | 31.8 | 17.1 | 23.3 | 1.35 | 1.56 | . 873 |
| Apr11. | 120 | 22.0 | 42.2 | 2.44 | 2.72 | 1.58 |
| May. | 35.3 | 14.4 | 22.5 | 1.30 | 1.50 | - 840 |
| June. | 20 | 7.2 | 11.0 | . 636 | . 71 | . 411 |
| July. | 63.7 | $7 \cdot 1$ | 17.3 | 1.00 | 1.15 | . 6493 |
| Auchist 1-21 | 44.4 | 9.2 | 13.2 | . 763 | . 59 | . 493 |
| 1934 |  |  |  |  |  |  |
| May 8-31 |  | 26.1 | 61.6 21.5 | 3.56 1.24 | 3.18 3.38 | 2.30 .801 |
| Juna ${ }^{\text {July }} 1$-29, ${ }^{\text {a }} 1$ | 65.4 | 12.9 | 15.1 | 1.873 | +. 97 | . 564 |
| August.... | 50.2 | 9.1 | 18.7 | 1.08 | 1.24 | . 698 |
| September 1-7, 12 | 72.7 | 10.7 | 28.0 | 1.62 | 1.57 | 1.05 |

Monthly dischorge of East Brench Wicomico River near Selisbury, Md. --Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Diecherge in million gellcns per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 58.5 | 13.2 | 26.7 | 1.54 | 1.78 | 0.995 |
| November. | 41.0 | 16.1 | 22.1 | 1.28 | 1.43 | . 827 |
| December | 45.5 | 18.1 | 32.4 | 1.87 | 2.16 | 1.21 |
| Januery 1-22 | 74.6 | 19.2 | 34.3 | 1.98 | 1.62 | 1.28 |
| February 4-28 | 77.3 | 24.2 | 40.8 | 2.36 | 2.19 | 1.53 |
| March 1-8,22-31 | 35.8 | 18.8 | 27.2 | 1.57 | 1.05 | 1.01 |
| April... | 197 | 19.8 | 47.0 | 2.72 | 3.04 | 1.76 |
| May.. | 44.2 | 14.9 | 22.9 | 1.32 | 1.52 | . 853 |
| June. | 65.2 | 10.6 | 20.1 | 1.16 | 1.29 | . 750 |
| July. | 67.1 | 10.6 | 26.2 | 1.51 | 1.74 | . 976 |
| August. | 29.0 | 9.0 | 13.8 | . 798 | . 92 | . 516 |
| September |  |  |  |  |  |  |
| May 8-31. <br> June $\qquad$ <br> July. <br> August. <br> September 1-15, 23-30 | 21.3 | 11.8 | 14.5 | . 838 | .75 | . 542 |
|  | 28.2 | 8.7 | 14.0 | . 809 | . 90 | . 523 |
|  | 20.2 | 8.5 | 11.8 | . 682 | .79 | . 441 |
|  | 218 | 7.1 | 22.8 | 1.32 | 1.52 | . 853 |
|  | 67.0 | 11.6 | 21.4 |  |  | . 801 |
| October.............. | 127 | 15.1 | 30. |  |  | $\begin{aligned} & 1.14 \\ & .590 \end{aligned}$ |
| November | 24.4 | 10.8 | 15.8 | 1.76 | $\begin{aligned} & 2.03 \\ & 1.02 \end{aligned}$ |  |
| Deceraber. | 124 | 14.2 | 39.4 | 2.28 | 2.63 | $\begin{aligned} & 1.47 \\ & 2.94 \end{aligned}$ |
|  | 200 | 38.8 | 78.7 | 4.55 | 2.88 |  |
| February 17-28 | 79.2 | 38.8 | 56.4 | 3.26 | 1.45 | 2.11 |
| March..... | 150 | 20.0 | 44.7 | 2.58 | 2.97 |  |
| April 1-2 | 167 | 19.0 | 43.7 | 2.53 | 2.73 | 1.64 |
|  | 41.6 | 15.1 | 24.9 | 1.44 | 1.66 | 1.631.769 |
| June.July. | 120 | 10.8 | 20.6 | 1.19 | 1.33 |  |
|  | 278 | 13.3 | 34.0 | 1.97 | 2.27 | 1.27 |
| July ........Auguet $1-22$,Sept ember |  | 10.0 | $\begin{aligned} & 13.5 \\ & 12.5 \end{aligned}$ | . 723 | . 81 | 1.27 .504 |
|  | $28.3$ | 8.0 |  |  |  | . 467 |
| October... 1937-38.... |  |  |  |  |  | . 493 |
| Novomber. | 68 |  |  |  |  |  |
| December. |  | 10.5 | 26.6 25.4 | $\begin{aligned} & 1.54 \\ & 1.47 \end{aligned}$ | 1.72 1.70 | $.995$ |
|  | 76 | 20.3 | 32.2 | 1.86 | 1.70 2.14 | 1.20 |
| Fobruery. | 79 | 15.5 | 29.8 | 1.72 | $1.79$ | 1.111.00 |
| March 20-31 | 3755 | 19.1 | 26.8 | 1.551.73 | $.69$ |  |
| April 1-17 |  | 20.2 | 30.043.4 |  | 1.09 | 1.12 |
| July. | 230 | 10.4 |  | 1.73 2.51 | 2.89 | 1.62 |
| August... <br> Sept amber | 34210 | $\begin{array}{r} 12.0 \\ .8 \end{array}$ | $\begin{aligned} & 20.4 \\ & 42.3 \end{aligned}$ | $\begin{aligned} & 1.18 \\ & 2.45 \end{aligned}$ | $\begin{aligned} & 1.36 \\ & 2.73 \end{aligned}$ |  |
|  |  |  |  |  |  | $1.58$ |
| October 1938-39 |  |  |  |  |  |  |
| November. | 75 | 17.6 | $\begin{aligned} & 28.4 \\ & 30.9 \end{aligned}$ | 1.64 1.79 | $\begin{aligned} & 1.89 \\ & 2.00 \end{aligned}$ | $\begin{aligned} & 1.06 \\ & 1.16 \end{aligned}$ |
| December. | 40.0 | 16.4 | 27.6 | 1.602.52 | 1.84 | 1.031.63 |
| Januery. | 80 | $\begin{aligned} & 22.3 \\ & 34.6 \end{aligned}$ | 43.6 |  | 2.903.28 |  |
| Februery. | 84 |  |  | 2.52 3.15 |  | 2.04 |
| March | 219 | 30.6 | 52.4 | 3.03 | 3.49 | 1.96 |
| April | 198 | $\begin{aligned} & 29.3 \\ & 13.6 \end{aligned}$ | 57.7 | 3.341.24 | 3.73 | 2.16 |
| May. |  |  |  |  | 1.43 |  |
| June | 39.0 | 13.6 .6 | 21.4 14.3 | $\begin{gathered} 1.24 \\ .827 \end{gathered}$ | $.92$ | $.801$ |
| July. | 46 | $\begin{aligned} & 9.6 \\ & 5.6 \end{aligned}$ | 13.6 | . 786 |  | . 508 |
| AugusSepte | 31.8 <br> 67 |  | $\begin{aligned} & 13.1 \\ & 21.0 \end{aligned}$ | $\begin{aligned} & .757 \\ & 1.21 \end{aligned}$ | $\begin{array}{r} .87 \\ 1.35 \\ \hline \end{array}$ | $\begin{aligned} & .489 \\ & .782 \\ & \hline \end{aligned}$ |
|  |  | 12 | 21.0 |  |  |  |
| The yee | 21. | . 6 | 31.4 | 1.82 | 24.61 | 1.18 |
|  | $\begin{aligned} & 200 \\ & 60 \\ & 17.0 \\ & 29 \\ & 80 \\ & 72 \\ & 89 \\ & 68 \\ & 70 \\ & 47 \\ & 20 \\ & 11.5 \end{aligned}$ |  |  | 2.161.53.850.9772.322.292.171.251.01.717.618.470 |  | $\begin{gathered} 1.40 \\ .989 \\ .549 \\ .631 \\ 1.50 \\ 1.48 \\ 1.40 \\ .808 \\ .653 \\ .463 \\ .399 \\ .304 \end{gathered}$ |
| October.. |  | $\begin{aligned} & 17.5 \\ & 16.5 \\ & 12.5 \\ & 12.5 \\ & 16.0 \\ & 25 \\ & 22 \\ & 12.0 \\ & .7 \\ & 7.9 \\ & 8.0 \\ & 6.6 \end{aligned}$ | $\begin{gathered} 37.4 \\ 26.4 \\ 14.7 \\ 16.9 \\ 40.1 \\ 39.6 \\ 37.5 \\ 21.6 \\ 17.5 \\ 12.4 \\ 10.7 \\ 8.13 \end{gathered}$ |  | $\begin{array}{r} 2.49 \\ 1.71 \\ .98 \\ 1.13 \\ 2.50 \\ 2.64 \\ 2.42 \\ 1.44 \\ 1.13 \\ .83 \\ .71 \\ .52 \end{array}$ |  |
| November. |  |  |  |  |  |  |
| December. |  |  |  |  |  |  |
| Jenuery.. |  |  |  |  |  |  |
| Februery |  |  |  |  |  |  |
| March |  |  |  |  |  |  |
| April |  |  |  |  |  |  |
| Mey. |  |  |  |  |  |  |
| June. |  |  |  |  |  |  |
| July. |  |  |  |  |  |  |
| August. |  |  |  |  |  |  |
| September. |  |  |  |  |  |  |
|  | 200 | . 7 | 23.5 | 1.36 | 18.50 | . 879 |

Monthly discharge of East Branch Wicomico R1ver near Salisbury, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallone per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mıle |  |  |
| $1940-41$ <br> October. . . . . . . . . . . . . . . . . . . . . . <br> November. <br> December. <br> January. <br> February <br> March. <br> April. <br> May. <br> June <br> July. <br> August <br> September. | 12 35 29 55 44 92 106 18 32 20 18 11 | $\begin{array}{r} 6.5 \\ 6.4 \\ 9.4 \\ 11 \\ 20 \\ 20 \\ 19 \\ 10 \\ 8.7 \\ 8.7 \\ 6.5 \\ 5.3 \end{array}$ | $\begin{gathered} 7.98 \\ 14.6 \\ 15.2 \\ 26.3 \\ 27.1 \\ 32.0 \\ 36.0 \\ 13.6 \\ 13.0 \\ 12.1 \\ 8.38 \\ 6.67 \end{gathered}$ | $\begin{array}{r} 0.461 \\ .844 \\ .879 \\ 1.52 \\ 1.57 \\ 1.85 \\ 2.08 \\ .786 \\ .751 \\ .699 \\ .484 \\ .386 \end{array}$ | $\begin{array}{r} 0.53 \\ .94 \\ 1.01 \\ 1.75 \\ 1.63 \\ 2.13 \\ 2.32 \\ .91 \\ .84 \\ .81 \\ .56 \\ .43 \end{array}$ | $\begin{gathered} 0.298 \\ .545 \\ .568 \\ .982 \\ 1.01 \\ 1.20 \\ 1.34 \\ .508 \\ .485 \\ .452 \\ .313 \\ .249 \end{gathered}$ |
| The year.................... | 106 | 5.3 | 17.7 | 1.02 | 13.86 | . 659 |
| October. <br> November. <br> Docember. <br> Januery <br> February. <br> March. <br> April. <br> May. <br> June <br> July. <br> August. <br> September. | 9.6 7.3 15 13 15 357 126 20 35 26 32 20 | $\begin{gathered} 4.7 \\ 5.4 \\ 5.5 \\ 5.5 \\ 6.2 \\ 6.2 \\ 18 \\ 11 \\ 8.5 \\ 7.7 \\ 9.3 \\ 7.9 \end{gathered}$ | $\begin{gathered} 6.00 \\ 6.12 \\ 7.25 \\ 6.87 \\ 8.95 \\ 43.0 \\ 32.8 \\ 15.0 \\ 15.0 \\ 12.4 \\ 15.5 \\ 10.4 \end{gathered}$ | $\begin{gathered} .347 \\ .354 \\ .419 \\ .397 \\ .517 \\ 2.49 \\ 1.90 \\ .867 \\ .867 \\ .717 \\ .896 \\ .601 \end{gathered}$ | $\begin{array}{r} .40 \\ .39 \\ .48 \\ .46 \\ .54 \\ 2.86 \\ 2.11 \\ 1.00 \\ .97 \\ .83 \\ 1.03 \\ .67 \\ \hline \end{array}$ | $\begin{gathered} .224 \\ .229 \\ .271 \\ .257 \\ .334 \\ 1.61 \\ 1.23 \\ .560 \\ .560 \\ .463 \\ .579 \\ .388 \end{gathered}$ |
| The year................... | 357 | 4.7 | 15.0 | . 867 | 11.74 | .560 |
| October. <br> November $\qquad$ <br> December <br> January. <br> February <br> March. <br> Apr 11 <br> May. <br> June <br> July <br> August. <br> September | $\begin{aligned} & 25 \\ & 19 \\ & 30 \\ & 53 \\ & 79 \\ & 35 \\ & 59 \\ & 29 \\ & 17 \\ & 16 \\ & 60 \\ & 17 \end{aligned}$ | $\begin{aligned} & 7.9 \\ & 11 \\ & 14 \\ & 15 \\ & 24 \\ & 21 \\ & 18 \\ & 16 \\ & 8.6 \\ & 5.6 \\ & 6.2 \\ & 5.6 \end{aligned}$ | $\begin{gathered} 12.6 \\ 13.5 \\ 18.8 \\ 21.8 \\ 36.0 \\ 28.0 \\ 26.3 \\ 20.7 \\ 11.8 \\ 8.93 \\ 9.59 \\ 8.08 \end{gathered}$ | $\begin{array}{r} .728 \\ .780 \\ 1.08 \\ 1.27 \\ 2.08 \\ 1.62 \\ 1.52 \\ 1.20 \\ .682 \\ .516 \\ .554 \\ .467 \end{array}$ | .84 .87 1.25 1.46 2.17 1.87 1.70 1.38 .76 .60 .64 .52 | $\begin{gathered} .471 \\ .504 \\ .704 \\ .821 \\ 1.34 \\ 1.05 \\ .982 \\ .776 \\ .441 \\ .333 \\ .358 \\ .302 \end{gathered}$ |
|  | 79 | 5.6 | 17.9 | 1.03 | 14.06 | . 666 |

Yearly diecharge of East Branch W1comico RIver near Saliebury, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inchee | Discharge in million gellons per day per equare mile | Discharge in second-feet |  | Runoff in <br> inches | Discharge in million gallons per day per equare mile |
|  | Mean | Per square mile |  |  | Mean | Por aquare mile |  |  |
| 1330. | - | - | - | - | 9.16 | 0.529 | 7.19 | 0.342 |
| 1931. | 6.57 | . 380 | 5.16 | . 246 | 7.45 | . 431 | 5.86 | . 279 |
| 1932 | 15.2 | . 879 | 11.98 | . 568 | 17.5 | 1.01 | 13.78 | . 653 |
| 1939 | 31.4 | 1.82 | 24.61 | 1.18 | 30.7 | 1.77 | 24.06 | 1.14 |
| 1940. | 23.5 | 1.36 | 18.50 | . 879 | 20.1 | 1.16 | 15.80 | . 750 |
| $1941 .$ | 17.7 | 1.02 | 13.86 |  | 16.1 |  |  |  |
| 1942. | 15.0 | . 867 | 11.74 | . 560 | 17.1 | . 988 | 13.43 | . 639 |
| 1943.... | 17.9 | 1.03 | 14.06 | . 666 | - | - | - | - |

ELK RIVER BASIN
81g Elk Creek at EIK M111s, Md.
Location - Wire-waight gage, lat. $39^{3} 39^{1} 26^{\prime \prime}$, long. $75^{\circ} 49^{\prime} 20^{\prime \prime}$, on highway bridge at Elk NIIIs, Cecil County and 7 miles upstream from Little Elk Creek.
Drainage area. - 52.6 square miles.
Records avallable. - April 1932 to September 1943.
Fxtremes.- Maximum discharge, 10,600 second-feet July 5, 1937 (gage height, 14.5 feet,
from floodmarks), from rating curve extended above 2,000 second-faat on basis of
valocity-area study; minimum observed, 7 second-feet Sept. 19, 22-24, 1932 (gege halght 2.09 feet).

Marimum stage known, about 19 feet in June 1884
Remarks. - Slight regulation from mills above station.
Monthly discharge of Blg Elk Creek at Elk Mills, Md


Monthly discharge of 81 g EIk Creek at Elk M111s, Ma.--Continued

| Month | Diecharge in eecond-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Fer equare mile |  |  |
| 1936-37 |  |  |  |  |  |  |
| October...... | 114 | 17 | 27.6 | 0.525 | 0.61 | 0.339 |
| November. | 37 | 17 | 22.1 | . 420 | . 47 | . 271 |
| December. | 304 | 21 | 68.1 | 1.29 | 7.49 | . 834 |
| Januery. | 241 | 40 | 109 | 2.07 | 2.39 | 1.34 |
| February. | 410 | 59 | 90.5 | 1.72 | 1.79 | 1.11 |
| March.... | 158 | 50 | 72.6 | 1.38 | 1.59 | . 892 |
| April. | 256 | 47 | 85.6 | 1.63 | 1.82 | 1.05 |
| May.. | 145 | 37 | 58.8 | 1.12 | 1.29 | . 724 |
| June. | 170 | 28 | 48.3 | . 918 | 1.02 | . 593 |
| July. | 1,630 | 18 | 120 | 2.28 | 2.63 | 1.47 |
| August. | 1,450 | 11 | 154 | 2.93 | 3.38 | 1.89 |
| September $\qquad$ <br> The year $\qquad$ | 76 | 31 | 46.0 | . 875 | . 98 | . 566 |
|  | 1,630 | 11 | 75.3 | 1.43 | 19.46 | . 924 |
| October....... | 768 | 34 | 89.6 | 1.70 | 1.96 | 1.10 |
| November | 1,210 | 39 | 102 | 1.94 | 2.16 | 1.25 |
| December. | 104 | 40 | 56.4 | 1.07 | 1.23 | . 692 |
| Jamuery. | 380 | 43 | 68.2 | 1.30 | 1.50 | . 840 |
| February. | 245 | 41 | 76.1 | 7.45 | 1.51 | . 937 |
| March. | 182 | 36 | 70.8 | 1.35 | 1.56 | . 873 |
| April | 125 | 44 | 58.7 | 1.12 | 1.25 | . 724 |
| May. | 713 | 39 | 49.8 | .947 | 1.09 | . 612 |
| June | 800 | 25 | 89.8 | 1.71 | 1.91 | 1.11 |
| July | 840 | 31 | 122 | 2.32 | 2.68 | 1.50 |
| August.... September. | 192 | 31 | 62.6 | 7.19 | 1.37 | . 769 |
|  | 860 | 30 | 112 | 2.13 | 2.38 | 1.38 |
| The ye | 1,210 | 25 | 79.7 | 1. 52 | 20.60 | . 992 |
| October. | 72 | 37 | 49.5 | . 941 | 1.08 | . 608 |
| November. | 65 | 39 | 46.5 | . 884 | . 99 | . 571 |
| December. | 224 | 43 | 70.7 | 1.34 | 1.54 | . 866 |
| January. . | 695 | 40 | 80.5 | 1.53 | 1.76 | . 989 |
| February | 1,190 | 86 | 199 | 3.78 | 3.94 | 2.44 |
| March. | 235 | 88 | 127 | 2.41 | 2.78 | 1.56 |
| April. | 340 | 86 | 143 | 2.72 | 3.04 | 1.76 |
| May... | 95 | 47 | 70.7 | 1.34 | 1.54 | . 866 |
| June | 158 | 37 | 58.4 | 1.11 | 1.24 | . 717 |
| July.. | $\begin{array}{r}74 \\ \hline\end{array}$ | 20 | 33.9 | . 644 | . 74 | . 416 |
| August. . | 1,340 | 13 | 75.7 | 1.44 | 1.66 | .931 |
| September. | 95 | 19 | 29.2 | . 555 | . 62 | . 359 |
| The year. | 1,340 | 13 | 81.2 | 1.54 | 20.93 | . 995 |
| October. | 247 | 28 | 54.6 | 1.04 | 1.20 | . 672 |
| November. | 108 | 31 | 40.1 | . 762 | . 85 | . 492 |
| December. | 65 | 25 | 37.0 | .703 | . 81 | . 454 |
| January. | 461 | 24 | 51.0 | . 970 | 1.12 | . 627 |
| February. | 760 | 26 | 99.1 | 1.88 | 2.03 | 1.22 |
| March. . . | 978 | 35 | 156 | 2.97 | 3.42 | 1.92 |
| Apr11 | 626 | 54 | 118 | 2.24 | 2.50 | 1.45 |
| May. . | 348 | 55 | 99.7 | 1.90 | 2.19 | 1.23 |
| June | 114 | 33 | 56.7 | $1: 08$ | 1.20 | . 698 |
| July .... August.. | 48 128 | $\begin{aligned} & 24 \\ & 22 \end{aligned}$ | $\begin{aligned} & 31.8 \\ & 32.0 \end{aligned}$ | $\begin{aligned} & .605 \\ & .608 \end{aligned}$ | .70 .70 | . 391 |
| August... | $\begin{aligned} & 128 \\ & 254 \end{aligned}$ | 22 | 32.0 37.7 | $\begin{array}{r} .608 \\ .717 \\ \hline \end{array}$ | .70 .80 | .393 <br> .463 |
| The year. | 978 | 22 | 67.6 | 1.29 | 17.52 | . 834 |
| 1940-41 |  |  |  |  |  |  |
| October... |  | 24 | 33.6 |  | . 74 | . 413 |
| November. | 313 | 28 | 66.3 | 1.26 | 1.41 | . 814 |
| Decomber. | 285 | 31 | 50.7 | . 952 | 1.10 | . 615 |
| January.. | 328 | 21 | 68.4 | 1.30 | 1.50 | . 840 |
| February. | 950 | 26 | 94.4 | 1.79 | 1.87 | 1.16 |
| March. . | 596 | 35 | 91.7 | 1.74 | 2.01 | 1.12 |
| April... | 210 | 36 | 61.0 | 1.16 | 1.29 | . 750 |
| May.. | 51 | 26 | 32.7 | . 622 | . 72 | . 402 |
| June. | 70 | 22 | 32.2 | . 612 | . 68 | . 396 |
| July.. | 1,110 | 18 | 84.2 | 1.60 | 1.84 | 1.03 |
| August. | 233 | 16 | 28.1 | . 534 | . 62 | . 345 |
| Septomber....... | 18 | 12 | 14.0 | .266 | . 30 | .172 |
| The year. | 1,110 | 12 | 54.5 | 1.04 | 14.08 | . 672 |

Monthly discharge of Big Elk Creek at Elk Mills, Md.--Continued


Yearly Discharge of Bis Elk Creek at Elk M111s, Md.


SUSQUEHANNA RIVER BASIN
Broad Creek at Mill Green, Md.

[^0]Monthly discharge of Broed Creek at M111 Green, Md.

| Month | Discherge in second-feet |  |  |  | Runoffininches | Discharze in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | MInImum | Meen | Per square m110 |  |  |
| December 14-31. <br> Jenuery. <br> Februery <br> March. <br> April. <br> Mey. <br> June <br> July. <br> August. <br> September. <br> 1905-6 <br> October. <br> November <br> December <br> Jenuary. <br> February <br> March. <br> April. <br> May <br> June <br> July. <br> August. <br> September. <br> The yeer. |  |  |  |  |  |  |
|  | 76 | - | 15.0 | 0.915 | 0.61 | 0.591 |
|  | 184 | - | 31.7 | 1.93 | 2.22 | 1.25 |
|  | 60 | - | 14.2 | . 866 | . 90 | . 560 |
|  | 187 | 29 | 54.2 | 3.30 | 3.80 | 2.13 |
|  | 64 | 26 | 33.7 | 2.05 | 2.29 | 1.32 |
|  | 84 | 16 | 23.6 | 1.44 | 1.66 | . 931 |
|  | 86 | 13 | 19.8 | 1.21 | 1.35 | . 782 |
|  | 246 | 11 | 29.3 | 1.79 | 2.06 | 1.16 |
|  | 286 | 11 | 29.7 | 1.81 | 2.09 | 1.17 |
|  | 49 | 13 | 16.1 | . 982 | 1.10 | . 635 |
|  | 111 | 8 | 16.0 | . 976 | 1.13 | . 631 |
|  | 45 | 9 | 13.0 | . 793 | . 88 | . 513 |
|  | 184 | 11 | 26.1 | 1.59 | 1.83 | 1.03 |
|  | 72 | 16 | 24.3 | 1.48 | 1.71 | . 957 |
|  | 132 | 19 | 28.9 | 1.77 | 1.84 | 1.14 |
|  | 139 | 23 | 33.0 | 2.01 | 2.32 | 1.30 |
|  | 181 | 25 | 40.3 | 2.46 | 2.74 | 1.59 |
|  | 28 | 18 | 21.8 | 1.33 | 1.53 | . 860 |
|  | 74 | 13 | 20.1 | 1.23 | 1.37 | . 795 |
|  | 27 | 11 | 15.0 | . 915 | 1.05 | . 591 |
|  | 123 | 10 | 21.8 | 1.33 | 1.53 | . 860 |
|  | 13 | 9 | 9.93 | . 605 | .67 | .391 |
|  | 184 | 8 | 22.5 | 1.37 | 18.60 | . 885 |
| October | 107 | 9 | 19.0 | 1.16 | 1.34 | . 750 |
| November. | 36 | 12 | 16.4 | 1.00 | 1.12 | . 646 |
| December. | 103 | 12 | 23.1 | 1.41 | 1.63 | . 911 |
| January | 92 | - | 30.4 | 1.85 | 2.13 | 1.20 |
| February | - | - | 20.0 | 1.22 | 1.27 | . 789 |
| March. . | 278 | 19 | 56.8 | 3.46 | 3.99 | 2.24 |
| Apr11 | 43 | 17 | 21.2 | 1.29 | 1.44 | - 834 |
| Mey. | 32 | 15 | 18.5 | 1.13 | 1.30 | . 730 |
| June | 39 | 13 | 20.1 | 1.23 | 1.37 | . 795 |
| July. | 64 | 11 | 18.4 | 1.12 | 1.29 | . 724 |
| August. | 101 | 11 | 20.4 | 1.24 | 1.43 | . 801 |
| September. | 199 | 10 | 22.4 | 1.37 | 1.53 | . 885 |
| The yei | 278 | 10 | 24.0 | 1.46 | 19.84 | . 944 |
| October. . . . . . . | 26 | 11 | 17.1 | 1.04 | 1.20 | . 672 |
| November | 227 | 13 | 36.1 | 2.20 | 2.46 | 1.42 |
| December. | 320 | 25 | 58.2 | 3.55 | 4.09 | 2.29 |
| Jenuery. | 184 | 31 | 46.3 | 2.82 | 3.25 | 1.82 |
| Februery | 509 | 27 | 65.9 | 4.02 | 4.34 | 2.60 |
| Merch. | 291 | 26 | 41.5 | 2.53 | 2.92 | 1.64 |
| April | 33 | 19 | 24.3 | 1.48 | 1.65 | . 957 |
| Mey. | 136 | 18 | 27.1 | 1.65 | 1.90 | 1.07 |
| June | 28 | 13 | 16.3 | . 994 | 1.11 | . 642 |
| July. | 398 | 10 | 31.6 | 1.93 | 2.22 | 1.25 |
| August. | 103 | 10 | 16.6 | 1.01 | 1.16 | . 653 |
| September. | 20 | 10 | 10.8 | . 659 | .74 | . 426 |
| The year | 509 | 10 | 32.6 | 1.99 | 27.04 | 1.29 |
| October. 1908-9 | 36 | 9 | 12.8 |  | . 90 | . 504 |
| November. | 19 | 11 | 13.3 | . 811 | . 90 | . 524 |
| December. | 39 | 11 | 14.4 | . 878 | 1.01 | . 567 |
| Jonuary. | 69 | 13 | 18.8 | 1.15 | 1.33 | .743 |
| Februery. | 100 | 13 | 26.4 | 1.61 | 1.68 | 1.04 |
| March............ | 74 | 20 | 33.7 | 2.05 | 2.36 | 1.32 |

Yearly discharge of Broad Creek at M1ll Green, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge In million gallons per day per square mile | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day $p \in r$ square mile |
|  | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mıle } \end{gathered}$ |  |  | Mean | Per equare mile |  |  |
| $\begin{aligned} & 1905 . . \\ & 1906 . \\ & 1907 . \\ & 1908 . . \end{aligned}$ | $\begin{aligned} & 22.5 \\ & 24.0 \\ & 32.6 \end{aligned}$ | $\begin{aligned} & - \\ & 1.37 \\ & 1.46 \\ & 1.99 \end{aligned}$ | $\begin{aligned} & 18.60 \\ & 19.84 \\ & 27.04 \end{aligned}$ |  | $\begin{aligned} & 25.6 \\ & 22.8 \\ & 28.3 \\ & 26.7 \end{aligned}$ | $\begin{aligned} & 1.56 \\ & 1.39 \\ & 1.72 \\ & 1.63 \end{aligned}$ | $\begin{aligned} & 21.31 \\ & 18.85 \\ & 23.50 \\ & 22.10 \end{aligned}$ | $\begin{aligned} & 1.01 \\ & .898 \\ & 1.11 \\ & 1.05 \end{aligned}$ |

Octoraro Creek near Rising Sun, Md.
Location. - Wire-weight gage, lat. $39^{\circ} 41^{\prime 2} 7^{\prime \prime}$, long. $76^{\circ}{ }^{\circ} 7^{\prime} 138^{\prime \prime}$, on Porter Bridge, just downstream from Love Run, and 3咅 miles weet of R1sing Sun, Cecil county. Datum of gage is 73.77 feet above mean sea level, adjustment of 1912.
Drainage area.- 191 square miles.
Recorde gvalTable.- Apr11 1932 to September 1943.
Extremes.- Maximum discharge, 35,000 second-feet Aug. 9, 1942 (gage height, 17.57 feet)
from rating curve extended above 5,000 eecond-feet on basis of area-velocity studiee; minimum observed, 24 second-feet Sept. 19, 1932 (gage helght, 3.48 feet).

Floods of 1884, 1918, and 1933 reached stages of $24.3,16.5$, and 17.5 feet, respectively, present datum, from floodmarks.
Remarks. - Records do not include a small amount of water diverted by Octoraro water co. for use in locomotives. Slight regulation by mills.

Monthly discharge of Octoraro Creek near Rising Sun, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1932 |  |  |  |  |  |  |
| April 9-30.. | 394 | 125 | 189 | 0.990 | 0.81 | 0.640 |
| May..... | 814 | 125 | 210 | 1.10 | 1.27 | . 711 |
| June. | 290 | 71 | 120 | . 628 | . 70 | . 406 |
| July. | 292 | 55 | 77.3 | . 405 | . 47 | . 262 |
| August.. | 215 | 40 | 61.7 | . 323 | . 37 | . 209 |
| Soptamber. | E. |  |  | . 211 | . 24 | . 136 |
| Octobe |  |  |  |  |  |  |
| November.... | 570 1,250 | $\begin{array}{r}34 \\ 103 \\ \hline\end{array}$ | 288.2 | -.514 | . 59 | . 332 |
| December. . | 1,2504 694 | 107 | 288 | 1.51 | 1.68 1.18 |  |
| January. | 610 | 139 | 197 | 1.03 | 1.18 |  |
| Pebruary. | 814 | 129 | 261 | 1.37 | 1.43 | . 885 |
| March. | 1,590 | 169 | 393 | 2.06 | 2.38 | 1.33 |
| April | 1,810 | 292 | 521 | 2.73 | 3.05 | 1.76 |
| May. | 584 | 255 | 364 | 1.91 | 2.20 | 1.23 |
| June. | 584 | 137 | 217 | 1.14 | 1.27 | 1.737 |
| July.. | 2,300 | 96 | 242 | 1.27 | 1.45 | . 321 |
| August. | 13,700 | 87 | 1,074 | 6.15 | 7.09 | 3.87 |
| Septembe | 980 | 238 | 1,368 | 1.93 | 2.15 | 1.25 |
| The year. | 13,700 | 34 | 361 | 1.89 | 25.66 | 1.22 |
| October...... |  |  |  |  |  |  |
| November. | 274 | 139 | 178 | $\begin{aligned} & 1.21 \\ & .921 \end{aligned}$ | $\begin{aligned} & 1.40 \\ & 1.03 \end{aligned}$ | $\begin{array}{r} .782 \\ 505 \end{array}$ |
| December. | 352 | 116 | 170 |  |  |  |
| January. | 584 | 118 | 260 | 1.36 | 1.57 | . 879 |
| Februar | - 250 | 120 | 159 | . 832 | . 87 | . 538 |
| March. | 1,540 | 160 | 392 | 2.05 | 2.36 | 1.32 |
| May... | 1,630 | 268 | 406 | 2.13 | 2.38 | 1.38 |
| June.. | 1,280 | 214 | 346 | 1.81 | 2.09 | 1.17 |
| July.. | 721 | 158 | 216 | 1.13 | 1.26 | . 730 |
| August... | 367 | -85 | 159 | 1.832 .707 | . 96 | . 538 |
| September. | 980 | 75 | 269 | 1. 41 | 1.57 |  |
| The yaar. | 1,630 | 75 | 244 | 1.28 | 17.34 | 827 |

Monthly diacharge of Octoraro Creek near Rising Sun, Md.--Continued

| Month | Diacharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1934-35 |  |  |  |  | . |  |
| October. | 306 | 115 | 160 | 0.838 | 0.97 | 0.542 |
| November. | 556 | 123 | 189 | . 990 | 1.10 | . 640 |
| December. | 845 | 182 | 275 | 1.44 | 1.66 | . 931 |
| January. | 752 | 170 | 274 | 1.43 | 1.65 | . 924 |
| February. | 1,200 | 210 | 396 | 2.07 | 2.16 | 1.34 |
| March. | 880 | 286 | 358 | 1.87 | 2.16 | 1.21 |
| April. | 1,360 | 249 | 403 | 2.11 | 2.35 | 1.36 |
| May. | 556 | 182 | 269 | 1.41 | 1.63 | . 911 |
| June | 1,120 | 158 | 277 | 1.45 | 1.62 | . 937 |
| July. | 6,540 | 148 | 480 | 2.51 | 2.89 | 1.62 |
| August. | 458 | 115 | 172 | . 901 | 1.04 | -.582 |
| September | 1,540 | 124 | 287 | 1.50 | 1.67 | . 969 |
| The year. | 6,540 | 115 | 294 | 1.54 | 20.90 | . 995 |
| January 15-31.. | 845 | 250 | 402 | 2.10 | 1.32 | 1.36 |
| February ..... | 2,780 | 210 | 498 | 2.61 | 2.82 | 1.69 |
| March. | 2,910 | 327 | 786 | 4.12 | 4.75 | 2.66 |
| April | 1,280 | 308 | 489 | 2.56 | 2.86 | 1.65 |
| May. | 665 | 184 | 271 | 1.42 | 1.64 | . 918 |
| June | 270 | 135 | 176 | . 921 | 1.03 | . 595 |
| July. | 193 | 93 | 129 | . 675 | . 78 | . 436 |
| August | 234 | 63 | 103 | . 539 | . 62 | . 348 |
| September. | 91 | 55 | 76.9 | . 403 | . 45 |  |
| October. | 187 | 72 | 90.5 | . 474 | . 55 | . 306 |
| November | 106 | 69 | 80.0 | . 419 | . 47 | . 271 |
| December. | 1,360 | 77 | 203 | 1.06 | 1.22 | . 685 |
| January. | 722 | 151 | 336 | 1.76 | 2.03 | 1.14 |
| February. | 1,540 | 211 | 323 | 1.69 | 1.76 | 1.09 |
| March | 584 | 193 | 249 | 1.30 1.53 | 1.50 1.71 | . 840 |
| April | 814 435 | 182 | 292 238 | 1.53 | 1.71 | . 989 |
| May. | 435 435 | 171 | 238 177 | 1.25 <br> .927 | 1.44 1.03 | .808 .599 |
| June | 435 1,340 | 125 | 177 | 1.927 | 1.03 1.22 | . 598 |
| July .... | 1,340 827 | 104 96 | 202 226 | 1.06 1.18 | 1.22 1.36 | .685 .763 |
| August... | 827 193 | 96 <br> 96 | 226 125 | 1.18 .654 | 1.36 .73 | $\begin{array}{r} .763 \\ .423 \\ \hline \end{array}$ |
| The jear. | 1,540 | 69 | 211 | 1.10 | 15.02 | . 711 |
| October | 2,810 | 96 | 295 | 1.54 | 1.78 | . 995 |
| November | 2,210 | 160 | 305 | 1.60 | 1.78 | 1.03 |
| December | 251 | 175 | 202 | 1.06 | 1.22 | . 685 |
| January. | 752 | 150 | 219 | 1.15 | 1.33 | . 743 |
| February | 638 | 165 | 252 | 1.32 | 1.38 | . 853 |
| March. | 752 | 217 | 285 | 1.49 | 1.72 | . 963 |
| April. | 412 | 165 | 215 | 1.13 | 1.26 | .730 |
| May. | 3 308 | 129 | 172 | . 901 | 1.04 | -. 588 |
| June | 3,780 | 117 133 | 323 342 | 1.69 1.79 | 1.89 2.06 | 1.09 |
| July... | 1,280 980 | 133 | 342 221 | 1.79 1.16 | 2.06 1.34 | 1.16 .750 |
| August.. | 980 1,050 | 111 | 221 206 | 1.16 1.08 | 1.34 1.20 | . 750 |
| The year. | 3,780 | 96 | 253 | 1.32 | 18.00 | . 853 |
| October.. | 389 | 130 | 167 | .874 | 1.01 | . 565 |
| November. | 249 | 120 | 149 | . 780 | . 87 | . 504 |
| December. | 1,120 | 173 | 296 | 1.55 | 1.78 | 1.00 |
| January. | 1,790 | 130 | 255 | 1.34 | 1.54 | . 866 |
| February. | 1,530 | 346 367 | 557 | 2.92 | 3.04 | 1.89 |
| March... | 1,120 | 367 | 478 | 2.50 | 2.88 | 1.62 |
| April. | 910 | 367 | 482 | 2.52 | 2.81 | 1.63 |
| May.. | 814 | 198 | 297 | 1.55 | 1.79 | 1.00 |
| June. | 1,750 | 170 | 273 | 1.43 | 1.60 | . 924 |
| July. | 458 | 127 | 194 | 1.02 | 1.18 | . 659 |
| August. | 934 | 99 | 190 | . 995 | 1.15 | . 643 |
| September | 308 | 91 | 119 | . 623 | . 70 | . 403 |
| The year.. | 1,790 | 91 | 286 | 1.50 | 20.36 | .969 |

Monthly discharge of Octoraro Creek near Rising Sun, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Par square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| October. | 2,050 | 113 | 250 | 1.31 | 1.51 | 0.847 |
| November | 458 | 112 | 147 | . 770 | . 86 | . 498 |
| December. | 288 | 110 | 138 | .723 | . 83 | . 467 |
| Januery. | 1,300 | 105 | 172 | . 901 | 1.04 | . 582 |
| February. | 980 | 110 | 258 | 1.35 | 1.46 | . 873 |
| March. | 1,690 | 174 | 352 | 1.84 | 2.12 | 1.19 |
| April. | 1,830 | 215 | 450 | 2.36 | 2.63 | 1.53 |
| May... | 752 | 215 | 310 | 1.62 | 1.87 | 1.05 |
| June | 482 | 159 | 220 | 1.15 | 1. 28 | . 743 |
| July. | 262 | 96 | 137 | . 717 | . 83 | . 463 |
| August. | 296 | 83 | 128 | . 670 | . 77 | . 433 |
| September | 1,320 | 83 | 191 | 1.00 | 1.12 | . 646 |
| The year. | 2,050 | 83 | 229 | 1.20 | 16.32 | . 776 |
| October...... |  | 96 |  |  |  |  |
| November. | 1,280 | 111 | 262 | 1.37 | 1.53 | . 885 |
| December. | 583 | 164 | 233 | 1.22 | 1.41 | . 789 |
| Januriry. | 991 | 170 | 263 | 1.38 | 1.68 | . 392 |
| February. | 1,330 | 150 | 288 | 1.51 | 1.57 | . 976 |
| Merch. | 1,250 | 151 | 341 | 1.79 | 2.06 | 1.16 |
| April. | 502 | 162 | 235 | 1.23 | 1.37 | . 795 |
| May.. | 194 | 107 | 137 | . 717 | . 83 | . 463 |
| June. | 413 | 94 | 154 | . 806 | . 90 | . 521 |
| Augy. | 858 528 | 82 58 | 192 | $1.01$ | $\begin{array}{r}1.16 \\ \hline .55\end{array}$ | .653 .307 |
| September | 282 | 44 | 66.3 | . 347 | . 39 | . 224 |
| The jear | 1,330 | 44 | 199 | 1.04 | 14.17 | . 672 |
| October.. | 66 | 33 | 53.3 | .279 | . 32 | . 180 |
| November. | 137 | 47 | 67.4 | . 353 | . 39 | . 228 |
| December. | 722 | 47 | 111 | . 581 | . 67 | . 376 |
| Jenuery. | 371 | 70 | 101 | . 529 | . 61 | . 342 |
| February. | 1,930 | 80 | 210 | 1.10 | 1.14 | . 711 |
| March. | 1,380 | 83 | 256 | 1.34 | 1.55 | . 866 |
| April | 352 | 115 | 173 | . 906 | 1.01 | . 586 |
| May. | 9,270 | 96 | 625 | 3.27 | 3.77 | 2.11 |
| June | 482 | 123 | 202 | 1.06 | 1.18 | . 685 |
| July. | 1,120 | 101 | 197 | 1.03 | 1.19 | . 666 |
| August... | 15,000 | 125 | 790 | 4.14 | 4.77 | 2.68 |
| September | 545 | 105 | 161 | . 843 | . 94 | .545 |
| The year. | 15,000 | 33 | 247 | 1.29 | 17.54 | . 834 |
| October. | 996 | 113 | 248 | 1.30 | 1.50 | . 840 |
| November | 600 | 157 | 236 | 1.24 | 1.38 | . 801 |
| December. | 1,740 | 160 | 384 | 2.01 | 2.32 | 1.30 |
| January.. | , 560 | 218 | 286 | 1.50 | 1.72 | 1.969 |
| Fobruery. | 1,330 | 143 | 403 | 2.11 | 2.20 | 1.36 |
| Merch. | -911 | 218 | 382 | 2.00 | 2.30 | 1.29 |
| April | 962 | 234 | 327 | 1.71 | 1.91 | 1.11 |
| May. | 1,500 | 218 | 380 | 1.99 | 2.29 | 1.29 |
| June | 305 | 157 | 218 | 1. 14 | 1.27 | . 737 |
| July. | 1,520 | 129 | 231 | 1.21 | 1.39 | . 782 |
| August. | 134 | 68 | 96.7 | . 506 | . 58 | . 327 |
| September. | 83 | 45 | 66.4 | . 348 | . 39 | . 225 |
| The jear. | 1,740 | 45 | 271 | 1.42 | 19.25 | . 918 |

Yearly discharge of Octoraro Creek near Rising Sun, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in sacond-faet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day par square mile | Diacharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharce In million gallons per day per square mile |
|  | Max | Per squara mile |  |  | Mean | Por square mile |  |  |
| 193? | 361 | 1.89 | 25.66 | 1.22 | 361 | 1.89 | 25.67 | 1.22 |
| 1934. | 244 | 1.28 | 17.34 | . 827 | 247 | 1.29 | 17.61 | . 834 |
| 1935 | 294 | 1.54 | 20.90 | . 995 | - | - | - |  |
| 1937 | 211 | 1.10 | 15.02 | . 711 | 247 | 1.29 | 17.56 | . 834 |
| 1938. | 253 | 1.32 | 18.00 | . 853 | 237 | 1.24 | 16.89 | .801 |
| 1939. | 286 | 1.50 | 20.36 | . 969 | 280 | 1.47 | 19.89 | . 950 |
| 1940 | 229 | 1.20 | 16.32 | . 776 | 237 | 1.24 | 16.88 | . 801 |
| 1941 | 199 | 1.04 | 14.17 | . 672 | 166 | . 869 | 11.79 | . 562 |
| 1942 | 247 | 1.29 | 17.54 | . 834 | 300 | 1.57 | 21.36 | 1.01 |
| 1943. | 271 | 1.42 | 19.25 | . 918 | - | - |  |  |
| Higheet. | 361 | 1.89 | 25.66 | 1.22 | 361 | 1.89 | 25.67 | 1.22 |
| Average. | 260 | 1.36 | 18.46 | . 879 | 259 | 1.36 | 18.46 | . 879 |
| Lowast.. | 199 | 1.04 | 14.17 | . 672 | 166 | . 869 | 11.79 | . 562 |

Octcrarc Creek at Rowlandsville, Ma.
 Rowiandavilla, Cacil County, immediately downstraam from Basin Run, and 0.7 mile upstream from Susquehanna River
Drainage araz. - 217 equare miles.
Records available.. November 1896 to September 1890
prtremes:- Marimum dally discharge, 6,150 second-feet Feb. 7, 1897; minimum daıly 102 second-feet Sept. 6, 1899.
Remarks.- Hith stages of Susquehanna River probably causes backwater at this station.
Monthly diecharga of Octoraro Creek at Rowlandsville, MC.

| Month | Dlecharge in second-feet |  |  |  | Runoff 1 n inches | Discharge In million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare m1le |  |  |
| 1896-97 |  |  |  |  |  |  |
| November 22-30. | 540 | 145 | 211 | 0.972 | 0.33 | 0.628 |
| December...... | 225 | 145 | 158 | . 728 | . 84 | . 471 |
| Januery. | 2,580 | 155 | 329 | 1.52 | 1.75 | . 982 |
| February. | 6,150 | 170 | 1,021 | 4.71 | 4.90 | 3.04 |
| March. | 500 | 170 | 230 | 1.06 | 1.22 | . 685 |
| April. | 2,000 | 170 | 37 C | 1.71 | 1.90 | 1.11 |
| May...... | , 920 | 170 | 321 | 1.48 | 1.70 | . 957 |
| Juna. | 1,270 | 145 | 222 | 1.02 | 1.14 | . 659 |
| July. | 520 | 135 | 192 | . 885 | 1.02 | . 572 |
| August.. | 960 | 130 | 186 | . $85{ }^{7}$ | . 99 | . 554 |
| September | 170 | 130 | 136 | . 627 | . 70 | . 405 |
| 1897-98 |  |  |  |  |  |  |
| October.. | 170 | 130 | 141 | . 650 | . 75 | . 420 |
| November. | 1,840 | 155 | 298 | 1.37 | 1.53 | . 885 |
| Decambar. | 820 | 185 | 275 | 1.27 | 1. 46 | . 821 |
| January. | 705 | 220 | 308 | 1.41 | 1.62 | . 911 |
| February. | 985 | 220 | 325 | 1.50 | 1.56 | . 069 |
| March. | 985 | 245 | 315 | 1. 45 | 1.67 | . 937 |
| April | 535 | 245 | 322 | 1.48 | 1.66 | . 85 ? |
| May. | 1,070 | 300 | 523 | 2.41 | 2.78 | 1.56 |
| June. | 562 | 220 | 282 | 1.30 | 1.45 | . 840 |
| July. | 375 | 200 | 230 | 1.06 | 1.22 | . 685 |
| August. | 1,690 | 200 | 415 | 1.91 | 2.20 | 1.23 |
| September | 480 | 180 | 243 | 1.12 | 1.25 | . -24 |
| The yaar. | 1,840 | 130 | 306 | 1.41 | 19.15 | .911 |
| October. | 375 | 200 | 225 | 1.04 | 1.20 | . 672 |
| November. | 1,600 | 220 | 650 | 3.00 | 3.34 | 1.94 |
| Dacamber. | 3,320 | 245 | 951 | 4.38 | 5.05 | 2.33 |
| January. | 1,470 | 225 | 642 | 2.96 | 3.41 | 1.91 |
| February. | 1,950 | 325 | 82 E | 3.79 | 3.95 | 2.45 |
| March. | 2,090 | 285 | 763 | 3.52 | 4.05 | 2.25 |
| April | 960 | 345 | 508 | 2.34 | 2.61 | 1.51 |
| May. | 525 | 305 | 358 | 1.79 | 2.06 | 1.16 |
| June. | 345 | 185 | 254 | 1.17 | 1.30 | . 756 |
| July. | 345 | 130 | 188 | . 866 | 1.00 | . 560 |
| August. | 960 | 120 | 181 | . 334 | . 96 | . 539 |
| Saptember. | 1,470 | 102 | 262 | 1.21 | 1.35 | . 782 |
| The year....... | 3,320 | 102 | 484 | 2.23 | 30.28 | 1.44 |

Iearly discharge of Octoraro Creek at Rowlandsvilie, Md.

| Yaar | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in sacond-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { inches } \end{aligned}$ | Discharce in million callcms per day per square mile | Discharge in sacond-feet |  | RunoffIninches | D1scharge in million gallons per day par square mile |
|  | Mean | Per square mile |  |  | Mean | Par square mile |  |  |
| $\begin{aligned} & 1897 . \\ & 1898 . \\ & 1899 . \end{aligned}$ | $\begin{aligned} & 306 \\ & 484 \end{aligned}$ | $\begin{aligned} & \overline{1} .41 \\ & 2.23 \end{aligned}$ | $\begin{aligned} & -\overline{9} .15 \\ & 30.28 \end{aligned}$ | $\begin{aligned} & \overline{0.911} \\ & 1.44 \end{aligned}$ | 305 400 - | $\begin{aligned} & 1.41 \\ & 1.94 \end{aligned}$ | $\begin{aligned} & 19.06 \\ & 25.00 \end{aligned}$ | $\begin{aligned} & 0.911 \\ & 1.19 \end{aligned}$ |

Dean treek above Kellogg Branch, st Rocks, Md.
Location.- Staff gage, lat. $39^{\circ} 39^{\prime} 08^{\prime \prime}$, long. $76^{\circ} 2^{\prime \prime} 4^{\prime \prime \prime \prime \prime}$, at Rocks, Harford County, and 0.2 mlle unstrear from Kelloge Branch. Prior to AuE. 17, 1933 water-stage recorder at same site and datur:
Drainate ares.- 92.1 square miles.
Pecerds avallakle.- July 1933 to February 1934.
Extrames. - Maximim daly diacharge, 6,780 second-feet Ave. 23, 1933 ; minlmum daily, S5 second-feet Dec. 12, 193̃, Feh. 17-20, 25-28, 1934
Remary. - Low flow slighty regulated by mills above station. Records not previoualy pitIished.

Monthly discharge of Deer Creek above Kelloge Eranch at Rocks, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Par square m116 |  |  |
| 1933 |  |  |  |  |  |  |
| July 27-31. | 94 | 71 | 79.2 | 0.860 | 0.76 | 0.556 |
| August. | 6,780 | 66 | 471 | 5.11 | 5.89 | 3.30 |
| September | 436 | 104 | 144 | 1.56 | 1.74 | 1.01 |
| 1933-34 |  |  |  |  |  |  |
| October. | 201 | 88 | 102 | 1.11 | 1.28 | . 717 |
| November. | 129 | 75 | 86.5 | .939 | 1.05 | . 607 |
| December. | 130 | 65 | 79.6 | . 864 | 1.00 | . 558 |
| January. | 257 | 68 | 110 | 1.19 | 1.37 | . 768 |
| February. | 80 | 65 | 70.9 | . 770 | . 80 | . 499 |

Decr Creek at Rocks, Md.
 m'IE southerst of Rocks, Herforl county, 1.8 miles upotzeam from stirrup Rum.
Datum of pace is 250.401 feet above meara yea levol (city of paltimore bench mark). 1)rainage area.- 94.4 square miles.

Reccids avalier.le. - October 1926 to September 1943
Fxtremes. - Maximum at schurne, 22,500 seconc-f eet Allg. 23, 1933 ( ance haicht, 17.7 feet,
from floodmarks), by slope-area nethod; minimum 8 second-feet (regulated) Dec. 16,
1930, and Jan. 26, 1939; minimum da11y, 13 second-feet Au-. 2, 1931.
Remarks.- Low flow silghtly regulated by mills above station.

Monthly discharge of Deer Creek a Rocks, Md.

| Month | Discharge in sacond-reet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge <br> in million <br> callons per <br> day per <br> square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1-2e-27 |  |  |  |  |  |  |
| October. | 564 | 92 | 138 | 1.46 | 1.68 | 0.944 |
| Niovamber 1-15 | 300 | 112 | 148 | 1.57 | . 87 | 1.01 |
| December 2-31. | 726 | 92 | 168 | 1.78 | 1.99 | 1.15 |
| January.. | 618 | 101 | 182 | 1.93 | 2.22 | 1.25 |
| February. | 305 | 112 | 170 | 1.80 | 1.87 | 1.16 |
| March. | 212 | 112 | 137 | 1.45 | 1.67 | . 937 |
| April. | 822 | 101 | 165 | 1.75 | 1.95 | 1.13 |
| May... | 212 | 101 | 134 | 1.42 | 1.64 | . 918 |
| Juna. | 145 | 68 | 91.4 | . 968 | 1.08 | . 626 |
| July. | 476 | 62 | 87.7 | . 929 | 1.07 | . 600 |
| August. | 289 | 51 | 77.9 | . 825 | . 95 | . 533 |
| Saptambar. | 292 | 44 | 59.8 | . 633 | .71 | . 402 |

Monthly discharge of Deer Creek at Rocks, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { inches } \end{gathered}$ | Discharge <br> in mıllion <br> gailons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximam M | Minimum | Mean ${ }^{\text {a }}$ | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}$ |  |  |
|  | 427 <br> 420 <br> 499 <br> 162 <br> 979 <br> 186 <br> 1,230 <br> 308 <br> 758 <br> 695 <br> 2,800 <br> 279 | $\begin{array}{r} 44 \\ 63 \\ 70 \\ 72 \\ 105 \\ 101 \\ 114 \\ 101 \\ 112 \\ 99 \\ 148 \end{array}$ | $\begin{aligned} & 114 \\ & 95.6 \\ & 131 \\ & 92.3 \\ & 233 \\ & 138 \\ & 189 \\ & 164 \\ & 205 \\ & 181 \\ & 327 \\ & 190 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.21 \\ & 1.01 \\ & 1.39 \\ & .978 \\ & 2.47 \\ & 1.46 \\ & 2.00 \\ & 1.74 \\ & 2.17 \\ & 1.32 \\ & 3.46 \\ & 2.01 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.40 \\ & 1.13 \\ & 1.60 \\ & 1.13 \\ & 2.06 \\ & 1.08 \\ & 2.23 \\ & 2.01 \\ & 2.42 \\ & 2.21 \\ & 3.99 \\ & 2.24 \end{aligned}$ | $\begin{array}{r} 0.782 \\ .653 \\ . .998 \\ . .632 \\ 1.60 \\ . .944 \\ 1.29 \\ 1.12 \\ 1.40 \\ 1.24 \\ 2.24 \\ 1.30 \\ \hline \end{array}$ |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | 2,800 | 44 | 171 | 1.81 | 24.70 | 1.17 |
| The year. . . . . $\begin{array}{r}\text {, } \\ 1928-29\end{array}$ | $\begin{array}{r} 184 \\ 209 \\ 181 \\ 400 \\ 1,050 \\ 1,400 \\ 1,720 \\ 276 \\ 656 \\ - \\ 117 \\ 388 \end{array}$ | 109 <br> 94 <br> - <br> - <br> - <br> 91 <br> 89 <br> 119 <br> 86 <br>  <br> 49 <br> 49 | $\begin{gathered} 130 \\ 110 \\ 102 \\ 127 \\ 205 \\ 210 \\ 219 \\ 160 \\ 129 \\ 77.5 \\ 63.3 \\ 87.2 \\ \hline \end{gathered}$ | $\begin{gathered} 1.38 \\ 1.17 \\ 1.08 \\ 1.35 \\ 2.17 \\ 2.22 \\ 2.32 \\ 1.69 \\ 1.37 \\ .821 \\ .671 \\ .924 \\ \hline \end{gathered}$ | $\begin{array}{r} 1.5 ? \\ 1.30 \\ 1.24 \\ 1.56 \\ 2.26 \\ 2.56 \\ 2.59 \\ 1.95 \\ 1.53 \\ .95 \\ .77 \\ 1.03 \end{array}$ | $\begin{gathered} .892 \\ .75 \\ .6 .8 \\ .873 \\ 1.40 \\ 1.43 \\ 1.50 \\ 1.05 \\ .885 \\ .531 \\ .434 \\ .587 \end{gathered}$ |
| October. <br> November. <br> December <br> January. <br> February <br> March. <br> April. <br> May. <br> June. <br> July. <br> Alagust <br> September |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | 1,400 | 49 | 134 | 1.42 | 19.33 | .118 |
| October <br> November <br> December <br> January. <br> February <br> March. <br> April <br> May. <br> June <br> July. <br> August. <br> September <br> The year. | $\begin{array}{r} 1,410 \\ 372 \\ 151 \\ 120 \\ 408 \\ 496 \\ 363 \\ 157 \\ 208 \\ 75 \\ 49 \\ 134 \\ \hline \end{array}$ | 080---105997361352226 | $\begin{aligned} & 188 \\ & 130 \\ & 93.1 \\ & 83.8 \\ & 137 \\ & 141 \\ & 138 \\ & 91.9 \\ & 88.6 \\ & 50.0 \\ & 33.9 \\ & 42.7 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.99 \\ & 1.38 \\ & .986 \\ & .898 \\ & 1.45 \\ & 1.49 \\ & 1.40 \\ & .974 \\ & .935 \\ & .530 \\ & .359 \\ & .452 \\ & \hline \end{aligned}$ | $\begin{gathered} 2.29 \\ 1.54 \\ 1.14 \\ 1.02 \\ 1.51 \\ 1.72 \\ 1.63 \\ 1.12 \\ 1.05 \\ .61 \\ .41 \\ \hline \end{gathered}$ | $\begin{aligned} & 1.29 \\ & .892 \\ & .637 \\ & .574 \\ & .937 \\ & .963 \\ & .944 \\ & .630 \\ & .607 \\ & . .43 \\ & .232 \\ & .282 \\ & \hline \end{aligned}$ |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | 1,410 | 22 | 101 | 1.07 | 14.54 | . 692 |
| October. . . . . . . . . . . . . . . . . . | -40 | 21 | $\begin{array}{r} 30.4 \\ 35.9 \\ 62.2 \\ 106 \end{array}$ | $\begin{array}{r} .322 \\ .380 \end{array}$ | .37.42 | .208.246 |
| November. . . . . . . . . |  | - |  |  |  |  |
| December. | 448 |  |  |  | $.76$ | $.420$ |
| January. | - | - |  | $\begin{aligned} & .659 \\ & 1.12 \end{aligned}$ | $\begin{array}{r} 1.29 \\ .81 \end{array}$ | $.503$ |
| Februery. | 223 | 44 | 73.5 | $1.12$ | $\begin{aligned} & .88 \\ & .92 \end{aligned}$ |  |
| March. |  | 50 | 78.3 | . 766 |  | $\begin{array}{r} .495 \\ .536 \end{array}$ |
| April. | 123 | 46 |  | . 8273 | . 34 | . 472 |
|  | 260 | +26 | 57.7 | . 611 | . 68 | $\begin{aligned} & .395 \\ & .237 \end{aligned}$ |
| July. | 55 | 13 | 34.683.7 | . 367 | .421.02 |  |
| August. | $4 \times 7$ |  |  | . 987 |  | $\begin{array}{r} .573 \\ .219 \\ \hline \end{array}$ |
| Septembe | 148 | 25 | 40.8 | . 432 | . 48 |  |
|  | - | 13 | 62.0 | . 657 | 8.89 | . 425 |
| The year. $\begin{array}{r}\text { 1031-32 }\end{array}$ |  |  |  | . 320 | 37 | . 207 |
| October.. | 42 | 27 | 32.5 | . 344 | - .38 | . 222 |
| November. | 89239 | 3747 | 79.6 | . 442 | - . 51 | - 2.6 |
| December. |  |  |  | . 843 | - 97 | . 545 |
| January. | 120 | 46 | 60.2 | -.638 | 3 . 69 | . 412 |
| February | 937 | 47 | 113 | 7. 20 | 1.38 | . 776 |
| March. |  | 67 <br> 68 | 96.0 | 1.12 | 1.14 | . 659 |
| April | 522 |  | 106 |  |  | . 724 |
| May.. | 135 | 68 48 | 70.6 | - 748 | - $\begin{array}{r}1.29 \\ \hline .83\end{array}$ | 3 . 483 |
| June. | 213 | 33 | 55.552.1 | - 588 | 8 . 68 |  |
| July. |  | - 29 |  |  | - . 64 | 4 .357 <br> 0 .289 |
| September. <br> The year |  |  | 42.2 | . 447 | 7 . 50 |  |
|  | 937 | $7 \quad 22$ | 65.1 | . 690 | $01 \quad 9.38$ | . 446 |
|  |  |  |  |  |  |  |

Monthly discharge of Deer Creek at Rocks, Ma.--Continued


Monthly discharge of Deer Creek at Rocks, Md.--Continued



Yearly discharge of Deer Creek at Rocks, Mad.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in second-feet |  | Runoff <br> in <br> inches | Discharge in million gallons per day per equare mile | Diecharge in escond-feot |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | $\begin{aligned} & \text { Discharge } \\ & \text { in million } \\ & \text { gallons per } \\ & \text { day per } \\ & \text { square mile } \end{aligned}$ |
|  | Mean | Per square mile |  |  | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| 1927 | - | - | - | - | 120 | 1.27 | 17.29 |  |
| 1928. | 171 | 1.81 | 24.70 | 1.17 | 171 | 1.81 | 24.70 | 1.17 |
| 1929 | 134 | 1.42 | 19.33 | -. 218 | 140 | 1.48 | 20.17 | 1.957 |
| 1930 | 101 | 1.07 | 14.54 | . 692 | 77.5 | . 821 | 11.12 | . 531 |
| 1931 | 62.0 | . 657 | 8.89 | . 425 | 60.0 | . 636 | 8.60 | . 412 |
| 1932. | 65.1 | . 690 | 9.38 | . 446 | 83.7 | . 887 | 12.07 |  |
| 1933. | 173 | 1.83 | 24.90 | 1.18 | 169 | 1.79 | 24.26 | 1.16 |
| 1934. | 119 | 1.26 | 17.10 | . 814 | 123 | 1.30 | 17.73 | 1.840 |
| 1935. | 128 | 1.36 | 18.35 | . 879 | 121 | 1.28 | 17.46 | . 227 |
| 1936. | 138 | 1.46 | 19.86 | . 944 | 134 | 1.42 | 19.34 | . 918 |
| $1937 .$ | 125 | 1.32 | 17.92 |  |  |  | 20.75 | . 989 |
| $1938 .$ | 118 | 1.25 | 16.90 | . 808 | 99.6 | 1.06 | 14.33 | . 685 |
|  | 118 113 | 1.25 1.20 | 16.91 16.31 | .808 .776 | 1116 | 1.23 | 16.65 | .795 |
| 1941. | 113 | 1.20 | 16.21 | . 7776 | 122 87.7 | 1.29 | 17.56 | . 834 |
|  |  |  |  |  |  |  |  |  |
| 1942 | 98.6 | 1.04 | 14.17 | .672 | 130 | 1.38 | 18.67 | . 892 |
| 1843 | 150 | 1.59 | 21.52 | 1.03 | - |  |  |  |
| Highest. | 173 | 1.83 | 24.90 | 1.18 | 171 | 1.81 | 24.70 |  |
| Averago. | 120 | 1.27 | 17.31 | . 821 | 119 | 1.26 | $17 \cdot 17$ | . .814 |
| Lowest. | 62.0 | . 657 | 8.89 | . 425 | 60.0 | . 636 | 8.60 | . 411 |

Deer Creek near Churchville, Md.

[^1]Monthly diecharge of Deer Creek near Churchville, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per equare mile |  |  |
| 1904-5 |  |  |  |  |  |  |
| Decomber 14-31 | 522 | - | 130 | 0.922 | 0.62 | 0.596 |
| January. . | 3,200 | - | 264 | 1.87 | 2.16 | 1.21 |
| February.. | 695 | - | 162 | 1.15 | 1.20 | .743 |
| March... | 955 | 164 | 377 | 2.67 | 3.08 | 1.73 |
| Apr11. | 635 | 178 | 254 | 1.80 | 2.01 | 1.16 |
| May... | 296 | 105 | 153 | 1.09 | 1.26 | . 704 |
| June | 335 | 96 | 144 | 1.02 | 1.14 | . 659 |
| July.. | 495 2.680 | 96 96 | 162 | 1.15 | 1.33 2.04 | . 744 |
| August.... September. | 2,680 920 | 96 105 | 249 194 | 1.77 1.38 | 2.04 1.54 | $\begin{aligned} & 1.14 \\ & .892 \end{aligned}$ |
| 1905-6 |  |  |  |  |  |  |
| November. | 323 | 105 | 130 | 1.922 | 1.03 | $.596$ |
| December. | 2,230 | 115 | 265 | 1.88 | 2.17 | 1.22 |
| Janusry. | 790 | 150 | 273 | 1.94 | 2.24 | 1.25 |
| Fobruary | 377 | 126 | 219 | 1.55 | 1.61 | 1.00 |
| March. | 855 | 178 | 301 | 2.13 | 2.46 | 1.38 |
| Apr11. | 2,180 | 225 | 426 | 3.02 | 3.37 | 1.95 |
| May.. | 277 | 178 | 211 | 1.50 | 1.73 | . 969 |
| June | 725 | 126 | 212 | 1.50 | 1.67 | . 969 |
| July. | 887 | 115 | 251 | 1.78 | 2.05 | 1.15 |
| August. | 1,580 126 | 109 87 | 187 99.2 | 1.33 .704 | 1.53 .79 | $\begin{array}{r} .860 \\ .455 \\ \hline \end{array}$ |
| The year. | 2,230 | 87 | 229 | 1.62 | 22.02 | 1.05 |
| October.......... ${ }^{\text {1906 }}$ ' | 758 | 87 | 165 | 1.17 | 1.35 | . 756 |
| November. | 400 | 105 | 132 | . 936 | 1.04 | . 605 |
| December. | 1,140 | 105 | 243 | 1.72 | 1.98 | 1.11 |
| January. | 605 | 120 | 240 | 1.70 | 1.96 | 1.10 |
| February. | 1330- | 178 | 180 | 1.28 | 1.33 | . 827 |
| March.... | 1,330 445 | 178 | 394 | 2.79 1.45 | 3.22 | 1.80 |
| April. | 445 | 164 | 204 | 1.45 1.30 | 1.62 <br> .50 | . 937 |
| May. | 445 758 | 145 | 200 | 1.30 1.42 | 1.50 1.58 | . 840 |
| June. | 323 | 105 | 142 | 1.01 | 1.16 | .653 |
| August | 653 | 105 | 156 | 1.11 | 1.28 | . 717 |
| September. | 2,650 | 87 | 272 | 1.93 | 2.15 | 1.25 |
| The year. | 2,650 | 87 | 210 | 1.49 | 20.17 | . 963 |
| October. . . . . . . | 296 | 126 | 166 | 1.18 | 1.36 | . 763 |
| November | 1,620 | 150 | 372 | 2.64 | 2.94 | 1.71 |
| December | 1,510 | 138 | 420 | 2.98 | 3.44 | 1.93 |
| Janusry. | 1,540 | 242 | 383 | 2.72 | 3.14 | 1.76 |
| February | 8, 460 | 250 | 718 | 5.08 | 5.48 | 3.28 |
| March... | 790 | 277 | 379 | 2.69 | 3.10 | 1.74 |
| April. | . 378 | 178 | 249 | 1.77 | 1.98 | 1.14 |
| May.. | 2,480 | 164 | 359 | 2.55 | 2.94 | 1.65 |
| June | 4,220 | 105 | 145 | 1.03 | 1.15 | 1.666 |
| July... | 2,200 | 80 | 189 | 1.34 | 2.24 1.54 | 1.256 |
| September | 495 | 87 | 110 | . 780 | . 87 | . 504 |
| The year | 8,460 | 80 | 312 | 2.21 | 30.18 | 1.43 |
| October... | 2,480 | 80 | 192 | 1.36 | 1.57 | . 879 |
| November. | 194 | 87 | 119 | . 844 | . 94 | . 545 |
| December. | 285 | 105 | 142 | 1.01 | 1.16 | . 653 |
| January. | 561 | 126 | 205 | 1.45 | 1.67 | . 937 |
| Fobruary. | 842 | 126 | 281 | 1.99 | 2.07 | 1.29 |
| March... | 605 | 178 | 339 | 2.40 | 2.77 | 1.55 |

Yearly discharge of Deer Creak near Churchville, Md

| Yoar | Year anding Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in second-f'e日t |  | Run off <br> in <br> inches | Dis charge in million gallons per day per square mile | Discharge in eecond-feet |  | Runoff in <br> inches | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per squaro mile |  |  |
| 1905.. | - | - | - | - | 210 | 1.49 | 20.33 | 0.963 |
| 1906. | 229 | 1.62 | 22.02 | 1.05 | 227 | 1.60 | 21.82 | 1.03 |
| 1907. | 210 | 1.49 | 20.17 | . 963 | 244 | 1.73 | 23.54 | 1.12 |
| 1908. | 312 | 2.21 | 30.18 | 1.43 | 272 | 1.93 | 26.11 | 1.25 |

GUNPOWDER RIVER BASIN
Little Gunpowder Falls at Laurel Brook, Md.
Location:- Water-etage recorder, lat $39^{\circ} 3^{\prime \prime} 18^{\prime \prime}$, long. $76^{\circ} 25^{\prime \prime} 56^{\prime \prime}$, 700 feet upstream from Laurel Brook, 0.4 mile southwest of Laurel Brook railroad station, Farford County Datum of gage is 261.43 feet above mean sea level (city of Baltimore bench mark). Draina e area.- 36.1 square miles.
Records avallable. - December 1926 to September 1943.
Fxtremes.- Maximum discharge, 9,200 second-foet Aug. 23, 1933, by slope-area method; minimum, 3.1 second-feet Feb. 15, 1931 , Mar. 15, $1932 ;$ minimum gage height, 0.65 foot
Mar. 15 , 1932 .

Monthly discharge of Little Junpowder Falls at Iaurel Brook, Md.

| Month | Discharge in second-fiet |  |  |  | $\begin{aligned} & \text { Runof } f^{\circ} \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square milo |  |  |
| $1926-27$ <br> December 7-25...................... <br> February 24-28..................... <br> March. <br> April <br> May. <br> June. <br> July. <br> August. <br> Soptember. | $\begin{array}{r} 62 \\ 108 \\ 73 \\ 840 \\ 67 \\ 75 \\ 38 \\ 99 \\ 82 \end{array}$ | $\begin{aligned} & 57 \\ & 41 \\ & 38 \\ & 38 \\ & 27 \\ & 20 \\ & 16 \\ & 16 \end{aligned}$ | $\begin{aligned} & 48.3 \\ & 77.4 \\ & 47.3 \\ & 80.0 \\ & 46.8 \\ & 36.4 \\ & 25.2 \\ & 24.4 \\ & 21.4 \end{aligned}$ | $\begin{aligned} & 1.34 \\ & 2.14 \\ & 1.31 \\ & 2.22 \\ & 1.30 \\ & 1.01 \\ & .698 \\ & .676 \\ & .593 \end{aligned}$ | $\begin{array}{r} 0.95 \\ .40 \\ 1.51 \\ 2.48 \\ 1.50 \\ 1.13 \\ .80 \\ .78 \\ .66 \end{array}$ | $\begin{aligned} & 0.866 \\ & 1.38 \\ & .847 \\ & 1.43 \\ & .840 \\ & .653 \\ & .451 \\ & .437 \\ & .383 \end{aligned}$ |
| October <br> November <br> December. <br> Januery <br> February <br> March. <br> April. <br> May. <br> June <br> July. <br> August <br> Septamber. | $\begin{array}{r} 352 \\ 261 \\ 188 \\ 70 \\ 8 \overline{3} \\ 537 \\ 71 \\ 1,080 \\ 260 \\ 2,340 \\ 169 \end{array}$ | $\begin{array}{r} 16 \\ 23 \\ 26 \\ - \\ 38 \\ 34 \\ 41 \\ 38 \\ 30 \\ 34 \\ 53 \end{array}$ | $\begin{gathered} 52.7 \\ 40.4 \\ 47.0 \\ 30.1 \\ 85.0 \\ 51.2 \\ 66.8 \\ 49.1 \\ 161 \\ 72.3 \\ 215 \\ 77.6 \end{gathered}$ | $\begin{aligned} & 1.46 \\ & 1.12 \\ & 1.30 \\ & .834 \\ & 2.35 \\ & 1.42 \\ & 1.85 \\ & 1.36 \\ & 4.46 \\ & 2.00 \\ & 5.96 \\ & 2.15 \end{aligned}$ | $\begin{aligned} & 1.68 \\ & 1.25 \\ & 1.50 \\ & . .96 \\ & 2.53 \\ & 1.64 \\ & 2.06 \\ & 1.57 \\ & 4.98 \\ & 2.31 \\ & 6.87 \\ & 2.40 \end{aligned}$ | $\begin{aligned} & .944 \\ & .724 \\ & .840 \\ & .539 \\ & 1.52 \\ & .918 \\ & 1.20 \\ & .879 \\ & 2.88 \\ & 1.29 \\ & 3.85 \\ & 1.39 \end{aligned}$ |
| The year..................... | 2,340 | 16 | 78.9 | 2.19 | 29.75 | 1.42 |
| October. <br> November <br> December <br> January <br> February. <br> March. <br> April. <br> May. <br> June <br> July. <br> August. <br> September | $\begin{array}{r} 67 \\ 88 \\ 86 \\ 234 \\ 539 \\ 475 \\ 731 \\ - \\ 63 \\ 80 \\ 123 \\ 82 \end{array}$ | 43 38 - - - 37 34 37 26 16 14 17 | $\begin{aligned} & 50.5 \\ & 45.6 \\ & 40.8 \\ & 52.4 \\ & 83.1 \\ & 77.2 \\ & 93.9 \\ & 53.4 \\ & 34.8 \\ & 23.5 \\ & 26.3 \\ & 27.1 \end{aligned}$ | $\begin{aligned} & 1.40 \\ & 1.26 \\ & 1.13 \\ & 1.45 \\ & 2.30 \\ & 2.14 \\ & 2.60 \\ & 1.48 \\ & .964 \\ & .651 \\ & .729 \\ & .751 \end{aligned}$ | $\begin{aligned} & 1.61 \\ & 1.41 \\ & 1.30 \\ & 1.67 \\ & 2.40 \\ & 2.47 \\ & 2.90 \\ & 1.71 \\ & 1.08 \\ & .75 \\ & .84 \\ & .84 \end{aligned}$ | $\begin{gathered} .905 \\ .814 \\ .730 \\ .937 \\ 1.49 \\ 1.38 \\ 1.68 \\ .957 \\ .623 \\ .421 \\ .471 \\ .485 \end{gathered}$ |
| The jear................... | 731 | 14 | 50.7 | 1. 40 | 18.98 | .905 |

Monthly discharge of Little Gunpowder Fells at Laurel Brook, Md.--Continued

| Month | Diecherge in second-reet |  |  |  | Run of f in <br> 1nches | Discharge in million gellons per doy per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| October. | 813 | 24 | 81.8 | 2.27 | 2.62 | 1.47 |
| November. | 177 | 26 | 43.8 | 1.21 | 1.35 | . 782 |
| December. | 53 | - | 32.2 | . 898 | 1.03 | . 577 |
| Jenuary. . | 43 | - | 27.9 | . 773 | . 89 | . 500 |
| Februery. | 156 | - | 51.1 | 1.42 | 1.48 | . 918 |
| Merch.... | 232 | - | 51.1 | 1.42 | 1.64 | . 918 |
| April. | 305 | 37 | 55.3 | 1.53 | 1.71 | . 989 |
| May... | 65 | 26 | 33.2 | . 920 | 1.06 | . 555 |
| June | 92 | 18 | 28.5 | -799 | . 88 | . 610 |
| July. | 19 | 10 | 14.1 | .391 | . 45 | . 253 |
| August. | 13 | 7.4 | 9.45 | . 262 | .30 | . 169 |
| September |  | 8.0 | 11.5 |  | . 36 |  |
| The yeer. | 813 | 7.4 | 36.6 | 1.01 | 13.77 | . 653 |
| October | 14 | 8.0 | 10.8 | . 299 | . 34 | . 193 |
| November | 19 |  | 14.2 | . 393 | .44 | .254 |
| December. | 152 | - | 20.1 | . 557 | . 64 | . 360 |
| Jenuary.. | 233 | - | 26.9 | - 745 | - 86 | -482 |
| February. | 85 | 14 | 21.9 | . 607 | . 63 | .392 |
| March. | 92 | 18 | 29.1 | - 806 | . 93 | . 521 |
| Apr11. | 96 | 18 | 28.9 | . 801 | . 89 | . 518 |
| Mey.. | 92 | 15 | 26.9 | . 745 | . 86 | . 484 |
| June. | 31 | 8.6 | 14.4 | . 399 | . 45 | . 258 |
| July. | 198 | 6.0 | 18.9 | . 524 | . 60 | . 339 |
| Auguet. | 107 13 | 5.8 6.5 | 21.4 9.16 | $\begin{array}{r} .593 \\ .254 \end{array}$ | . 68 | $\begin{array}{r} .383 \\ .164 \end{array}$ |
| The yeer | 233 | 5.8 | 20.2 | . 560 | 7.60 | . 362 |
| 1931-32 |  |  |  |  |  |  |
| October... | 25 |  | 7.83 9.29 | $.217$ | $\begin{aligned} & .25 \\ & .29 \end{aligned}$ | $.140$ |
| November. ${ }^{\text {December. }}$ | 12 | $\begin{aligned} & 8.5 \\ & 9.5 \end{aligned}$ | 12.19 | . 2537 | .29 .39 | . 1617 |
| Januery. | 85 | 14 | 27.9 | . 773 | . 89 | . 500 |
| February. | 61 | 14 | 20.8 | . 576 | . 62 | . 372 |
| Merch. | 462 | 13 | 40.0 | 1.11 | 1.28 | . 717 |
| April. | 62 | 21 | 28.3 | . 784 | . 87 | . 507 |
| Mey. | 242 | 21 | 38.4 | 1.06 | 1.22 | . 685 |
| June. | 61 | 12 | 21.4 | . 593 | . 66 | . 383 |
| July. | 36 | 8.1 | 12.7 | . 352 | . 41 | . 228 |
| August. | 93 | 7.1 | 15.0 | . 416 | . 48 | . 269 |
| September. | 42 | 6.1 | 8.79 | . 243 | .27 | $\cdot 157$ |
| The year. | 462 | 6.1 | 20.2 | . 560 | 7.63 | . 362 |
| October. | 218 | 6.5 | 29.1 | . 806 | . 93 | . 521 |
| November | 454 | 23 | 56.6 | 1.57 | 1.75 | 1.01 |
| Decomber | 108 | 15 | 30.5 | . 845 | . 97 | . 546 |
| Jenuary. | 267 | 25 | 40.8 | 1.13 | 1.30 | . 730 |
| Februery. | 113 | 28 | 43.1 | 1.19 | 1.24 | . 769 |
| March.... | 196 | 32 | 63.7 | 1.76 | 2.03 | 1.14 |
| Apr11. | 468 | 52 | 108 | 2.99 | 3.34 | 1.93 |
| May... | 133 | 54 | 77.7 | 2.15 | 2.48 | 1.39 |
| June. | 108 | 31 | 44.8 36.6 | 1.24 | 1.38 | . 801 |
| July... | 2,800 | 21 | 178 | 4.93 | 5.68 | 3.19 |
| August.. | 2, 143 | 34 | +52.4 | 1.45 | 1.62 | . 937 |
| The yeer. | 2,800 | 6.5 | 63.5 | 1.76 | 23.88 | 1.14 |
| October. . . . . . . . . | 93 | 32 | 38.7 | 1.07 | 1.23 | . 692 |
| November. | 56 | 29 | 32.6 | . 903 | 1.01 | . 584 |
| December. | 55 | 26 | 33.1 | . 917 | 1.06 | . 593 |
| Januery. | 120 | 29 | 48.1 | 1.33 | 1.53 | . 860 |
| Februery. | 40 | 26 | 30.1 | . 834 | . 87 | . 539 |
| Merch. . | 300 | 28 | 74.7 | 2.07 | 2.39 | 1.34 |
| April. | 102 | 41 | 54.7 | 1.52 | 1.70 | . 982 |
| May. . | 243 | 36 | 51.9 | 1.44 | 1.66 | . 931 |
| June. | 207 | 25 | 38.7 | 1.07 | 1.19 | . 692 |
| July. | 35 | 15 | 21.7 | . 601 | . 69 | . 388 |
| August... | 61 892 | 15 15 | 24.5 117 | .679 3.24 | .78 3.62 | $\begin{aligned} & .439 \\ & 2.09 \end{aligned}$ |
| The year.. | 892 | 15 | 47.1 | 1.30 | 17.73 | . 840 |

Monthly discharge of Iittle Gunpowder Falls at Laurel 8rook, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { inches } \end{gathered}$ | Discherge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 48 | 27 | 30.6 | 0.848 | 0.98 | 0.548 |
| November. | 336 | 27 | 42.1 | 1.17 | 1.30 | . 756 |
| December. | 310 | 34 | 56.4 | 1.56 | 1.80 | 1.01 |
| Jenuary.. | 112 | 33 | 48.1 | 1.33 | 1.53 | . 860 |
| February. | 163 | 37 | 63.9 | 1.77 | 1.84 | 1.14 |
| March.... | 141 | 50 | 61.6 | 1.71 | 1.97 | 1.11 |
| April. | 313 | 49 | 74.4 | 2.06 | 2.30 | 1.33 |
| Mey. | 126 | 38 | 51.5 | 1.43 | 1.65 | . 924 |
| June | 220 | 33 | 53.3 | 1.48 | 1.65 | . 957 |
| July. | 229 | 26 | 56.0 | 1.55 | 1.79 | 1.00 |
| August. | 27 | 17 | 21.9 | . 607 | . 70 | . 392 |
| Soptember. | 236 | 17 | 47.8 | 1.32 | 1.47 |  |
| The year. | 336 | 17 | 50.5 | 1.40 | 18.98 | .905 |
| October...... | 110 | 18 | 25.1 | . 695 | . 80 | . 449 |
| November. | 418 | 22 | 58.2 | 1.61 | 1.80 | 1.04 |
| December. | 70 | 28 | 38.9 | 1.08 | 1.24 | . 698 |
| Januery. | 954 | 32 | 110 | 3.05 | 3.52 | 1.97 |
| February. | 637 | 34 | 115 | 3.19 | 3.44 | 2.06 |
| March. | 648 | 58 | 129 | 3.57 | 4.12 | 2.31 |
| Apr 11 | 192 | 54 | 75.8 | 2.10 | 2.34 | 1.36 |
| Mey. | 89 | 33 | 45.8 | 1.27 | 1.46 | . 821 |
| June | 40 | 24 | 30.7 | . 850 | . 95 | . 549 |
| July | 89 | 18 | 27.4 | . 759 | . 88 | . 491 |
| August. | 70 | 14 | 21.6 | . 598 | . 69 | . 386 |
| September | 20 | 12 | 14.7 | . 407 | . 45 | .263 |
| The yeer. | 954 | 12 | 57.5 | 1.59 | 21.69 | 1.03 |
| October....... |  |  |  |  |  |  |
| November. | 26 | 15 | 17.3 | . 4.478 | . 63 | $\begin{aligned} & .354 \\ & .310 \end{aligned}$ |
| December | 194 | 15 | 45.7 | 1.27 | 1.46 | . 821 |
| January. | 123 | 32 | 60.4 | 1.67 | 1. 2 | 1.08 |
| February. | 914 | 42 | 88.8 | 2.46 | 2.56 | 1.59 |
| March. | 76 | 42 | 51.3 | 1.42 | 1.64 | . 918 |
| April | 586 | 40 | 86.7 | 2.40 | 2.68 | 1.55 |
| May. | 84 | 42 | 55.9 | 1.55 | 1.79 | 1.00 |
| June. | 191 | 35 | 57.0 | 1.58 | 1.76 | 1.02 |
| July. | 516 | 28 | 60.5 | 1.68 | 1.94 | 1.09 |
| August. | 354 | 24 | 77.0 | 2.13 | 2.46 | 1.38 |
| September | 38 | 24 | 29.3 | . 812 | . 91 | -. 525 |
| The jear | 914 | 15 | 53.9 | 1.49 | 20.28 | . 963 |
| October. | 912 | 24 | 79.8 | 2.21 |  |  |
| November. | 993 | 38 | 84.3 | 2.34 | 2.61 | $1.51$ |
| Decomber. | 68 | 39 | 46.7 | 1.29 | 1.49 | $.834$ |
| Jenuery. | 126 | 34 | 48.5 | 1.34 | 7.54 | . 866 |
| Februery. | 126 | 30 | 49.0 | 1.36 | 1.42 | . 878 |
| Merch. | 78 | 39 | 47.9 | 1.23 | 1.53 | . 860 |
| April | 65 | 33 | 40.6 | 1.12 | 1.25 | . 724 |
| Mey. | 55 | 29 | 35.1 | . 972 | 1.12 | . 628 |
| June. | 143 | 20 | 32.2 | . 892 | 1.00 | . 577 |
| July..... | 443 | 18 | 54.5 | 1.51 | 1.74 | .976 |
| August... September | 187 87 | 18 | 35.1 28.1 | .972 .778 .778 | 1.12 .87 | $\begin{aligned} & .628 \\ & .503 \end{aligned}$ |
| The year. | 993 | 18 | 48.5 | 1.34 | 18.24 | . 866 |
| October...... |  |  |  |  |  |  |
| November. | 37 | 22 | 24.7 25.6 | .684 .709 | .79 .79 | .442 .458 |
| December. | 119 | 26 | 41.6 | 1.15 | 1.33 | . 743 |
| Januery. | 728 | 21 | 67.5 | 1.87 | 2.16 | 1.21 |
| February. | 360 | 42 | 32.9 | 2.30 | 2.40 | 1.49 |
| March. | 118 | 52 | 68.2 | 1.89 | 2.18 | 1.22 |
| April. | 432 | 53 | 88.0 | 2.44 | 2.72 | 1.58 |
| May.. | 69 | 37 | 50.4 | 1.40 | 1.61 | . 905 |
| June | 385 | 33 | 66.2 | 1.83 | 2.04 | 1.18 |
| July. | 73 | 29 | 36.9 | 1.02 | 1.18 | . 659 |
| August. | 100 | 18 | 28.4 | . 787 | . 91 | . 509 |
| September. | 50 | 19 | 24.4 | . 676 | .75 | . 437 |
| The jear.... | 728 | 18 | 50.1 | 1.39 | 18.86 | . 898 |

Monthly discharge of Little Gumpowder Falls at Laurel Erook, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | D1scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square milo |  |  |
|  |  |  |  |  |  | 0.711.492.465.526.8921.091.621.40.905.521.653.551 |
|  | 260 50 | 23 23 | 39.7 27.5 | $\begin{aligned} & 1.10 \\ & .762 \end{aligned}$ | $\begin{array}{r} 1.27 \\ .85 \end{array}$ |  |
|  | 38 | 20 | 26.0 | . 720 | . 83 |  |
|  | 150 | 18 | 29.4 | . 814 | . 94 |  |
|  | 338 | 18 | 49.9 | 1.38 | 1.49 |  |
|  | 273 | 33 | 61.1 | 1.69 | 1.95 |  |
|  | 445 | 36 | 90.6 | 2.51 | 2.80 |  |
|  | 638 | 45 | 78.1 | 2.16 | 2.49 |  |
|  | 379 | 31 | 50.5 | 1.40 | 1.56 |  |
|  | 63 | 20 | 29.1 | . 806 | . 93 |  |
|  | 186 | 18 | 36.3 30.8 | 1.01 | $\begin{array}{r}1.16 \\ \hline .95\end{array}$ |  |
|  | 145 |  |  |  |  |  |
|  | 638 | 18 | 45.7 | 1.27 | 17.22 | .821 |
| October............. | 43 | 20 | 24.1 | . 668 | .77 | . 432 |
| Decamber. | 218 | 23 | 50.9 | 1.41 | 1.57 | . 919 |
|  | 90 | 29 | 40.7 | 1.13 | 1.30 | -730 |
| January. <br> February | 122 | 33 | 49.1 | 1.36 | 1.57 | . 879 |
|  | 190 | 33 | 50.5 | 1.40 | 1.46 | . 905 |
| March.... | 126 | 33 | 53.1 | 1.47 | 1.69 | . 950 |
| April | 188 | 33 | 48.3 | 1.34 | 1.49 | . 866 |
|  | 55 | 23 | 32.9 | . 9125 | 1.05 | . 589 |
| May.. | 197 | 23 | 45.3 | 1.25 | 1.40 .86 | . 808 |
| June. <br> July. <br> August | 57 | 12 | 18.0 | . 499 | . 57 | . 323 |
| Septambar <br> The ye | 15 | 8.2 | 10.1 | . 280 | . 31 | . 181 |
|  | 218 | 8.2 | 37.4 | 1.04 | 14.04 | . 672 |
| October....... | 18 | 7.3 | 11.0 | . 305 | . 35 | . 197 |
| Novamber. Dacembar. | 33 | 12 | 14.8 | . 410 | . 46 | . 265 |
|  | 97 | 13 | 22.9 | . 634 | .73 | . 410 |
| January | 98 | 12 | 21.3 | . 590 | . 68 | .381 |
| February | 429 | 18 | 39.9 | 1.11 | 1.15 | . 717 |
|  | 227 | 18 | 41.7 | 1.16 | 1.33 | . 750 |
| March. <br> April. | 114 | 23 | 36.9 | 1.02 | 1.14 | . 659 |
| April. | 153 | 19 | 30.4 | . 842 | . 97 | . 544 |
| May. June. | 82 | 17 | 26.6 | . 737 | . 82 | . 476 |
| JuIy | 263 | 13 | 30.6 | . 848 | .98 | . 548 |
| August. . Septembe | 418 | 18 | 57.5 | 1.59 | 1.83 | 1.03 .448 |
|  | 114 | 17 | 25.0 | . 693 | . 77 | . 448 |
| The ye | 429 | 7.3 | 29.8 | . 825 | 11.21 | . 533 |
| October. . . . . . . . . | 410 | 18 | 64.3 | 1.78 | 2.05 | 1.15 |
| November. | 87 | 35 | 44.4 | 1.23 | 1.37 | . 795 |
|  | 303 | 29 | 56.6 | 1.57 | 1.81 | 1.01 |
| December | 67 | 39 | 46.4 | 1.29 | 1.48 | . 834 |
| January. <br> Fabruary | 178 | 42 | 66.4 | 1.84 | 1.92 | 1.19 |
| March. | 146 | 42 | 68.9 | 1.91 | 2.20 1.78 | 1.23 |
| April. | 161 | 46 | 57.7 | 1.60 | 1.78 | 1.03 |
|  | 380 | 41 | 80.5 43.2 | 2.23 1.20 | 2.57 1.35 | 1.44 .776 |
| June. | 91 | 24 | 35.8 | -. 992 | 1.14 | . 641 |
| Augy | 31 | 15 | 19.2 | . 532 | . 61 | . 344 |
| Septomber <br> The jear. | 19 | 12 | 11.5 | . 402 | . 15 | . 260 |
|  | 410 | 12 | 43.8 | 1.38 | 18.71 | . 892 |

Yearly discharga of Little Gunpowder Falls at Laural Brook, Md.

| Yaar | Yaar anding Sapt. 30 |  |  |  | Calondar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runofi in inches | Discharee in million gallons per day per square mile | Discharga in second-feat |  | Runoff in 1:ches | Disclarge in million callons per day per square mile |
|  | Mern | Per square mile |  |  | Mean | Per square mile |  |  |
| $\begin{aligned} & 1928 . \\ & 1929 . \\ & 1930 . \\ & 1931 . \\ & 1932 . \end{aligned}$ | $\begin{aligned} & 78.9 \\ & 50.7 \\ & 36.6 \\ & 20.2 \\ & 20.2 \end{aligned}$ | $\begin{gathered} 2.19 \\ 1.40 \\ 1.01 \\ .560 \\ .560 \end{gathered}$ | $\begin{array}{r} 29.75 \\ 18.98 \\ 13.77 \\ 7.60 \\ 7.63 \end{array}$ | 1.42 .905 .653 .362 .362 | 78.7 52.4 27.1 18.9 27.5 | $\begin{array}{r} 2.18 \\ 1.45 \\ .751 \\ .524 \\ .762 \end{array}$ | $\begin{array}{r} 29.64 \\ 19.66 \\ 10.19 \\ 7.11 \\ 10.35 \end{array}$ | $\begin{array}{r} 1.41 \\ .937 \\ .485 \\ .339 \\ .492 \end{array}$ |

Yeariy discharge of Little Ounpowder Falls at Laural Brook, Md.--Continued

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | Diecharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day par squara mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1933........... | 63.5 | 1.76 | 23.88 | 1.14 |  |  |  |  |
| 1934........... | 47.1 | 1.30 | 17.73 | 1.14 | 62.6 49.2 | 1.73 1.36 | $\begin{aligned} & 23.53 \\ & 18.51 \end{aligned}$ | $1.12$ |
| 1935......... | 50.5 | 1.40 | 18.98 | . .905 | 49.9 | 1.38 | 18.74 | .879 |
| 1936......... | 57.5 | 1.59 | 21.69 | 1.03 | 54.3 | 1.50 | 20.47 | . 969 |
| 1937.......... | 53.9 | 1.49 | 20.28 | .963 | 64.6 | 1.79 | 24.31 | 1.16 |
| 1938........... | 48.5 | 1.34 | 18.24 | . 866 | 38.6 | 1.07 | 14.50 | . 692 |
| 1939........... | 50.1 | 1.39 | 18.86 | . 898 | 50.2 | 1.39 | 18.90 | .898 |
| 1910.......... | 45.7 | 1.27 | 17.22 | . 821 | 47.5 | 1.32 | 17.91 | .853 |
| 1941........... | 37.4 | 1.04 | 14.04 | . 672 | 31.8 | . 881 | 11.94 | . 569 |
| 1942............ | 29.8 | . 825 | 11.21 | . 533 | 39.6 | 1.10 | 14.90 | .711 |
| 1943.......... | 49.8 | 1.38 | 18.71 | . 892 | - | - | - | - |
| Highest..... | 78.9 | 2.19 | 29.75 | 1.42 | 78.7 | 2.18 | 29.64 | 1.41 |
| Average..... | 46.3 | 1.28 | 17.41 | . 827 | 46.2 | 1.28 | 17.38 | 1.827 |
| Lowest....... | 20.2 | . 560 | 7.60 | .362 | 18.9 | . .524 | -7.11 |  |

Little Gunpowder Falls near Belair, Md.
 stream from Wildcat Branch and 5.3 miles southwast of 8alair, Harford County. Drainage area.- 43 square miles
Records avalIable. - December 1904 to March 1909
Extremes.- Maximum daily discharge, 1,600 second-feet Feb. 26, 1908; minimum dally, Iर second-feet sept. 25, 1908.

Monthly discharge of Little Gunpowder Falls near Belair, Md.


Monthly discharge of Little Gunpowder Falls near Belair, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{gathered} \text { Runo } f \\ \text { In } \\ \text { Inches } \end{gathered}$ | D1scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| October.... 1906. | 195 | 37 | 67.9 | 1.58 | 1.82 | 1.02 |
| November. | 199 | 43 | 60.0 | 1.40 | 1.56 | . 905 |
| December. | 241 | 42 | 83.5 | 1.94 | 2.24 | 1.25 |
| January. | 345 | 45 | 101 | 2.35 | 2.71 | 1.52 |
| February. | - | - | 60 | 1.40 | 1.46 | . 005 |
| March. . | 708 | 74 | 152 | 3.53 | 4.07 | 2.28 |
| April. | 278 | 60 | 84.2 | 1.96 | 2.10 | 1.87 |
| May.. | 159 | 52 | 68.2 | 1.59 | 1.83 | $1.0{ }^{3}$ |
| June. | 286 | 47 | 77.2 | 1.80 | 2.01 | 1.16 |
| July. | 161 | 31 | 52.4 | 1.22 | 1.41 | . 789 |
| August.. | 134 | 30 | 47.9 76.9 | 1.11 | 1.28 2.00 | $.717$ |
| September. | 405 |  |  |  |  |  |
| The year. | 708 | 25 | 77.8 | 1.81 | 24.58 | 1.17 |
| October. | 89 | 41 | 52.8 | 1.23 | 1.42 | . 795 |
| November | 636 | 43 | 104 | 2.42 | 2.70 | $\bigcirc .56$ |
| December | 690 | 69 | 151 | 3.51 | 4.05 | 2.27 |
| January. | 600 | 86 | 134 | 3.12 | 3.60 | 2.02 |
| February. | 1,600 | 99 | 209 | 4.86 | 5.24 | 3.14 |
| March.. | 337 | 80 | 113 | 2.63 | 3.03 | 1.70 |
| April.... | 100 | 61 | 76.1 | 1.77 | 1.98 | 1.14 |
| May. . . . . . | 256 | 50 | 78.2 | 1.82 | 2.10 | 1.18 |
| June. | 206 | 16 | 43.9 | 1.02 | 1.18 | . 659 |
| August. | 462 | 22 | 48.6 | 1.13 | 1.30 | . 730 |
| September | 92 | 13 | 32.3 | . 751 | . 84 | . 485 |
| The year. | 1,600 | 13 | 90.3 | 2.10 | 28.63 | 1.36 |
| October. | 351 | 20 | 48.3 | 1.12 | 1.29 | . 724 |
| November. | 64 | 29 | 42.5 | . 988 | 1.10 | . 639 |
| Decomber. | 84 | 28 | 49.3 | 1.25 | 1.33 | . 743 |
| January. | 126 | 42 | 63.8 | 1.48 | 1.71 | . 957 |
| February | 273 | 49 | 81.6 | 1.90 | 1.98 | 1.23 |
| March.... | 244 | 71 | 103 | 2.40 | 2.77 | 1.55 |

Year-iy discharge of Little Gunpowder Falls near Belair, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { Inches } \end{gathered}$ | $\begin{aligned} & \text { Discharge } \\ & \text { in million } \\ & \text { gallons per } \\ & \text { day per } \\ & \text { square mile } \end{aligned}$ | Discharge in eecond-feet |  | $\begin{gathered} \text { Finoff } \\ \text { in } \\ \text { incheo } \end{gathered}$ | Discinarge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| $\begin{aligned} & 1905 . \\ & 1906 . \\ & 1907 . \\ & 1908 . \end{aligned}$ | 71.8 77.8 90.3 | -1.67 1.81 2.10 | -22.66 24.58 28.63 | -1.08 1.17 1.36 | 64.5 76.1 85.6 76.8 | $\begin{aligned} & 1.50 \\ & 1.77 \\ & 1.99 \\ & 1.79 \end{aligned}$ | $\begin{aligned} & 20.44 \\ & 24.00 \\ & 27.13 \\ & 24.18 \end{aligned}$ | $\begin{aligned} & 0.969 \\ & 1.14 \\ & 1.29 \\ & 1.16 \end{aligned}$ |

Gunpowder Falls at Glencoe, Md.
Location.- Chain gage, lat. $39^{\circ} 33^{\prime} 00^{\prime \prime}$, long. $76^{\circ} 38^{\prime \prime} 10^{\prime \prime}$, at highway bridge in Glencoe, Baltimore County, and 0.7 mile upstream from Piney Creek.
Drainage area.- 160 square miles.
Records avallable. - December 1904 to March 1909.
Extremes.- Maxlmum daily discharge, 5,530 second-feet Feb. 26, 1904; minimum da1ly, 71 second-feet July 19-21, 1908.

Monthly discharge of Gunpowder Falls at Glencoe, Md.

| Month | Diacharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Per square mile |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| October <br> November <br> December <br> January <br> February <br> March <br> April. <br> May <br> June <br> July <br> August <br> September <br> The year. |  |  |  |  |  |  |
|  | 1,270 | 93 | 211 | 2.32 | 1.52 | . 853 |
|  | 503 | 111 | 147 | . 919 | 1.03 | . 594 |
|  | 2,260 | 143 | 310 | 1.94 | 2.24 | 1.25 |
|  | 772 | 174 | 255 | 1.59 | 1.83 | . 03 |
|  | 720 | 170 | 268 | 1.68 | 1.75 | 1.09 |
|  | 820 | 190 | 330 | 2.06 | 2.38 | 1.33 |
|  | 1,840 | 260 | 461 | 2.88 | 3.21 | 1.96 |
|  | 344 | 174 | 239 | 1.49 | 1.72 | . 963 |
|  | 433 | 132 | 205 | 1.28 | 1.43 | . 827 |
|  | 1,360 | 111 | 227 | 1.42 | 1.64 | . 918 |
|  | 1,310 | 111 | 237 | 1.48 | 1.71 | . 957 |
|  | 149 | 80 | 104 | . 650 | . 72 | . 420 |
|  | 2,260 | 80 | 250 | 1.56 | 21.18 | 1.01 |
| October. | 527 | 86 | 179 | 1.12 | 1.29 | . 724 |
| November | 235 | 104 | 132 | . 825 | . .92 | . 533 |
| December | 457 | 101 | 203 | 1.27 | 1.46 | . 821 |
| January. | 612 | - | 250 | 1.56 | 1.80 | 1.01 |
| February | - | - | 192 | 1.20 | 1.25 | . 776 |
| March. | 3,800 | - | 505 | 3.16 | 3.64 | 2.04 |
| April | 552 | 152 | 209 | 1.31 | 1.46 | . 847 |
| May. | 265 | 135 | 167 | 1.04 | 1.20 | . 672 |
| June | 668 | 101 | 186 | 1.16 | 1.29 | . 750 |
| July. | 2,580 | 104 | 280 | 1.75 | 2.02 | 1.13 |
| August... | 538 | 80 | 131 | . 819 | . 94 | . 529 |
| September. . . . . . . . . . . . . . . . . . | 1,480 | 77 | 231 | 1.44 | 1.61 | . 931 |
| The year............. | 3,800 | 77 | 223 | 1.39 | 18.88 | . 898 |
| October. | * 457 | 104 | 153 | . 956 | 1.10 | . 618 |
| November | 1,080 | 135 | 296 | 1.25 | 2.06 | 1.20 |
| December | 2,060 | 194 | 447 | 2.79 | 3.22 | 1.80 |
| January. | 3,070 | 200 | 417 | 2.61 | 3.01 | 1.69 |
| February | 5,530 | - | 656 | 4.10 | 4.42 | 2.65 |
| March | 1,740 | 273 | 433 | 2.71 | 3.12 | 1.75 |
| Apri | +344 | 180 | 242 | 1.51 | 1.68 | . 976 |
| May. | 1,390 | 170 | 299 | 1.87 | 2.16 | 1.21 |
| June | 3 208 | 97 | 106 | . 662 | . 74 | . 428 |
| July. | 3,040 | 「1 | 270 | 1.69 | 1.95 | 1.09 |
| August. | $1,420$ | 111 | 191 | $1.19$ | 1.37 | . 769 |
| Septembe | 407 | 90 | 119 | . 744 | $\underline{.83}$ | . 481 |
| The year. | 5,530 | 71 | 304 | 1.90 | 25.66 | 1.23 |
| October. | 1,930 | 97 |  |  |  |  |
| November. | , 180 | 122 | 142 | 1.888 | 1.39 | . 574 |
| Decomber. | 180 | - | 130 | . 812 | . 94 | . 525 |
| January. | 401 | 80 | 181 | 1.13 | 1.30 | . 730 |
| February. | 668 | 144 | 240 | 1.50 | 1.56 | . 969 |
| March... | 748 | 212 | 298 | 1.86 | 2.14 | 1.20 |

Yearly discharge of Gunpowder Falls at Glencoe, Md

| Yaar | Year onding Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons par day per square mile | Diecharge in second-feet |  | Runoff in inches | Diecharce in million callons per day per sqi.are mile |
|  | Mean | $\begin{gathered} \text { Par } \\ \text { square } \\ \text { m1le } \end{gathered}$ |  |  | Mean | Par square mile |  |  |
| $\begin{aligned} & 1905 . \\ & 1906 . \\ & 1907 . \\ & 1908 . \end{aligned}$ | $\begin{array}{r} - \\ 250 \\ 223 \\ 304 \end{array}$ | $\begin{aligned} & 1.56 \\ & 1.39 \\ & 1.90 \end{aligned}$ | $\begin{aligned} & 21.18 \\ & 18.88 \\ & 65.66 \\ & \hline \end{aligned}$ | $\begin{aligned} & \overline{1.01} \\ & .898 \\ & 1.23 \end{aligned}$ | $\begin{aligned} & 256 \\ & 237 \\ & 254 \\ & 266 \end{aligned}$ | $\begin{aligned} & 1.60 \\ & 1.48 \\ & 1.59 \\ & 1.66 \end{aligned}$ | $\begin{aligned} & 21.86 \\ & 20.06 \\ & 21.59 \\ & 22.55 \end{aligned}$ | $\begin{aligned} & 1.03 \\ & .957 \\ & 1.03 \\ & 1.07 \end{aligned}$ |

PATAPSCO RIVER PASIN
North Branch Patapsco River near Reisterstown, Md
Location.- Water-stage recorder, lat. $39^{\circ} 26^{\prime \prime} 31^{\prime \prime}$, long. $76^{\circ} 53^{\prime \prime} 14^{\prime \prime}$, at highway bridge on Loulsville-Delight road, $3 \frac{1}{2}$ miles southwest of Reisterstown, Baltimore County. Datum of gage is 344.35 feet above mean sea level, adjustment of 1912
Drainage area.- 91.0 square miles
Records avallable.- June 1927 to September 1943.
Extremes.- Maxlmum discharge, 11,000 second-feet Aug. 24, 1933 (gage he1ght 14.6 feet), from rating curve extanded above 2,400 second-feet; minimum, 10 second-feet Oct. 4, 6, 1931 and 0ct. 9, 1941.
Romarks.- Slight rogulation at 1 ow and medium stages by mill above station. Records do not include small amount of water diverted above station into Monocacy River Basin for municipal supply of Westminster.

Monthly discharge of North Branch Patapsco River near Roisterstown, Md.

| Month | Discharge in second-feet |  |  |  | Runoff <br> in <br> inches | Discinarce in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { m!le } \end{gathered}$ |  |  |
| 1927 July. . . . . . . . . . Auguet. September. . . . . . . . . | $\begin{aligned} & 149 \\ & 249 \\ & 573 \end{aligned}$ | $\begin{aligned} & 76 \\ & 42 \\ & 35 \end{aligned}$ | $\begin{aligned} & 92.5 \\ & 64.6 \\ & 59.4 \end{aligned}$ | $\begin{aligned} & 1.02 \\ & .710 \\ & .653 \end{aligned}$ | $\begin{array}{r} 1.18 \\ .82 \\ .73 \end{array}$ | $\begin{array}{r} 0.659 \\ .459 \\ .422 \end{array}$ |
| October..... <br> November <br> December <br> January <br> February <br> March. <br> Apr11 <br> May. <br> June. <br> July. <br> August. <br> Soptamber | $\begin{array}{r} 773 \\ 403 \\ 434 \\ 172 \\ 702 \\ 204 \\ 1,040 \\ 237 \\ 553 \\ 452 \\ 708 \\ 177 \end{array}$ | 36 <br> 64 <br> 70 <br> - <br> 97 <br> 91 <br> 93 <br> 82 <br> 85 <br> 74 <br> 76 | 142 92.7 135 85.7 196 136 178 141 208 157 127 98.7 | $\begin{aligned} & 1.56 \\ & 1.02 \\ & 1.48 \\ & .942 \\ & 2.15 \\ & 1.49 \\ & 1.96 \\ & 1.55 \\ & 2.28 \\ & 1.72 \\ & 1.40 \\ & 1.08 \end{aligned}$ | $\begin{aligned} & 1.80 \\ & 1.14 \\ & 1.71 \\ & 1.09 \\ & 2.32 \\ & 1.72 \\ & 2.19 \\ & 1.79 \\ & 2.54 \\ & 1.98 \\ & 1.61 \\ & 1.20 \\ & \hline \end{aligned}$ | 1.01 .659 .957 .609 1.39 .963 1.27 1.00 1.47 1.11 .905 .698 |
| The year... | 1,040 | 36 | 141 | 1.55 | 21.09 | 1.00 |
| October. <br> Novamber. <br> Decembor. <br> January. <br> Februar's. <br> March. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September | $\begin{array}{r} 104 \\ 120 \\ 168 \\ 306 \\ 806 \\ 607 \\ 849 \\ 331 \\ 776 \\ 136 \\ 112 \\ \hline \end{array}$ | $\begin{array}{r} 68 \\ 58 \\ - \\ - \\ \hline 95 \\ 87 \\ 93 \\ 64 \\ 49 \\ - \end{array}$ | $\begin{gathered} 75.8 \\ 66.7 \\ 69.5 \\ 105 \\ 158 \\ 180 \\ 182 \\ 131 \\ 154 \\ 70.8 \\ 50.0 \\ 60 \end{gathered}$ | $\begin{aligned} & .833 \\ & .733 \\ & .764 \\ & 1.15 \\ & 1.74 \\ & 1.88 \\ & 2.00 \\ & 1.44 \\ & 1.69 \\ & .778 \\ & .549 \\ & .659 \end{aligned}$ | $\begin{array}{r} .96 \\ .82 \\ .88 \\ 1.33 \\ 1.81 \\ 2.28 \\ 2.23 \\ 1.66 \\ 1.89 \\ .90 \\ .63 \\ .74 \end{array}$ | $\begin{gathered} .538 \\ .474 \\ .494 \\ .743 \\ 1.12 \\ 1.28 \\ 1.29 \\ .931 \\ 1.09 \\ .503 \\ .355 \\ .426 \end{gathered}$ |
|  | 849 | - | 108 | 1.19 | 16.13 | . 769 |

Monthly diacharge of North Branch Patapsco River near Reisterstow, Md.--Continued

| Month | Diacharge in aecond-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per <br> square <br> mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| October... | 1,100 | 58 | 132 | 1.45 | 1.67 | 0.937 |
| November. | 346 | 60 | 105 | 1.15 | 1.28 | . 743 |
| December. | 140 | - | 87.4 | . 960 | 1.11 | . 620 |
| January.. | 120 | - | 75.3 | .827 | . 95 | . 535 |
| February. | 559 | - | 149 | 1.64 | 1.71 | 1.06 |
| March. | 519 | 84 | 137 | 1.51 | 1.74 | . .976 |
| April. | 569 | 91 | 142 | 1.56 | 1.74 | 1.01 |
| May. . | 95 | 60 | 76.4 | . 840 | -. 97 | . 543 |
| June. | 303 | 43 | 84.4 | . 927 | 1.03 | . 599 |
| July. | 91 | 24 | 37.4 | . 411 | . 47 | . 266 |
| August. | 39 | 18 | 24.7 | . 271 | . 31 | . 175 |
| Septermber | 126 | 19 | 30.0 | . 330 | . 37 | .213 |
| The year. | 1,100 | 18 | 89.7 | . 986 | 13.35 | . 637 |
| October. | 29 | 19 | 23.5 | . 258 | . 30 |  |
| November. | 51 | 23 | 28.4 | . 312 | . 35 | . 202 |
| Decomber. | 455 | 19 | 49.6 | . 545 | . 63 | . 352 |
| January. | 479 | 29 | 66.6 | . 732 | . 84 | . 473 |
| February. | 191 | 27 | 46.8 | . 514 | . 54 | . 332 |
| March. | 288 | 36 | 63.5 | . 698 | . 80 | . 451 |
| April | 192 | 38 | 58.2 | . 749 | . 84 | . 484 |
| May. | 96 | 27 | 46.4 | . 510 | . 59 | .330 |
| June | 174 | 23 | 42.0 | . 462 | . 52 | . 299 |
| July. | 40 | 14 | 23.0 | . 253 | . 29 | . 164 |
| August.. | 329 | 11 | 55.5 | . 610 | $.70$ | . 394 |
| September | 66 | 13 | 20.8 | . 229 |  | . 148 |
| The year. | 479 | 11 | 44.6 | . 490 | 6.66 | .317 |
| October. . . . . | 44 | 13 | 17.8 | . 196 | . 23 |  |
| November | 32 | 18 | 22.0 | . 242 | . 27 | . 156 |
| December. | 67 | 19 | 28.3 | . 311 | . 36 | .201 |
| January. | 199 | 33 | 64.0 | . 703 | . 81 | . 454 |
| February. | 146 | 33 | 50.5 | . 555 | . 60 | . 359 |
| March.. | 681 | 33 | 94.0 | 1.03 | 1.19 | . 666 |
| Apr11. | 186 | 50 | 82.9 | . 911 | 1.02 | . 589 |
| May. | 377 | 45 | 80.1 | . 880 | 1.01 | . 569 |
| June | 80 | 28 | 40.7 | . 447 | . 50 | . 289 |
| July. | 87 | 19 | 29.7 | . 326 | . 38 | . 211 |
| August. | 110 | 11 | 25.8 | . 284 | . 33 | . 184 |
| Soptember. | 205 | 14 | 32.2 | . 354 | . 40 | . 229 |
| The jear. | 681 | 11 | 47.3 | . 520 | 7.10 | .336 |
| October. | 624 |  | 86.1 |  | 1.09 |  |
| November. | 763 | 76 | 164 | 1.80 | 2.01 | 2.16 |
| December | 252 | 50 | 90.9 | . 999 | 1.15 | . 646 |
| January.. | 554 | 74 | 110 | 1.21 | 1.40 | . 782 |
| February. | 336 | 90 | 127 | 1.40 | 1.46 | . 905 |
| March. | 505 | 89 | 175 | 1.92 | 2.21 | 1.24 |
| April | 826 | 138 | 280 | 3.08 | 3.44 | 1.99 |
| May. | 398 | 122 | 191 | 2.10 | 2.42 | 1.36 |
| June | 305 | 70 | 101 | 1.11 | 1.24 | . 717 |
| July.. | 486 | 49 | 80.6 | . 886 | 1.02 | . 573 |
| August. | 3,550 | 42 | 284 | 3.12 | 3.60 | 2.02 |
| September. | 211 | 72 | 97.2 | 1.07 | 1.19 | . 692 |
| The year. | 3,550 | 16 | 149 | 1.64 | 22.23 | 1.06 |
| 1933-34 |  |  |  |  |  |  |
| October... | 150 | 64 | 76.4 | . 840 | . 97 | . 543 |
| November. | 117 | 57 | 67.1 | . 737 | . 82 | . 476 |
| December. | 108 | 50 | 62.4 | . 686 | . 79 | . 443 |
| January. | 225 | 45 | 94.1 | 1.03 | 1.18 | . 666 |
| February. | 85 | 45 | 55.6 | . 611 | . 64 | . 395 |
| March. | 900 | 50 | 149 | 1.64 | 1.89 | 1.06 |
| Apr 11 | 254 | 87 | 127 | 1.40 | 1.56 | . 905 |
| May. | 281 | 72 | 100 | 1.10 | 1.27 | . 711 |
| June | 407 | 48 | 81.4 | . 895 | 1.00 | . 578 |
| July. | 91 | 26 | 36.8 | . 404 | . 47 | . 261 |
| August. | 95 | 23 | 39.0 | . 429 | . 49 | . 277 |
| September. | 1,630 | 23 | 214 | 2.35 | 2.62 | 1.52 |
| The jear.. | 1,630 | 23 | 92.0 | 1.01 | 13.71 | . 653 |

Monthly discharge of North 8ranch Patapsco River near Reisterstown, Md.--Continued.

| Month | Discharge in second-fset |  |  |  | $\begin{gathered} \text { Runof } \\ \text { in } \\ \text { inches } \end{gathered}$ | D1scharge in million gallons per day per aquare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Pss square mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 132 | 65 | 78.5 | 0.863 | 0.99 | 0.558 |
| November. | 271 | 60 | 80.1 | . 880 | . 98 | . 569 |
| December. | 682 | 75 | 127 | 1.40 | 1.61 | . 905 |
| January. | 289 | 84 | 116 | 1.27 | 1.46 | . 821 |
| February | 423 | 90 | 166 | 1.82 | 1.90 | 1.18 |
| March... | 292 | 115 | 151 | 1.66 | 1.91 | 1.07 |
| April. | 440 | 101 | 149 | 1.64 | 1.83 | 1.06 |
| May. | 196 | 67 | 95.5 | 1.05 | 1.21 | . 679 |
| June | 172 | 50 | 70.8 | . 778 | . 87 | . 503 |
| July. | 235 | 37 | 58.7 | . 645 | . 74 | . 417 |
| August | 131 | 26 | 36.8 | . 404 | . 47 | . 261 |
| September | 753 | 26 | 99.4 | 1.09 | 1.22 | .704 |
| The year. | 753 | 26 | 102 | 1.12 | 15.19 | .724 |
| october............ | 233 | 39 | 50.0 | . 549 | . 63 | . 355 |
| November. | 212 | 43 | 73.0 | . 802 | . 85 | . 518 |
| December. | 101 | 49 | 64.4 | . 708 | . 82 | . 458 |
| January | 900 | 65 | 179 | 1.97 | 2.27 | 1.27 |
| February | 2,010 | 80 | 312 | 3.43 | 3.70 | 2.22 |
| March... | 830 | 138 | 290 | 3.19 | 3.68 | 2.06 |
| Apr11. | 424 | 110 | 162 | 1.78 | 1.99 | 1.15 |
| May.. | 170 | 72 | 94.0 | 1.03 | 1.19 | . 666 |
| June | 78 | 51 | 65.1 | . 715 | . 80 | . 462 |
| July. | 313 | 36 | 66.0 | .725 | . 84 | - 469 |
| August | 525 | 28 | 54.9 | . 603 | . 70 | .390 |
| September |  |  |  |  | . 33 | .192 |
| The year | 2,010 | 22 | 119 | 1.31 | 17.84 | . 847 |
| October........ | 167 |  |  |  | . 56 |  |
| November. | 54 | 30 | 36.6 | . 402 | . 45 | . 260 |
| December. | 348 | 28 | 93.5 | 1.03 | 1.19 | . 666 |
| January. | 266 | 72 | 140 | 1.54 | 1.78 | . 995 |
| February. | 1,010 | 106 | 188 | 2.07 | 2.16 | 1.34 |
| March... | 177 | 92 | 120 | 1.32 | 1.52 | . 853 |
| April | 1,260 | 81 | 178 | 1.96 | 2.19 | 1.27 |
| May. | 222 | 87 | 132 | 1.45 | 1.67 | . 937 |
| June | 474 | 72 | 138 | 1.52 | 1.70 | . 982 |
| July.. | 664 | 60 | 109 | 1.20 | 1.38 | . 776 |
| August... | 274 82 | 47 44 | 88.7 55.3 | . 975 | 1.12 | .630 .393 |
| September |  |  |  |  |  | . 393 |
| The year | 1,260 | 27 | 110 | 1.21 | 16.40 | . 782 |
| October............ | 1,260 |  |  |  |  |  |
| November. | 2,530 | 78 | 214 | 2.35 | 2.62 | 1.52 |
| December. | 138 | 81 | 97.2 | 1.07 | 1.23 | . 692 |
| January. | 212 | 70 | 88.9 | . 977 | 1.13 | . 631 |
| February. | 215 | 68 | 91.3 | 1.00 | 1.04 | . 646 |
| March. | 184 | 79 | 100 | 1.10 | 1.27 | . 711 |
| Apr11. | 197 | 68 | 87.0 | . 956 | 1.07 | . 618 |
| May.. | 117 | 52 | 67.3 | . 740 | . 85 | .478 |
| June. | 316 | 40 | 63.1 | . 693 | . 77 | . 448 |
| July. | 296 | 34 | 70.3 | . 773 | . 89 | . 500 |
| August. | 297 | 27 | 56.7 | . 623 | . 72 | . 403 |
| September. | 194 | 32 | 53.5 | . 588 | . 66 | . 380 |
| The year | 2,530 | 27 | 94.4 | 1.04 | 14.07 | . 672 |
| October 1938-39 |  |  |  |  |  |  |
| October.... |  |  | 42.8 | .470 | . 54 | . 304 |
| November. . . | 67 340 | 36 50 50 | 45.1 85.9 | .496 .944 | .55 1.09 | . 321 |
| January. | 905 | 40 | 93.0 | 1.02 | 1.18 | . 659 |
| February. | 587 | 106 | 190 | 2.09 | 2.18 | 1.35 |
| March. . | 286 | 111 | 154 | 1.69 | 1.95 | 1.09 |
| April. | 229 | 100 | 143 | 1.57 | 1.75 | 1.01 |
| May... | 152 | 63 | 92.2 | 1.01 | 1.16 | . 653 |
| June. | 417 | 56 | 96.8 | 1.06 | 1.18 | . 685 |
| July. | 85 | 39 | 51.3 | . 564 | . 65 | . 365 |
| August. | 79 | 26.0 | 36.8 | . 404 | . 47 | . 261 |
| Soptember. | 125 | 27.5 | 39.6 | . 435 | . 49 | .281 |
| The year. | 905 | 26.0 | 88.5 | . 973 | 13.19 | .629 |

Monthly discharge of North Branch Patapsce River near Reisterstown, Md.--Continued.

| Month | Discharge in second-feet |  |  |  | Runoff in Inches | Discharite In million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max1mum | M1n1mum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| October... | 357 | 33 | 61.4 | 0.675 | 0.78 | 0.436 |
| November. | 98 | 34 | 44.1 | . 485 | . 54 | . 313 |
| December. | 74 | 33 | 40.7 | . 447 | . 52 | . 28 ? |
| January. | 230 | 28 | 44.2 | . 486 | . 56 | . 314 |
| February. | 801 | 29 | 108 | 1.19 | 1.28 | . 769 |
| March. | 571 | 72 | 132 | 1.45 | 1.67 | . 937 |
| April | 1,330 | 66 | 242 | 2.66 | 2.97 | 1.72 |
| May. | 202 | 89 | 120 | 1.32 | 1.52 | . 853 |
| June. | 119 | 48 | 70.6 | . 776 | . 87 | . 502 |
| July. | 112 | 33 | 48.0 | .527 | . 61 | . 341 |
| August. | 188 | 30 | 51.2 | . 563 | . 65 | . 364 |
| September | 1,120 | 34 | 86.5 | . 951 | 1.06 | . 615 |
| The jear | 1,330 | 28 | 87.0 | . 956 | 13.03 | . 618 |
| October. | 145 | 42 | 53.7 | . 590 | . 68 | . 381 |
| November. | 334 | 48 | 112 | 1.23 | 1.38 | .795 |
| December. | 237 | 75 | 106 | 1.16 | 1.34 | .750 |
| January. | 207 | 83 | 112 | 1.23 | 1.42 | .785 |
| February. | 339 | 80 | 118 | 1.30 | 1.36 | . 840 |
| March. | 552 | 78 | 138 | 1.52 | 1.75 | . 818 |
| April. | 404 | 78 | 124 | 1.36 | 1.52 | .979 |
| May. | 99 | 50 | 68.0 | . 747 | . 86 | . 493 |
| June. | 214 | 45 | 73.1 | . 203 | . 90 | . 51.9 |
| July. | 100 | 32 | 50.7 | . 557 | . 64 | . 360 |
| August. | 47 | 23 | 29.4 | .323 | . 37 | . 200 |
| September. | 31 | 12 | 18.1 | . 109 | . 22 | . 129 |
| The year | 552 | 12 | 83.4 | . 916 | 12.44 | . 592 |
| October........ | 26 | 12 | 17.6 | . 193 | . 22 | . 125 |
| November. | 58 | 25 | 29.7 | .326 | . 36 | . 211 |
| December. | 136 | 30 | 44.6 | . 4.0 | . 57 | . 317 |
| January.. | 160 | 20 | 39.6 | . 435 | . 50 | . 281 |
| February. | 400 | 33 | 63.7 | . 700 | . 73 | . 452 |
| March. | 312 | 34 | 75.6 | . 831 | . 96 | . 537 |
| April | 383 | 50 | 113 | 1.24 | 1.39 | . 901 |
| May. | 257 | 38 | 61.6 | . 677 | . 78 | . 438 |
| June. | 130 | 33 | 54.3 | . 597 | . 67 | . 36 |
| July.. | 210 | 28 | 62.8 | . 690 | . 80 | . 444 |
| August... | 1,400 | 46 | 230 | 2.53 | 2.91 | 1.64 |
| Septomber. | 497 | 46 | 82.6 | .908 | 1.01 | . 587 |
| The year. | 1,400 | 12 | 73.0 | . 802 | 10.90 | .518 |
| October.. | 1,100 | 51 | 191 | 2.10 | 2.42 | 1.36 |
| November. | 210 | 92 | 123 | 1.35 | 1.50 | . 873 |
| December. | 874 | 82 | 146 | 1.60 | 1.85 | 1.03 |
| January. | 218 | 105 | 130 | 1.43 | 1.65 | .924 |
| February. | 416 | 92 | $17 \varepsilon$ | 1.93 | 2.01 | 1.25 |
| March.. | 278 | 104 | 168 | 1.85 | 2.13 | 1.20 |
| April | 312 | 109 | 143 | 1.57 | 1.75 | 1.01 |
| May. . | 487 | 88 | 126 | 1.38 | 1.59 | . 892 |
| June | 128 | 54 | 74.5 | . 819 | . 91 | . 529 |
| July. | 84 | 35 | 50.8 | . 558 | . 64 | $.361$ |
| August.... | 46 | 20 | 27.1 | . 298 | . 34 | $.193$ |
| September. | 35 | 16 | 22.2 | . 244 | . 27 | . 158 |
| The year. | 1,100 | 16 | 114 | 1.25 | 17.06 | .808 |

Tearly discharge of North Branch Patapsco River near Reisteretown, Md.

| Year | Year ending Sopt. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inchee | Dlecharge in million gallons per day per square mile | Discharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Dischargo in million gallone per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Por square mile |  |  |
| 1928. | 141 | 1.55 | 21.09 | 1.00 | 128 | 1.41 | 19.10 | 0.911 |
| 1929 | 108 | 1.19 | 16.13 | . 769 | 118 | 1.30 | 17.53 | . 840 |
| 1930. | 89.7 | . 986 | 13.35 | . 637 | 71.0 | . 780 | 10.57 | . 504 |
| 1931 | 44.6 | . 490 | 6.66 | . 317 | 41.7 | . 458 | 6.24 | . 296 |
| 1932. | 47.3 | . 520 | 7.10 | . 336 | 70.0 | . 769 | 10.49 | . 497 |
| 1933. | 149 | 1.64 | 22.23 | 1.06 | 138 | 1.52 | 20.56 | . 982 |
| 1934. | 92.0 | 1.01 | 13.71 | . 653 | 98.7 | 1.08 | 14.71 | . 698 |
| 1935 | 102 | 1.12 | 1.5 .19 | . 724 | 93.6 | 1.03 | 13.95 | . 666 |
| 1936 | 119 | 1.31 | 17.84 | . 847 | 118 | 1.30 | 17.70 | . 840 |
| 1937. | 110 | 1.21 | 16.40 | . 782 | 133 | 1.46 | $19.8{ }^{7}$ | . 944 |
| 1938. | 94.4 | 1.04 | 14.07 | . 672 | 70.9 | . 779 | 10.58 | . 503 |
| 1939 | 88.5 | . 973 | 13.19 | . 629 | 86.1 | . 946 | 12.85 | . 611 |
| 1940 | 87.0 | . 956 | 13.03 | . 618 | 97.5 | 1.07 | 14.59 | . 692 |
| 1941 | 83.4 | .916 | 12.44 | . 592 | $\begin{array}{r}68.3 \\ \\ \hline 104\end{array}$ | . 7.75 | 10.19 15.52 | . 485 |
| 1942. | 73.0 | . 802 | 10.90 | . 538 | 104 | 1.14 | 15.52 | . 737 |
| 1943. | 114 | 1.25 | 17.06 | . 808 | - | - | - |  |
| H1ghest | 149 | 1.64 | 22.23 | 1.06 | 138 | 1.52 | 20.56 |  |
| Average | 96.4 | 1.06 | 14.40 | . 685 | 95.8 | 1.05 | 14.30 | . 679 |
| Lowest. | 44.6 | . 490 | 6.66 | .317 | 41.7 | . 458 | 6.24 | . 296 |

North Branch Patapsco River near Marriottsville, Md.
Location.- Water-stage recorder, 1at. $39^{\circ} 21^{\prime} 56^{\prime \prime}$, long. $76^{\circ} 53^{\prime} 06^{n}$, at hichway bridge 1.2 miles northeast of Marriottsville, Roward County, and 2.3 mlles upstream from confluence with South Branch. Datum of gage is 269.78 feet above mean sea level (city of Baltimore bench mark).
Drainage area.- 165 square miles.
Records avallable.- October 1929 to September 1943.
Extremes.-Maximum discharge, 19,500 eecond-feet Aug. 24, 1933 (gage height, 20.8 feet), from rating curve extended above 2,300 second-feet on basis of velocity-area studies; minimum 6 second-feet (regulated) Sept. 29, 1941; minimum dally, 9 second-feet (regulated) Sept. 30, 1941.
Remarke.- Considerable regulation at low stages caused by operation of power plants above station. Records do not include small amount of water diverted above station into Monocacy River Basin for municipal supply of Westminster.

Monthly discharge of North Branch Patapsca River near Marrioteville, Md.

| Month | Diecharge in second-feet |  |  |  | Runoffininches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Mininum | Mean | Per square mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| October. | - | - | 239 | 1.45 | 1.67 | 0.937 |
| November. | 725 | 92 | 191 | 1.16 | 1.29 | . 750 |
| December. | 259 | - | 156 | . 945 | 1.09 | . 611 |
| January. | 209 | - | 138 | . 836 | 96 | . 540 |
| February. | 654 | - | 249 | 1.51 | 1. 57 | .876 |
| March. . | 1,100 | 164 | 262 | 1.59 | 1.83 | 1.03 |
| April. | 1,200 | 164 | 257 | 1.56 | 1.74 | 1.01 |
| May... | 176 | 109 | 136 | . 824 | . 95 | . 533 |
| June. | 454 | 80 | 144 | .873 | .97 | .564 .228 |
| July... | 104 49 | 36 | 58.0 35.5 | . 352 | .41 .25 | .228 .139 |
| Auguet... | 49 150 | 29 26 | 35.5 43.9 | .215 .266 | .25 .30 | .139 .172 |
| September. | 150 | 26 |  |  |  |  |
| The jear. | - | 26 | 158 | . 958 | 13.03 | .619 |
| October....... | 47 | 25 | 34.4 | . 208 | . 24 | .134 |
| November. | 70 | 31 | 47.9 | . 290 | . 32 | . 187 |
| December. | 636 | 35 | 75.0 | . 461 | . 53 | . 298 |
| January. | 545 | 44 | 97.4 | . 590 | . 68 | .381 |
| February. | 253 | 40 | 83.7 | . 507 | . 53 | . 328 |
| March... | 494 | 65 | 114 | . 691 | . 80 | . 447 |
| April. | 335 | 70 | 120 | . 727 | - 61 | . 470 |
| May. . | 224 | 47 | 87.6 | . 531 | . 61 | . 343 |
| June. | 223 | 28 | 69.2 | . 419 | . 47 | $.271$ |
| July. | 222 | 25 | 51.2 | . 310 | . 36 | $\cdot 200$ |
| August... | 480 | 17 | 90.7 36.9 | . 550 | .63 .25 | $\begin{aligned} & .355 \\ & .145 \end{aligned}$ |
| September. | 87 | 24 | 36.9 | . 224 |  |  |
| The year... | 636 | 17 | 75.8 | .459 | 6.23 | . 297 |

Monthly discharge of North Branch Patapsco River near Marriottsville, Md.--Continued


Monthly discharge of North Branch Petepsco River neer Marriottsville, Md.--Continued

| Month | Discherge in second-feet |  |  |  | Runoff in inches | Discherge in million gellons per day per square mils |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per square mil $\theta$ |  |  |
| 1936-37 |  |  |  |  |  |  |
| October. . | 288 90 | 43 50 | $\begin{aligned} & 81.9 \\ & 66.6 \end{aligned}$ | $\begin{aligned} & 0.496 \\ & .404 \end{aligned}$ | $\begin{array}{r} 0.57 \\ .45 \end{array}$ | $\begin{array}{r} 0.321 \\ .261 \end{array}$ |
| December. | 689 | 53 | 168 | 1.02 | 1.18 | . 659 |
| Jenuary. | 520 | 132 | 257 | 1.56 | 1.80 | 1.01 |
| February | 1,870 | 186 | 336 | 2.04 | 2.12 | 1.32 |
| March... | 348 | 169 | 216 | 1.31 | 1.51 | . 847 |
| April. | 2,170 | 148 | 342 | 2.07 | 2.31 | 1.34 |
| May. | 354 | 168 | 237 | 1.44 | 1.66 | . 931 |
| June. | 714 | 132 | 228 | 1.38 | 1.54 | . 892 |
| July.. | 808 | 108 | 170 | 1.03 | 1.19 | $.666$ |
| August. | 512 136 | 81 | 161.8 92.8 | .976 .562 | 1.13 .63 | $\begin{array}{r} .631 \\ .363 \end{array}$ |
| The year. | 2,170 | 43 | 195 | 1.18 | 16.09 | . 763 |
| October........... | 2,230 | 69 | 254 | 1.54 | 1.78 | . 995 |
| November. | 5,340 | 141 | 407 | 2.47 | 2.76 | 1.60 |
| Decomber. | 229 | 154 | 177 | 1.07 | 1.23 | . 692 |
| Jenuary. | 373 | 126 | 157 | 1.01 | 1.16 | -653 |
| February. | 430 | 143 | 185 | 1.12 | 1.17 | . 724 |
| March. | 300 | 151 | 188 | 1.14 | 1.31 | . 737 |
| April | 334 | 136 | 168 | 1.02 | 1.14 | . 659 |
| May.. | 207 | 114 | 135 | . 818 | . 94 | . 529 |
| June. | 491 | 67 | 116 | . 703 | . 78 | . 454 |
| July. | 451 | 58 | 131 | . 794 | . 92 | . 513 |
| August... September | 426 553 | 41 54 | 88.5 108 | . .656 | . 62 |  |
| The jeer. | 5,340 | 41 | 177 | 1.07 | 14.54 | . 692 |
| October............ | 140 | 63 | 77.8 | . 472 | . 54 | .305 |
| November. | 125 | 67 | 82.7 | . 501 | . 56 | . 324 |
| December. | 765 | 91 | 156 | . 946 | 1.09 | . 611 |
| Januery | 1,720 | 75 | 178 | 1.08 | 1.24 | . 698 |
| February. | 1,040 | 201 | 374 | 2.27 | 2.36 | 1.47 |
| March. | 624 | 208 | 303 | 1.84 | 2.12 | 1.19 |
| April | 488 | 192 | 283 | 1.72 | 1.92 | 1.11 |
| May. | 286 | 107 | 167 | 1.01 | 1.16 | . 653 |
| June | 628 | 94 | 168 | 1.02 | 1.14 | . 659 |
| July. | 179 | 72 | 87.5 | . 5981 | . 68 | . 316 |
| August. . ${ }_{\text {September }}$ | 290 | 33 | 72.8 | . 441 | . 49 | . 285 |
| The year. | 1,720 | 33 | 169 | 1.02 | 13.86 | . 659 |
| October | 586 | 62 | 120 | . 727 | . 84 | . 470 |
| November | 231 | 66 | 89.5 | . 542 | . 60 | . 350 |
| December | 210 | 66 | 89.2 | . 541 | . 62 | . 350 |
| Januery | 500 | 58 | 91.7 | . 556 | . 64 | - 359 |
| February. | 1,210 | 60 | 192 | 1.16 | 1.25 | . 750 |
| March.. | 975 | 132 | 234 | 1.42 | 1.64 | . 918 |
| April | 1,940 | 118 | 425 | 2.58 | 2.88 | 1.67 |
| May. | 364 | 152 | 213 | 1.29 | 1.49 | . 834 |
| June | 205 | 85 | 119 | . 721 | . 80 | . 466 |
| July. | 195 | 61 | 85.7 | . 519 | . 60 | . 335 |
| August. | 280 | 50 | 82.6 | . 501 | . 58 | . 324 |
| September | 1,050 | 52 | 115 | . 697 | . 78 | . 450 |
| The joar. | 1,940 | 50 | 154 | . 933 | 12.72 | . 603 |
| October. . . . . . . . | 228 | 73 | 91.7 | . 556 | . 64 | . 359 |
| November. | 730 | 90 | 198 | 1. 20 | 1.34 | . 776 |
| Decomber. | 394 | 118 | 169 | 1.02 | 1.18 | . 659 |
| Jemuery. | 404 | 129 | 181 | 1.10 | 1.26 | . 711 |
| Februery. | 586 | 125 | 199 | 1.21 | 1.26 | . 782 |
| Miarch.... | 770 | 120 | 221 | 1.34 | 1.55 | . 866 |
| Apr11. | 718 | 135 | 217 | 1.32 | 1.47 | . 853 |
| May...... | 148 322 | 82 | 112 | . 679 | . 78 | . 4.454 |
| June. | 174 | 51 | 85.3 | . 517 | . 60 | . 334 |
| August. | 84 50 | 35 9 | 48.0 30.5 | $\begin{array}{r} .291 \\ .185 \end{array}$ | .34 .21 | $\begin{aligned} & .188 \\ & .120 \end{aligned}$ |
| The year. | 770 | 9 | 139 | . 842 | 11.41 | . 544 |

Monthly discharga of North Eranch Patapsco River near Marriottsvilie, Md.--Continued


Yearly diacharge of North 8ranch Patapsco River near Marriottsvillo, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diacharge in second-feet |  | $\begin{aligned} & \text { Runorf } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runoif <br> In <br> Inches | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Maan | Por square mile |  |  |
| 1930. | 158 | 0.958 | 13.03 | 0.618 | 122 | 0.739 | 10.07 | 0.478 |
| 1931. | 75.8 | . 459 | 6.23 | . 297 | 73.4 | . 445 | 6.04 | . .288 |
| 1932. | 87.8 | . 532 | 7.24 | . 344 | 124 | . 752 | 10.22 | . 486 |
| 1933 | 262 | 1.59 | 21.56 | 1.03 | 245 | 1.48 | 20.19 | . 957 |
| 1934 | 164 | . 994 | 13.44 | . 642 | 175 | 1.06 | 14.40 | . 685 |
| 1935. | 188 | 1.14 | 15.49 | . 737 | 176 | 1.07 | 14.48 | . 692 |
| 1936 | 211 | 1.28 | 17.42 | . 827 | 208 | 1.26 | 17.16 | . 814 |
| 1937 | 195 | 1.18 | 16.09 | . 763 | 239 | 1.45 | 19.66 | . 937 |
| 1938. | 177 | 1.07 | 14.54 | . 692 | 133 | . 806 | 10.96 | . 521 |
| 1939. | 169 | 1.02 | 13.85 | . 659 | 167 | 1.01 | 13.73 | . 653 |
| 1940. | 154 | . 933 | 12.72 | . 603 | 167 | 1.01 | 13.82 | . 653 |
| 1941 | 139 | . 842 | 11.41 | . 544 | 113 | . 685 | 9.33 | . 443 |
| 1942. | 123 | . 745 | 10.13 | . 482 | 177 | 1.07 | 14.58 | . 692 |
| 1943. | 206 | 1.25 | 16.93 | . 808 | - | - |  |  |
| Highest. | 262 | 1.59 | 21.56 | 1.03 | 245 | 1.48 | 20.19 | . 957 |
| Averaco. | 165 | 1.00 | 13.58 | . 646 | 163 | . 988 | 13.43 | . 639 |
| Lowest. | 75.8 | . 459 | 6.23 | .297 | 73.4 | . 445 | 6.04 | . 288 |

## Patapsco River at Woodstock, Md

Location. - Chain gage, lat. $39^{\circ} 19152^{\prime \prime}$, long. $76^{\circ} 52^{\prime} 23^{\prime \prime}$, at highway bridge at Woodstock, Howard County, 1.7 miles downstream from confluence of North and South Branches. Prior to Nov. 11,1903 wire gage at same elte and datum.
Drainage area.- 251 square miles.
Records avallable.- August 1896 to March 1909.
Extremes.- Maximum da1ly discharge, 11,000 socond-feet Feb. 26, 1908; minimum daily, 50 second-feet July 17, 21, Aug. 7-9, 12, 14-16, 18, 1900, June 25, Sept. 11, 1904. Remarks. - Low and medium flow regulated by operation of mills above etation.

Monthiy discharge of Patapsco River at Woodstock, Md.


Monthly discharge of Patopsco River et Woodstock, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallcns per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maxinum | Minimum | Meen | Per squere $m i l e$ |  |  |
| 1901-2 |  |  |  |  |  |  |
| October. | 35.5 | 111 | 209 | 0.833 | 0.96 | 0.538 |
| November. | 1,850 | 91 | 239 | . 952 | 1.06 | . 615 |
| December. | 7,690 | 310 | 1,014 | 4.04 | 4.66 | 2.61 |
| Jenuery. | 2,310 | 235 | -432 | 1.72 | 1.98 | 1.11 |
| Februery | 9,480 | 332 | 1,348 | 5.38 | 5.60 | 3.48 |
| Merch. | 1,550 | 425 | 797 | 3.18 | 3.67 | 2.06 |
| April | 3,020 | 400 | 649 | 2.58 | 2.88 | 1.67 |
| Mey. | 450 | 200 | 313 | 1.24 | 1.43 | . 801 |
| June. | 1,250 | 135 | 305 | 1.22 | 1.36 | . 789 |
| July. | 355 | 91 | 174 | . 693 | . 80 | . 448 |
| August. | 710 | 122 | 225 | . 896 | 1.04 | . 579 |
| September | 1,500 | 111 | 245 | . 976 | 1.09 | . 631 |
| The year | 9,480 | 91 | 489 | 1.95 | 26.53 | 1.26 |
| October. | 2,510 | 200 | 351 |  |  |  |
| November... | 2,750 | 200 | 292 | 1.16 | 1.61 | .905 |
| Decomber. | 2,450 | 425 | 651 | 2.59 | 2.99 | . 167 |
| Jenuery. | 5,000 | 330 | 902 | 3.59 | 4.14 | 2.32 |
| February. | 3,800 | 520 | 751 | 2.99 | 3.11 | 1.93 |
| Merch. | 7,200 | 460 | 1,014 | 4.04 | 4.66 | 2.61 |
| Apr11 | 2,350 | 536 | 948 | 3.78 | 4.22 | 2.44 |
| Mej. | 2,100 | 350 | 592 | 2.36 | 2.72 | 1. 53 |
| June | 9,700 | 400 | 1,018 | 4.06 | 4.53 | 2.62 |
| July. | 2,750 | 330 | 766 | 3.05 | 3.52 | 1.97 |
| August. | 3,250 | 310 | 535 | 2.13 | 2.46 | 1.38 |
| Septembe | 555 |  | 333 | 1.33 | 1.48 | . 8680 |
| The yeer. | 9,700 | 200 | 679 | 2.71 | 36.73 | 1.75 |
| October. | 290 | 250 | 287 | 1.14 | 1.31 | . 737 |
| November | 290 | 185 | 252 | 1.00 | 1.12 | . 646 |
| December | 2,100 | 185 | 352 | 1.40 | 1.61 | . 905 |
| January 22 | 2,880 | 223 | 775 | 3.09 | 1.15 | 2.00 |
| Februery. | 7,170 | 139 | 498 | 1.98 | 2.14 | 1.28 |
| March. | 1,440 | 187 | 345 | 1.37 | 1.58 | . 885 |
| April | 308 | 125 | 194 | -. 773 | . 86 | . 500 |
| May. | 332 | 76 | 145 | . 578 | . 67 | .374 |
| June | 285 | 50 | 120 | . 478 | . 53 | . 309 |
| July. | 1,350 | 66 | 207 | . 825 | . 95 | . 533 |
| August. | 308 | 58 | 117 | . 466 | . 54 | . 301 |
| September | 898 | 50 | 110 | . 438 | . 49 | . 283 |
| october........ | 1,160 | 58 | 137 | . 546 | . 63 | . 353 |
| November. | 285 | 66 | 136 | . 542 | . 60 | . 350 |
| December | 1,160 | 58 | 245 | . 976 | 1.13 | . 631 |
| January. | 3,820 | 770 | 412 | 1.64 | 1.89 | 1.06 |
| Merch. | 2,280 | 223 | 739 | 2.94 | 3.39 | 1.90 |
| April | 1,030 | 242 | 390 | 1.55 | 1.73 | 1.00 |
| May. | 561 | 154 | 230 | . 917 | 1.06 | -. 593 |
| June. | 1,210 | 125 | 285 | 1.14 | 1.27 | . 737 |
| July.. | 2,210 | 139 | 463 | 1.84 | 2.12 | 1.19 |
| August... | 5,890 | 139 | 463 | 1.84 | 2.12 | 1.19 |
| Soptember. | 701 | 125 | 226 | . 900 | 1.00 | . 582 |
|  |  |  |  |  |  |  |
| Novtober... | 438 | 125 | 203 | . 809 | . 93 | . 523 |
| Necember. | 529 | 111 | 174 | . 693 | . 77 | . 448 |
| Jamuary.. | 5,250 | 170 | 520 | 2.07 | 2.39 | 1.34 |
| February. | $\begin{array}{r}1,540 \\ \hline 739\end{array}$ | 285 | 410 | 1.63 1.55 | 1.88 | 1.05 |
| March. | 2,380 | 308 | 596 | 2.37 | 2.73 | 1.53 |
| April. | 5,250 | 383 | 692 | 2.76 | 3.08 | 1.78 |
| May. | 701 | 223 | 3.55 | 1.41 | 1.63 | . 911 |
| June | 817 | 187 | 303 | 1.21 | 1.35 | . 782 |
| July. | 2,330 | 155 | 341 | 1.36 | 1.57 | . 879 |
| August.... | 8,440 | 204 | 1,020 | 4.08 | $4.70$ | 2.64 |
| September. | 383 | 187 | 264 | 1.05 | 1.17 | . 679 |
| The jear. | 8,440 | 111 | 441 | 1.76 | 23.81 | 1.14 |

Monthly discharge of Patapsco River at Woodstock, Md.--Continued


Yearly discharge of Patapsco River at Wocdstock, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge ir second-feet |  | Runoff in Inches | Discharge In million gallons per day per square mile | Diecharge in second-feet |  | Runoff in 1nches | Discharce in million callons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1897. | 360 | 1.43 | 19.47 | 0.924 | 417 | 1.66 | 22.67 | 1.07 |
| 1898. | 323 | 1.29 | 17.58 | . 834 | - | - | - |  |
| 1902. | 489 | 1.95 | 26.53 | 1.26 | 476 | 1.90 | 25.74 | 1.23 |
| 1903. | 679 | 2.71 | 36.73 | 1.75 | 645 | 2.57 | 34.88 | 1.66 |
| 1906.. | 441 | 1.76 | 23.81 | 1.14 | 464 | 1.25 | 25.10 | 1.20 |
| 1907 | 421 | 1.68 | 22.82 | 1.09 | 397 | 1.58 | 21.46 | 1.02 |
| 1908 | 439 | 1.75 | 23.80 | 1.13 | 404 | 1.61 | 21.90 | 1.04 |

Plney Fun neer Sykesville, Md.
 et hichway bridge il miles north of sykesville, Carroll County, end $5 \frac{1}{4}$ miles upstreer from mouth.
Droinage area.- 11.4 square miles
Fecords evelioble.- September 1931 to September 1943
Extremes.- Meximum discharge, 2,430 second-feet Aug. 23, 1933 (mare hei-ht, e. 3 feet) from rating curve extended ebove 700 second-feet on besis of velocity-erea studies; minimum, 0.4 second-foot Jan. 25, 1939; minimum delly, l.2 second-fect Sept. 17-2l, 25, 26, 1932.

Monthiy discherge of Piney Run neer Sykesville, Md.

| Month | Diecherge in second-feet |  |  |  | $\begin{aligned} & \text { Runorf } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million -allons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per squere mile |  |  |
| September $\begin{array}{r}1931 \\ 22-30 .\end{array}$ | 2.8 | 1.6 | 1.97 | 0.173 | 0.06 | 0.112 |
| October...1931-z2 |  |  |  |  |  |  |
| October... | 5.9 | 1.3 | 1.93 | . 169 | . 19 | .109 |
| December... | 3.4 7.3 | 1.8 | 2.16 | - 189 | . 21 | . 122 |
| Januery. | $20^{\circ}$ | 4.1 | 3.33 7.47 | . 295 | .34 .76 | - 189 |
| Februery. | 46 | 4.4 | 7.53 | . 661 | .71 | . 423 |
| Merch. | 85 | 4.1 | 11.4 | 1.00 | 1.15 | . 646 |
| April | 26 | 6.5 | 10.4 | . 912 | 1.02 | . 589 |
| Mey. | 41 | 5.8 | 10.8 | . 947 | 1.09 | . 612 |
| June. | 117 | 3.5 | 10.5 | . 921 | 1.03 | . 595 |
| July... | 8.6 | 2.2 | 3.36 | . 295 | . 34 | . 191 |
| August... | 35 | 1.6 | 3.87 | . 339 | . 39 | . 219 |
| September | 6.0 | 1.2 |  | . 160 | .18 | -103 |
| The yee | 117 | 1.2 | 6.21 | . 545 | 7.41 | . 352 |
| October....................... 53 . ${ }^{\text {a }}$ - ${ }^{\text {a }}$ |  |  |  |  |  |  |
| November. | 125 | 7.4 | 8.25 18.4 | 1.721 | $\begin{array}{r} .83 \\ 1.80 \end{array}$ | 1.468 |
| December. | 30 | 5.4 | 10.5 | 1.61 | 1.806 | 1.04 .0595 |
| Jenuery.. | 59 | 8.2 | 13.2 | 1.16 | 1.34 | . .750 |
| February. | 49 | 10.5 | 16.1 | 1. 41 | 1.47 | . 911 |
| April. | 59 99 | 11.5 | 20.8 | 1.22 | 2.10 | 1.18 |
| May. | 59 | 14.5 | 22.4 | 2.65 1.96 | 2.96 2.26 | 1.71 |
| June. | 41 | 8.7 | 12.9 | 1.15 | 1.26 | - 1.230 |
| July.. | 102 | 5.8 | 13.7 | 1.20 | 1.38 | . 776 |
| August... | 685 | 5.0 | 36.8 | 3.23 | 3.72 | 2.05 |
| September | 45 | 8.5 | 11.8 | 1.04 | 1.16 | . 672 |
| The yerr.................... | 685 | 1.4 | 17.9 | 1.57 | 23.34 | 1.01 |
| October......... | 18 |  |  |  |  |  |
| November. | 15 | 6.5 | 7.78 | . 688 | $\begin{aligned} & .89 \\ & .76 \end{aligned}$ | $.500$ $.441$ |
| December. | 19 | 5.7 | 7.68 | . 674 | . 78 | . 436 |
| January. | 34 | 5.0 | 11.4 | 1.00 | 1.15 | - 46 |
| March... | 15 182 | 5.0 7.0 | 7.01 | . 615 | . 64 | . 397 |
| April. | 182 39 | 11.0 | 22.7 | 1.99 | 2.29 | 1.25 |
| Mey... | 38 | 11.8 | 15.5 | 1.36 | 1.52 | . 879 |
| June. | 50 | 6.0 | 12.5 | 1.10 | 1.27 | . 711 |
| July.. | 15 | 3.0 | 11.3 4.32 | . 991 | 1.11 | . 641 |
| August. | 15 | 2.5 | 4.32 4.48 | .379 .393 | .44 .45 | .245 .254 |
| September | 269 | 2.7 | 22.5 | 1.97 | 2.20 | $\begin{array}{r} .254 \\ 1.27 \end{array}$ |
| The year................ | 269 | 2.5 | 11.3 | . 991 | 13.50 | . 641 |
| October . . . . . . . . . . . . . . . . . . . |  |  |  |  |  |  |
| November | 32 | 6.5 | 8.17 | . 717 | . 83 | . 46.3 |
| December. | 91 | 7.8 |  | . 801 | . 8 ¢ | . 518 |
| Januery. | 41 | 9.0 | 14.3 | 1.25 | 1.44 | - 908 |
| February. | 63 | 11. | 21.4 | 1.25 1.88 | 1.44 | . 308 |
| March. | 41 | 15 | 18.5 | 1.62 | 1.87 | 1.05 |
| April. | 74 | 13 | 19.6 | 1.72 | 1.92 | 1.11 |
| May. | 31 | 8.8 | 12.8 | 1.12 | 1.29 | 1.11 |
| June | 60 | 6.7 | 13.0 | 1.14 | 1.27 | . 737 |
| July. | 64 | 5.0 | 10.8 | $\begin{array}{r}\text { - } \\ . \\ .84 \\ \hline\end{array}$ | 1.09 | . 612 |
| August. | 60 | 3.6 | 6.72 | . 589 | -. 68 | . 381 |
| September | 117 | 3.6 | 13.6 | 1.19 | 1.33 |  |
| The zear. | 117 | 3.6 | 13.5 | 1.18 | 16.01 | .7e3 |

Monthly discharge of Piney Run neer Sykesville, Md.--Continued

| Month | Diecherge in second-feet |  |  |  | Runof $f$ in inches | Discherge in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1935-36 |  |  |  |  |  |  |
| October. | 41 | 4.6 | 6.71 | 0.589 | 0.68 | 0.381 |
| November. | 45 | 5.5 | 10.8 | . 947 | 1.06 | . 612 |
| December. | 20 | 6.6 | 9.33 | . 818 | . 94 | . 529 |
| Jenuary. | 224 | 8.2 | 27.5 | 2.41 | 2.78 | 1.56 |
| February | 209 | 10 | 40.2 | 3.53 | 3.81 | 2.28 |
| Merch. | 94 | 16 | 32.7 | 2.87 | 3.31 | 1.85 |
| April. | 46 | 15 | 20.6 | 1.81 | 2.02 | 1.17 |
| May. | 53 | 8.2 | 13.0 | 1.14 | 1.31 | . 737 |
| June | 13 | 5.1 | 7.95 | . 697 | . 78 | . 450 |
| July. | 30 | 4.4 | 7.10 | . 623 | . 72 | . 403 |
| August. | 28 | 3.1 | 6.40 | . 561 | . 65 | . 363 |
| September. | 7.0 | 2.6 | 3.69 | .324 | . 36 | . 209 |
| The yeer. | 224 | 2.6 | 15.4 | 1.35 | 18.42 | . 873 |
| October....... | 18 | 3.6 | 5.08 | .446 | . 51 | . 288 |
| November | 6.2 | 3.4 | 4.23 | . 371 | . 41 | . 240 |
| December | 38 | 3.4 | 12.3 | 1. 08 | 1.24 | . 698 |
| Januery. | 52 | 8.8 | 19.3 | 1.69 | 1.95 | 1.09 |
| Februery. | 108 | 14 | 22.9 | 2.01 | 2.09 | 1.30 |
| Merch. | 28 | 12 | 15.8 | 1.39 | 1.60 | . 898 |
| April | 235 | 10 | 25.7 | 2.25 | 2.51 | 1.45 |
| Mey. | 42 | 11 | 17.6 | 1.54 | 1.78 | . 995 |
| June | 164 | 8.6 | 18.0 | 1.58 | 1.76 | 1.02 |
| July. | 14 | 5.9 | 8.04 | . 705 | . 81 | . 456 |
| August.. | 95 | 5.3 | 12.2 | 1.07 | 1.23 | . 692 |
| September | 7.0 | 4.5 | 5.53 | . 485 | . 54 | . 313 |
| The yeer | 235 | 3.4 | 13.8 | 1.21 | 16.43 | . 782 |
| October. | 202 | 4.8 | 18.2 | 1.60 | 1.84 | 1.03 |
| November. | 401 | 8.8 | 27.1 | 2.38 | 2.66 | 1.54 |
| December. | 18 | 8.5 | 11.0 | . 965 | 1.11 | . 624 |
| January. | 28 | 8.5 | 11.9 | 1.04 | 1.20 | . 672 |
| February. | 38 | 9.4 | 13.1 | 1.15 | 1.20 | . 743 |
| March. | 19 | 10 | 13.1 | 1.15 | 1.33 | . 743 |
| April | 38 | 8.8 | 12.2 | 1.07 | 1.19 | . 692 |
| Mey. | 17 | 7.2 | 9.67 | . 848 | . 98 | . 548 |
| June | 41 | 5.1 | 9.94 | . 878 | .97 | . 564 |
| July. | 134 | 3.9 | 16.0 | 1.40 | 1.61 | . 905 |
| August | 87 | 3.6 | 10.1 | . 886 | 1.02 | . 573 |
| September | 40 | 4.1 | 8.71 | . 764 | . 85 | . 494 |
| The year. | 401 | 3.6 | 13.4 | 1.18 | 15.95 | . 763 |
| October... | 8.8 | 4.7 | 5.55 | . 487 | . 56 | . 315 |
| November. | 13 | 4.9 | 6.51 | . 571 | . 64 | . 369 |
| December. | 40 | 5.9 | 12.4 | 1.09 | 1.26 | .704 |
| January. | 195 | 5.0 | 15.3 | 1.34 | 1.54 | . 866 |
| February. | 102 | 16 | 28.2 | 2.47 | 2.57 | 1.60 |
| Merch. | 34 | 15 | 21.3 | 1.87 | 2.16 | 1.21 |
| April | 38 | 14 | 19.3 | 1.69 | 1.89 | 1.09 |
| May. | 20 | 7.6 | 12.1 | 1.06 | 1.22 | . 695 |
| June | 64 | 6.6 | 11.8 | 1.04 | 1.16 | . 672 |
| July. | 11 | 5.1 | 5.85 | . 601 | . 69 | . 388 |
| August. | 31 | 3.2 | 6.16 | . 540 | . 62 | . 349 |
| September. | 19 | 3.0 | 4.64 | .407 | .45 | . 263 |
| The year | 195 | 3.0 | 12.4 | 1.09 | 14.76 | .704 |
| October........... | 58 | 4.4 | 7.78 | . 682 | . 79 | . 441 |
| November. | 18 | 4.5 | 6.17 | . 541 | . 60 | .350 |
| December. | 15 | 4.0 | 5.49 | . 482 | . 56 | . 312 |
| Jenuery.. | 42 | 3.5 | 5.73 | . 503 | . 58 | . 325 |
| February. | 120 | 3.5 | 14.4 | 1.26 | 1.36 | . 814 |
| Merch.. | 53 | 8.5 | 15.4 | 1.35 | 1.56 | . 873 |
| April. | 211 | 7.9 | 31.2 | 2.74 | 3.06 | 1.77 |
| Mey.. | 23 | 10 | 13.2 | 1.16 | 1.34 | .750 |
| June. | 13 | 5.7 | 7.98 | .700 | . 78 | . 452 |
| July..... | $19$ | 4.0 | 5.35 | .557 | . 64 | . 350 |
| August... | $16$ | 3.4 3.0 | 5.09 7.24 | . 446 | . 51 | . 288 |
| September. | 90 | 3.0 | 7.24 | . 635 | . 71 | . 410 |
| The jeer....... | 211 | 3.0 | 10.5 | . 921 | 12.49 | . 595 |

Monthly discharge of Piney Rur near Sykesville, Md.--Continued


Yearly discharge of Piney Run near Sykesville, Md

| Year | Year ending Sept. 30 |  |  |  | Calendar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runoff in inches | Dischare in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1932. | 6.21 | 0.545 | 7.41 | 0.352 | 8.68 | 0.761 | 10.36 | 0.492 |
| 1933. | 17.9 | 1.57 | 21.34 | 1.01 | 16.9 | 1.48 | 20.08 | . 957 |
| 1934 | 11.3 | . 991 | 13.50 | . 641 | 11.9 | 1.04 | 14.23 | . 672 |
| 1935. | 13.5 | 1.18 | 16.01 | . 763 | 13.0 | 1.14 | 15.53 | . 737 |
| 1936 | 15.4 | 1.35 | 18.42 | .873 | 15.0 | 1.32 | 17.90 | . 853 |
| 1937. | 13.8 | 1.21 | 16.43 | . 782 | 16.7 | 1.46 | 19.88 | . 944 |
| 1938 | 13.4 | 1.18 | 15.96 | . 763 | 10.7 | . 939 | 12.81 | . 607 |
| 1935 | 12.4 | 1.09 | 14.76 | . 704 | 12.0 | 1.05 | 14.25 | . 679 |
| 1940. | 10.5 | . 921 | 12.49 | . 595 | 11.2 | . 982 | 13.42 | . 635 |
| 1911. | 8.80 | . 772 | 10.48 | . 499 | 7.20 | . 632 | 8.57 | . 408 |
| 1542. | 7.62 | . 668 | 9.08 | . 432 | 11.0 | . 965 | 23.17 | . 624 |
| 1943. | 12.3 | 1.08 | 14.70 | .692 | - | - | - | - |
| Ht chest | 17.9 | 1.57 | 21.34 | 1.01 | 16.9 | 1.48 | 20.08 | .957 |
| Average | 11.9 | 1.04 | 14.22 | .672 | 12.2 | 1.07 | 14.56 | . 692 |
| Lowest. | 6.21 | . 545 | 7.41 | . 352 | 7.20 | .632 | 8.57 | . 408 |

North River near Annapolis, Md
Location. - Water-stage recorder, lat. $38^{0} 59^{\prime 0} 9^{\prime \prime}$, long. $76^{037} 7^{\prime 2} 1^{\prime \prime}$, 500 feet downstream from tridge on U.S Highway $50,0.8$ mile upstream from mouth, and 7 miles west of Annapolis, Anne Arundel County. Prior to Nov. 2, 1933, staff gage at same site and datum.
Drainage aros.- 8.5 square miles.
Records avallable. December 1931 to September 1943.
Fixtremos.- Maximum discharge, about 675 second-feet April 26, 1937 (gage height, 2.78 feet); minimum, 1.5 second-feet Sept. 1, 2, 4, 1932

Montlily discharge of North River near Annapolis, MC.

| Month | Discharge in second-feet |  |  |  | Runoff in <br> Inches. | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square milo |  |  |
| 1931-32 |  |  |  |  |  |  |
| December 15-31. | 13 | 4.2 | 5.39 | 0.634 | 0.40 | 0.410 |
| January. | 23 | 3.9 | 8.99 | 1.06 | 1.22 | . 685 |
| February. | 22 | 4.7 | 7.51 | . 884 | . 95 | . 571 |
| March..... | 31 | 5.5 | 10.5 | 1.24 | 1.43 | -801 |
| April. | 28 | 6.0 | 9.90 | 1.16 | 1.29 | . 750 |
| May... | 39 | 5.0 | 9.92 | 1.17 | 1.35 | . 756 |
| June. | 14 | 3.2 | 5.38 | . 633 | . 71 | . 409 |
| July. | 18 | 2.8 | 5.02 | . 591 | . 68 | . 382 |
| August.. | 6 | 1.8 | 2.95 | .347 | . 40 | . 224 |
| September.. | 9.5 | 1.5 | 2.55 | . 300 | . 33 | . 194 |
|  |  |  |  |  |  |  |
| October. | 45 | 2.0 | 7.21 | . 848 |  |  |
| November. | 27 | 5.5 | 10.6 | 1.25 | 1.40 | . 808 |
| December | 28 | 5.5 | 9.45 | 1.11 | 1.28 | . 717 |
| January. | 62 | 7.0 | 11.6 | 1.36 | 1.57 | . 879 |
| Pebruary. | 19 | 7.5 | 10.3 | 1.21 | 1.26 | . 782 |
| March. | 26 | 7.0 | 11.1 | 1.30 | 1.50 | . 848 |
| April. | 71 | 9.0 | 18.0 | 2.12 | 2.36 | 1.37 |
| May. | 20 | 8.0 | 11.6 | 1.36 | 1.57 | . 879 |
| June. | 24 | 5.0 | 7.38 | . 868 | . 97 | . 561 |
| July | 48 | 4.8 | 9.32 | 1.10 | 1.27 | . 711 |
| August... | 115 | 4.8 6.0 | 14.2 9.78 | 1.67 1.15 | 1.92 1.28 | 1.08 |
| September. | 18 | 6.0 | 9.78 | 1.15 | 1.28 | . 743 |
| The year | 115 | 2.0 | 10.9 | 1.28 | 17.36 | .827 |
| October. | 19 | 7.2 | 9.40 | 1.11 | 1.28 | . 717 |
| November. | 20 | 6.8 | 8.77 | 1.03 | 1.15 | . 666 |
| December. | 24 | 6.2 | 9.64 | 1.13 | 1.30 | . 730 |
| January. | 23 | 5.3 | 11.1 | 1.31 | 1.51 | . 847 |
| February. | 14 | 5.6 | 8.20 | . 965 | 1.00 | . 624 |
| March. | 106 | 8.0 | 22.5 | 2.65 | 3.06 | 1.71 |
| April | 28 | 10 | 14.9 | 1.75 | 1.95 | 1.13 |
| May. | 31 | 8.4 | 13.1 | 1.54 | 1.78 | . 995 |
| June. | 27 | 5.9 | 8.30 | . 976 | 1.09 | .631 |
| July. | 24 | 4.0 | 6.51 | . 766 | . 88 | . 495 |
| August. | 17 | 4.0 | 5.45 | . 641 | . 74 | . 414 |
| September.. | 151 | 4.0 | 22.2 | 2.61 | 2.91 | 1.69 |
| The year. | 151 | 4.0 | 11.7 | 1.38 | 18.65 | . 892 |
| October........... |  |  |  |  |  |  |
| November. | 17 | 7.5 | 8.91 | 1.05 | 1.21 | . 679 |
| Devember. | 26 | 7.5 | 9.87 | 1.16 | 1.29 | . 750 |
| January.. | 34 | 7.8 | 113.6 | 1.34 1.60 | 1.54 1.84 | 1.866 |
| February. | 29 | 9.2 | 14.8 | 1.74 | 1.81 | 1.12 |
| March. | 36 | 10 | 13.5 | 1.59 | 1.83 | 1.03 |
| April | 143 | 11 | 22.1 | 2.60 | 2.90 | 1.68 |
| May. | 25 | 7.8 | 11.8 | 1.39 | 1.60 | . .898 |
| June | 25 | 6.4 | 8.90 | 1.05 | 1.17 | . 679 |
| July.. | 32 | 5.6 | 8.82 | 1.04 | 1.20 | . 672 |
| August. | 26 | 4.7 | 7.39 | . 869 | 1.00 | . 562 |
| September. | 80 | 6.0 | 12.4 | 1.46 | 1.63 | . 114 |
| The year. | 143 | 4.7 | 11.9 | 1.40 | 19.02 | .905 |
| October. | 20 | 6.4 | 8.13 | . 956 | 1.10 | . 618 |
| November. | 48 | 8.3 | 14.6 | 1.72 | 1.92 | 1.11 |
| December. | 18 | 6.7 | 9.97 | 1.17 | 1.35 | . 756 |
| January. | 46 | 8.0 | 19.2 | 2.26 | 2.61 | 1.46 |
| February | 70 | 8.5 | 22.6 | 2.66 | 2.87 | 1.72 |
| March. . | 46 | 14 | 21.9 | 2.58 | 2.97 | 1.67 |
| Apr11. | 28 | 11. | 16.7 | 1.96 | 2.19 | 1.27 |
| May... | 49 | 8.3 | 13.8 | 1.62 | 1.87 | 1.05 |
| June.. | 19 | 6.0 | 8.10 | . 953 | 1.06 | . 616 |
| July.. | 22 | 6.0 | 10.1 | 1.19 | 1.37 | . 769 |
| Auguet. | 32 | 5.4 | 8.29 | .975 | 1.12 | . 630 |
| September..... | 11 | 4.9 | 5.99 | . 705 | . 79 | . 456 |
| The year... | 70 | 4.8 | 13.2 | 1.55 | 21.22 | 1.00 |

Monthly discharge of North River near Annapolis, Md.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1936-37 |  |  |  |  |  |  |
| October. | 30 | 6.0 | 8.67 | 1.02 | 1.28 | 0.659 |
| November | 11. | 6.0 | 7.24 | . 852 | . 95 | . 551 |
| December | 32 | 5.7 | 11.5 | 1.35 | 1.56 | . 873 |
| January. | 55 | 11 | 18.9 | 2.22 | 2.56 | 1.43 |
| February. | 42 | 11 | 15.8 | 1.86 | 1.94 | 1.20 |
| March.... | 17 | 9.2 | 11.9 | 1.40 | 1.61 | . 905 |
| Apr11.. | 307 | 9.2 | 30.4 | 3.58 | 3.99 | 2.31 |
| May. . | 23 | 9.7 | 14.8 | 1.74 | 2.01 | 1.12 |
| June | 20 | 6.7 | 10.0 | 1.18 | 1.32 | . 763 |
| July. | 19 | 5.4 | 8.38 | . 986 | 1.14 | . 637 |
| August. | 169 | 4.9 | 17.6 | 2.07 | 2.39 | 1.34 |
| September | 11 | 5.7 | 7.23 | . 851 | . 95 | . 550 |
| The jear. | 307 | 4.9 | 13.5 | 1.59 | 21.60 | 1.03 |
| October. . . . . . . . . | 108 | 6.0 | 17.9 | 2.11 | 2.43 |  |
| November. | 342 | 8.7 | 26.4 | 3.11 | 3.47 | 2.01 |
| December. | 19 | 8.5 | 11.9 | 1.40 | 1.61 | -.905 |
| January. | 23 | 8.2 | 12.2 | 1.44 | 1.66 | . 931 |
| February. | 26 | 9.4 | 13.1 | 1.54 | 1.60 | . 995 |
| March. | 18 | 9.8 | 12.2 | 1.44 | 1.66 | . 931 |
| April | 21 | 9.0 | 10.9 | 1.28 | 1.43 | . 827 |
| May. | 28 | 7.4 | 10.9 | 1.28 | 1.48 | . $82{ }^{77}$ |
| June | 20 | 6.0 | 8.20 | . 965 | 1.08 | . 624 |
| July. | 24 | 4.4 | 8.25 | . 971 | 1.12 | . 628 |
| August... Saptambar | 11 | 4.4 4.7 | 5.74 9.00 | . 6775 1.06 | $\begin{array}{r} .78 \\ 1.18 \end{array}$ | .436 .685 |
| The year. | 342 | 4.4 | 12.2 | 1.44 | 19.50 | . 931 |
| October. | 16 | 5.4 | 7.26 | . 854 | . 98 | . 552 |
| November. | 15 | 6.4 | 7.63 | . 898 | 1.00 | . 580 |
| December. | 26 | 6.0 | 9.38 | 1.10 | 1.27 | . 711 |
| January. | 71 | 5.7 | 10.4 | 1.22 | 1.41 | . 789 |
| February. | 35 | 9.7 | 17.2 | 2.02 | 2.10 | 1.31 |
| March. | 63 | 11 | 16.6 | 1.95 | 2.25 | 1.26 |
| April. | 30 | 11 | 16.8 | 1.98 | 2.21 | 1.28 |
| May. | 15 | 6.0 | 9.65 | 1.14 | 1.31 | . 737 |
| June | 68 | 5.3 | 9.25 | 2.09 | 1.22 | . 704 |
| July. | 14 | 5.3 | 7.07 | . 832 | . 96 | . 538 |
| August. | 46 | 4.5 | 7.36 | . 866 | 1.00 | . 560 |
| Saptambe | 35 | 5.1 | 7.06 | .831 | . 93 | . 537 |
| Tha year | 71 | 4.5 | 10.4 | 1.22 | 16.64 | . 789 |
| October. | 45 | 6.1 | 10.2 | 1.20 | 1.38 | . 776 |
| Novamber. | 23 | 6.4 | 8.41 | . 989 | 1.10 | . 639 |
| December | 12 | 6.0 | 7.45 | . 876 | 1.01 | . 566 |
| January. | 25 | 4.5 | 6.19 | . 728 | . 84 | . 471 |
| February | 55 | 4.5 | 12.5 | 1.47 | 1.58 | . 950 |
| March. | 42 | 7.2 | 11.7 | 1.38 | 1.59 | . 892 |
| April. | 96 | 8.0 | 18.9 | 2.22 | 2.48 | 1.43 |
| May. | 65 | 7.5 | 13.4 | 1.58 | 1.82 | 1.02 |
| Juna | 12 | 4.9 | 6.83 | . 804 | . 90 | . 520 |
| July.. | 54 | 4.3 | 8.41 | . 989 | 1.1 .4 | . 639 |
| August... | 18 | 4.0 | 6.42 | . 755 | $.87$ | $.488$ |
| Saptember | 61 | 5.1 | 8.18 | . 962 | 1.07 | . 622 |
| Tha yaar. | 96 | 4.0 | 9.86 | 1.16 | 15.78 | .750 |
| Octobar. . . . . . . . . | 14 | 5.6 | 6.49 | . 764 | . 88 |  |
| Novamber.. | 46 | 6.4 | 12.4 | 1. 46 | 1.68 | . .944 |
| December. | 25 | 6.8 | 9.33 | 1.10 | 1.27 | . 711 |
| January. | 23 | 6.4 | 10.3 | 1.21 | 1.40 | .782 |
| Fabmiary. | 15 | 6.0 | 8.27 | . 973 | 1.01 | .629 |
| March. | 21 | 6.0 | 10.4 | 1.22 | 1.41 | . 789 |
| Apr11. | 37 | 7.2 | 12.3 | 1.45 | 1.61 | . 937 |
| May.. | 9.5 | 4.7 | 6.03 | . 709 | . 82 | . 458 |
| Juna. | 30 | 4.7 | 8.95 | 1.05 | 1.17 | . 679 |
| July. | 24 | 4.0 | 7.95 | . 935 | 1.08 | . 604 |
| August. | 12 | 3.5 | 4.98 | . 58.6 | . 68 | . 379 |
| September. | 4.2 | 2.8 | 3.15 | . 371 | .41 | . 240 |
| The year........ | 46 | 2.8 | 8.37 | . 985 | 13.36 | .637 |

Monthiy discharge of North River near Annapolis, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharte in million sallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| October. | 5.2 | 2.8 | 3.84 | 0.452 | 0.52 | 0.292 |
| November. | 8.3 | 4.2 | 4.96 | . 584 | . 65 | . 377 |
| December. | 28 | 4.5 | 7.22 | . 849 | . 98 | . 549 |
| January. | 24 | 3.1 | 7.49 | . 881 | 1.02 | . 569 |
| February. | 36 | 4.3 | 8.47 | . 996 | 1.04 | . 644 |
| March.... | 34 | 6.1 | 11.6 | 1.36 | 1.57 | . 879 |
| April. | 36 | 6.1 | 11.5 | 1.35 | 1.50 | . 873 |
| May... | 13 | 4.0 | 6.47 | . 761 | . 88 | . 492 |
|  | 35 | 2.7 | 5.06 | . 595 | . 66 | . 385 |
| July. | 21 | 2.9 | 5.47 | . 644 | . 74 | . 416 |
| August... | 241 | 4.0 3.8 |  | 2.40 | 2.77 | 1.55 |
| September | 32 |  | 6.79 |  |  |  |
| The year. | 241 | 2.7 | 8.28 | . 974 | 13.22 | . 630 |
| October. | 111 | 4.5 | 17.0 | 2.00 | 2.31 | 1.29 |
| November. | 13 | 6.5 | 8.20 | 2.965 | 1.08 | -. 624 |
| December. | 30 | 6.4 | 12.6 | 1.48 | 1.71 | .857 |
| January.. | 16 | 7.2 | 10.2 | 1.20 | 1.38 | . 776 |
| February. | 28 | 8.5 | 15.1 | 1.78 | 1.85 | 1.15 |
| March. . . | 30 | 8.5 | 15.0 | 1.76 | 2.04 | 1.14 |
| April.... | 30 | 10 | 13.2 | 1.55 | 1.74 | 1.00 |
| May. . . . . | 24 | 8.5 | 11.7 | 1.38 | 1.59 | . 892 |
| June. . . . . | $\begin{aligned} & 16 \\ & 8.0 \end{aligned}$ | 4.9 3.7 | 7.84 5.09 | . 928 | 1.03 | . 387 |
| July... | 4.0 | 2.9 | 3.33 | . 392 | . 45 | . 253 |
| September. | 24 | 3.3 | 5.42 | . 638 | .71 | . 412 |
| The year. | 111 | 2.9 | 10.4 | 1.22 | 16.58 | . 789 |

Yearly discharge of North River near Annapclis, Mid.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff <br> in <br> Inches | Discharge in million gallons per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { inches } \\ & \text { inche } \end{aligned}$ | Dıscharce in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1932. | - | - | $\checkmark$ | - | 7.50 | 0.882 | 12.02 | 0.570 |
| 1933. | 10.9 | 1.28 | 17.36 | 0.827 | 10.9 | 1.28 | 17.43 | . 827 |
| 1934. | 11.7 | 1.38 | 18.65 | .892 | 11.9 | 1.40 | 18.96 | . 905 |
| 1935. | 11.9 | 1.40 | 19.02 | . 905 | 12.1 | 1.42 | 19.35 | . 918 |
| 1936. | 13.2 | 1.55 | 21.22 | 1.00 | 12.8 | 1.51 | 20.54 | .976 |
| 1937. | 13.5 | 1.59 | 21.60 | 1.03 | 15.9 | 1.87 | 25.42 | 1.21 |
| 1938. | 12.2 | 1.44 | 19.50 | . 931 | 9.55 | 1.12 | 15.24 | . 724 |
| 1939. | 10.4 | 1.22 | 16.64 | . 789 | 10.6 | 1.25 | 16.88 | . 808 |
| 1940. | 9.86 | 1.16 | 15.78 | . 750 | 10.0 | 1.18 | 16.06 | . 763 |
| 1911. | 8.37 | . 985 | 13.36 | . 637 | 7.36 | . 866 | 11.74 | . 560 |
| 1942. | 8.28 | . 974 | 13.22 | . 630 | 10.1 | 1.19 | 16.17 | . 789 |
| 1943. | 10.4 | 1.22 | 16.58 | . 789 | - | - | - | - |
| Fif ghest. | 13.5 | 1.59 | 21.60 | 1.03 | 15.9 | 1.87 | 25.42 | 1.21 |
| Average. | 11.0 | 1.29 | 17.54 | . 834 | 10.8 | 1.27 | 17.26 | . 821 |
| Lowest. . | 8.28 | .974 | 13.22 | . 630 | 7.36 | . 866 | 11.74 | . 560 |

Bacon Ridge Branch at Chesterfield, Md.
Location. - Water-stame recorder and concrete control, lat. $39^{\circ} 00^{\prime} 07 \mathrm{~m}$, long. $766^{036} 53^{\prime \prime}$, 0.5 mlle aast of Chesterfield, Anne Arundal County, 1.4 miles upstream from confluence with North River, and 6.8 mllas northwest of Arnapolis
Drainage area.- 6.92 square miles.
Records avallable.- November 1942 to September 1943.
Extremes.- Maximum discharge, 46 second-feet Mar. 7 (cage heicht, 2.61 feet); minimum, 3.0 second-feet Aug. 4, 16, 19-27 (gace helght, 1.75 feet).

Remarks.- Figures of dally discharge include sewage from Crownville State Hospital, which obtains its watar supply from wells. Records of watar pumped from the wells can be obtalned from tha offica of Chief Engineer, Maryland State Department of Fealth, Baltimora.

Monthly discharga of Bacon Ridge Branch at Chesterfield, Md.

| Month | Dischargs in ascond-feet |  |  |  | Runoff in inches | DIscharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Par aquara mila |  |  |
| Noverter 5-3042-43 |  |  |  |  |  |  |
| Novamber 5-30.. | 11.0 | 5.6 | 7.10 |  |  |  |
| Dacambar.... | 28 | 5.6 | 9.88 |  |  |  |
| January.. | 14.5 | 7.0 | 9.13 |  |  |  |
| Fabruary. | 25 | 7.5 | 13.1 |  |  |  |
| March.. | 29 | 7.5 | 12.5 |  |  |  |
| April. | 29 | 9.5 | 10.9 |  |  |  |
| May. | 23 | 7.0 | 9.62 |  |  |  |
| Juns. | 13.5 | 3.8 | 6.15 |  |  |  |
| July. | 9.4 | 3.2 | 4.83 |  |  |  |
| August. | 3.8 | 3.0 | 3.25 |  |  |  |
| Saptamber. | 12.5 | 3.2 | 4.28 |  |  |  |

## PATUXENT RIVER BASIN

Patuxent River near Burtonsvilie, Md.
Location.- Water-stage recorder, lat. $39^{\circ} 07^{\prime} 4^{\prime \prime \prime}$, long. $76^{3} 55^{\prime} 04^{\prime \prime}$, 150 feet upstream from highway bridge, la milcs northast of Surtonsville, Montgomery County, and 8 miles downstream from Hawlings Rivar. Datum of gage 232.79 feet ahove mean sea level, adjustment of 1912. From July 22, 1914 to July 10, 1929, water-stace recorder 80 feet downstream from highway bridge at present datum. Prior to July 22, 1914, staff gage at highway bridce, datum 1.29 foet higher than present datum.
Drainage area.- 127 square miles.
Records avallable.- July 1911 to June 1912, July 1913 to September 1943.
Extremes:- Maxlinum discharge, 11,000 second-faat Aug. 24, 1933 (age height, 21.7 feet, from floodmarks), from rating curve extendad above 3, 800 second-feet; minimum, 4.6 second-feet oct. 9, 10, 1942.
Remarks.- Records do not include diversion by pumps at Mink Hollow faraina ee area log squara miles), which began Aug. 12, 1939, of part of low-water flow into anacostia River Easin to augment supply of Washington Suburban Sanitary District or change in storage of Bright on Reservoir (usable capacity, 2,913,000,000 gallons) which began June 27, 1942. Pumping station racords and change in storace of 8right on Reservoir can be obtalned from the Washingt on Suburban Sanitary Commission, Hyattsville.

Monthly discharga of Patuxant River near Burtonsvilie, Md.

| Month | Discharge in sacond-faet |  |  |  | Runoff <br> in <br> inches | Discharsa in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Maan | Par square mile |  |  |
| 1911 |  |  |  |  |  |  |
| August...... | 3,870 | 11 | 16.9 | 0.133 | 0.05 | 0.086 |
| August. | 3,870 150 | 6 | 204 | 1.61 | 1.86 | 1.04 |
| Sapt embar | 150 | 40 | 66.3 | . 522 | . 58 | . 337 |
| 1911-12 |  |  |  |  |  |  |
| October | 284 | 40 | 71.0 | . 559 | . 64 | . 361 |
| Novamber. | 486 | 54 | 119 | . 937 | 1.05 | . 606 |
| Dacamber. | 578 | 72 | 138 | 1.09 | 1.26 | . 704 |
| January. | 449 | - | 199 | 1.57 | 1.81 | 1.01 |
| February. | 1,790 | 150 | 354 | 2.79 | 3.01 | 1.50 |
| March. | 1,620 | 102 | 351 | 2.76 | 3.18 | 1.78 |
| April. | 212 | 110 | 145 | 1.14 | 1.27 | . 737 |
| May. | 424 | 87 | 154 | 1.21 | 1.40 | . 782 |
| June 1-15. | 203 | 115 | 124 | . 976 | . 54 | . 631 |

Monthly discharge of Patuxent Rlver near Burtonsville, Md---Continued


Monthly discharge of Petuxent River neer Burtonsville, Md.--Continued

| Month | Discherge in second-feet |  |  |  | $\left\|\begin{array}{c} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right\|$ | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Meen | Por squere mile |  |  |
| 1917-18 |  |  |  |  |  |  |
| October. | 507 | 47 | 104 | 0.819 | 0.94 | 0.529 |
| November. | 76 | 47 | 62.6 | . 494 | . 55 | . 319 |
| December. | 100 | 15 | 55.1 | . 434 | . 50 | . 281 |
| Jenuery. | 1,810 | 19 | 167 | 1.31 | 1.51 | . 847 |
| Februery. | 1,620 | 62 | 326 | 2.57 | 2.68 | 1.66 |
| Merch... | , 700 | 87 | 164 | 1.29 | 1.49 | . 834 |
| April | 1,050 | 81 | 254 | 2.00 | 2.23 | 1.29 |
| Mey. | 577 | 72 | 136 | 1.07 | 1.23 | . 692 |
| June | 162 | 56 | 74.2 | . 584 | . 65 | . 377 |
| July. | 121 | 35 | 49.7 | . 391 | . 45 | . 253 |
| August | 270 | 22 | 56.6 | . 446 | . 51 | . 288 |
| September | 186 | 32 | 55.9 | . 440 | . 49 | . 284 |
| The yeer | 1,810 | 15 | 124 | . 976 | 13.23 | .631 |
| October. . . . . | 62 | 32 | 41.0 | . 323 | . 37 | . 209 |
| November | 240 | 32 | 48.7 | . 383 | . 43 | . 248 |
| December. | 661 | 37 | 136 | 1.07 | 1.23 | . 692 |
| January. | 732 | 93 | 169 | 1.33 | 1.53 | . 860 |
| Februery. | 247 | 55 | 102 | . 803 | . 84 | . 519 |
| Merch. | 695 | 108 | 180 | 1.42 | 1.64 | . 918 |
| April. | 815 | 102 | 196 | 1.54 | 1.72 | . 995 |
| Mey. | 1.550 | 124 | 277 | 2.18 | 2.51 | 1.41 |
| June | 353 | 81 | 134 | 1.06 | 1.18 | . 685 |
| July. | 916 | 60 | 225 | 1.77 | 2.04 | 1.14 |
| August. | 796 | 112 | 173 | 1.36 | 1.57 | . 879 |
| September | 381 | 72 | 118 | . 929 | 1.04 | . 600 |
| The yeer. | 1,550 | 32 | 151 | 1.19 | 16.10 | . 769 |
| October........ | 240 | 77 | 113 | . 890 | 1.03 | . 575 |
| November. | 430 | 82 | 155 | 1.22 | 1.36 | . 789 |
| Decombor. | - | - | 162 | 1.28 | 1.48 | . 827 |
| January. | - | - | 160 | 1.26 | 1.45 | . 814 |
| February. | 1,230 | 142 | 386 | 3.04 | 3.28 | 1.96 |
| Merch. | 1,860 | 128 | 347 | 2.73 | 3.15 | 1.76 |
| April | 645 | 127 | 220 | 1.73 | 1.93 | 1.12 |
| Mey. | 275 | 101 | 139 | 1.09 | 1.26 | . 704 |
| June. | 385 | 80 | 147 | 1.16 | 1.29 | . 750 |
| July. | 528 | 72 | 141 | 1.11 | 1.28 | . 717 |
| August... | 968 | 72 | 184 | 1.45 | 1.61 | . 937 |
| September | 237 | 38 | 62.0 | . 488 | . 54 | . 315 |
| The year. | 1,8\% 0 | 38 | 184 | 1.45 | 19.66 | .937 |
| October... | 148 | 38 | 52.6 | . 414 | . 48 | . 268 |
| November. . | 662 | 42 | 90.4 | . 712 | . 79 | . 460 |
| December. | 696 | - | 135 | 1.06 | 1.22 | . 685 |
| January. | - | - | 96.9 | . 763 | . 88 | . 493 |
| Februery. | 272 | - | 90.1 | . 709 | . 74 | . 458 |
| March. | 342 | - | 127 | 1.00 | 1.15 | . 646 |
| April. | 370 | 80 | 135 | 1.06 | 1.18 | . 685 |
| Mey. | 731 | 120 | 227 | 1.79 | 2.06 | 1.16 |
| June | 323 | 50 | 83.5 | . 657 | . 73 | $.425$ |
| July.. | 413 | 33 | 95.0 | $.748$ | . 86 | $.483$ |
| August... | 195 | $32$ | 69.0 | $.543$ | $.63$ | $.351$ |
| September. | 40 | 25 | 31.5 | . 248 | . 28 | . 160 |
| The jear. | 731 | 25 | 103 | .811 | 11.00 | . 524 |
| October........... |  |  |  |  |  |  |
| November... | 491 | 25 <br> 32 | 69.1 | $\begin{array}{r} .237 \\ .544 \end{array}$ | . 27 | . 153 |
| December. | 238 | 73 | 94.2 | . 742 | . 86 | . 480 |
| January.. | 321 | - | 117 | . 921 | 1.06 | . 595 |
| Februery. | 970 | $\overline{-}$ | 257 | 2.02 | 2.10 | 1.31 |
| Merch.... | 438 | 102 | 183 | 1.44 | 1.66 | .931 |
| April. | 125 | 66 | 86.7 | . 683 | . 76 | . 441 |
| Mey... | 189 | 48 | 75.1 | . 591 | . 68 | . 382 |
| June. | 344 | 42 | 84.2 | . 663 | . 74 | . 429 |
| July. | 563 | 44 | 107 | . 842 | . 97 | . 544 |
| August. | 146 | 28 | 48.5 | . 382 | . 44 | . 247 |
| September. | 277 | 26 | 49.7 | . 391 | .44 | . 253 |
| The year.. | 970 | 25 | 99.1 | . 780 | 10.59 | . 504 |

Monthly discharge of Patuxent River near Burtonsville, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mesn | $\begin{aligned} & \text { Per } \\ & \text { equare } \\ & \text { mile } \end{aligned}$ |  |  |
| October. <br> November. <br> December <br> January <br> February. <br> March. <br> April. <br> May. <br> June. <br> July <br> August. <br> September. . . . . . . . . | 449 46 133 149 708 387 354 361 551 220 349 | 24 <br> 33 <br> 34 <br> - <br>  <br> 90 <br> 100 <br> 71 <br> 55 <br> 33 <br> 40 <br> 41 | $\begin{aligned} & 52.5 \\ & 40.0 \\ & 59.6 \\ & 87.5 \\ & 118 \\ & 151 \\ & 149 \\ & 106 \\ & 101 \\ & 79.7 \\ & 70.9 \\ & 105 \end{aligned}$ | $\begin{array}{r} 0.413 \\ .315 \\ .469 \\ .689 \\ .929 \\ 1.19 \\ 1.17 \\ .835 \\ .795 \\ .628 \\ .558 \\ .827 \end{array}$ | $\begin{array}{r} 0.48 \\ .35 \\ .54 \\ .79 \\ .97 \\ 1.37 \\ 1.30 \\ .96 \\ .89 \\ .72 \\ .64 \\ .92 \\ \hline \end{array}$ | 0.267 .204 .303 .445 .600 .769 .756 .540 .514 .406 .361 .535 |
| The year. | - | 24 | 93.1 | . 733 | 9.93 | . 474 |
| October November. December. January. February. March. April. May. June... July....... August..... September. | 125 257 973 777 1,450 1,190 1,170 556 231 793 2,720 | $\begin{array}{r} 54 \\ 91 \\ \hline \\ 141 \\ 195 \\ 176 \\ 133 \\ 68 \\ 71 \\ 71 \end{array}$ | 65.2 <br> 88.3 <br> 134 <br> 230 <br> 197 <br> 327 <br> 341 <br> 319 <br> 220 <br> 117 <br> 173 <br> 206 | $\begin{aligned} & .513 \\ & .695 \\ & 1.06 \\ & 1.81 \\ & 1.55 \\ & 2.57 \\ & 2.69 \\ & 2.51 \\ & 1.73 \\ & .921 \\ & 1.36 \\ & 1.62 \\ & \hline \end{aligned}$ | .59 <br> . .78 <br> 1.22 <br> 2.09 <br> 1.67 <br> 2.96 <br> 3.00 <br> 2.89 <br> 1.93 <br> 1.06 <br> 1.57 <br> 1.81 | $\begin{array}{r} .332 \\ .449 \\ .685 \\ 1.17 \\ 1.00 \\ 1.66 \\ 1.74 \\ 1.62 \\ 1.12 \\ .595 \\ .879 \\ 1.05 \\ \hline \end{array}$ |
| The jear. | 2,720 | 54 | 201 | 1.58 | 21.57 | 1.02 |
| 1924 <br> October <br> November. . ..... <br> December. <br> . . . . . . <br> January....... <br> February. <br> Merch. <br> April. <br> May. <br> June. <br> July.. <br> August. <br> September | 693 <br> - <br> 274 <br> - <br> 286 <br> 172 <br> 385 <br> 158 <br> - <br> - <br> 388 | $\begin{array}{r} 70 \\ - \\ 78 \\ 127 \\ 108 \\ 73 \\ 37 \\ 37 \\ 32 \\ 30 \end{array}$ | $\begin{array}{r} 130 \\ 125 \\ 108 \\ 146 \\ 331 \\ 150 \\ 124 \\ 111 \\ 56.3 \\ 87.3 \\ 58.0 \\ 66.6 \end{array}$ | $\begin{aligned} & 1.02 \\ & .984 \\ & .850 \\ & 1.15 \\ & 2.61 \\ & 1.18 \\ & .976 \\ & .873 \\ & .443 \\ & .687 \\ & .457 \\ & .524 \end{aligned}$ | $\begin{array}{r} 1.18 \\ 1.10 \\ .98 \\ 1.33 \\ 2.72 \\ 1.36 \\ 1.09 \\ 1.01 \\ .49 \\ .79 \\ .53 \\ .58 \end{array}$ | $\begin{aligned} & .659 \\ & .636 \\ & .549 \\ & .743 \\ & .69 \\ & .763 \\ & .631 \\ & .564 \\ & .286 \\ & .444 \\ & .295 \\ & .339 \end{aligned}$ |
| The year. | 693 | 30 | 123 | . 969 | 13.16 | .626 |
| 1925-26 <br> October <br> November <br> December <br> January. <br> February <br> March. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September | 446 - 164 900 1,140 205 244 178 79 701 250 1,400 | $\begin{array}{r} 32 \\ 75 \\ - \\ - \\ \hline 78 \\ 60 \\ 35 \\ 31 \\ 28 \\ 46 \\ \hline \end{array}$ | $\begin{gathered} 85.6 \\ 112 \\ 87.3 \\ 153 \\ 255 \\ 124 \\ 108 \\ 79.1 \\ 51.2 \\ 70.0 \\ 100 \\ 222 \end{gathered}$ | $\begin{array}{r} .674 \\ .882 \\ .687 \\ 1.20 \\ 2.01 \\ .976 \\ .850 \\ .623 \\ .403 \\ .551 \\ .787 \\ 1.75 \\ \hline \end{array}$ | .78 .98 .79 1.38 2.09 1.13 .95 .72 .45 .64 .91 1.95 | $\begin{array}{r} .436 \\ .570 \\ .444 \\ .776 \\ 1.30 \\ .631 \\ .549 \\ .403 \\ .260 \\ .356 \\ .509 \\ 1.13 \\ \hline \end{array}$ |
| The year. | 1,400 | 28 | 119 | . 937 | 12.77 | .606 |
| October....... | 399 | 60 | 115 | . 906 | 1.04 | . 586 |
| November. | 1,740 | 96 | 266 | 2.09 | . 2.33 | 1.35 |
| December. | 379 | - | 168 | 1.32 | 1.52 | . 853 |
| Januery. | 313 | 117 | 172 | 1.35 | 1.56 | . 873 |
| February. | 428 197 | 127 142 | 213 161 | 1.68 1.27 | 1.75 1.46 |  |
| April | 1,260 | 134 | 232 | 1.83 | 2.04 | 1.18 |
| May.. | 488 | 130 | 174 | 1.37 | 1.58 | . 885 |
| June. . . . | 241 | 81 | 122 | . 961 | 1.07 | . 621 |
| July... | 144 228 | 50 57 | 75.8 87.9 | . .597 | .69 .80 | $\begin{array}{r} .386 \\ .447 \end{array}$ |
| September. . . . |  |  |  |  | . 47 | . 275 |
|  | 1,740 | 35 | 153 | 1.20 | 16.31 | . 776 |

Monthly discharge of Patuxent River near Burtonsville, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Dischar-e in million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
|  |  |  |  |  |  |  |
| October. . . . . . ..... | 635 | 34 | 153 | 1.20 | 1.38 | 0.776 |
| November. | - | - | 100 | . 787 | . 88 | . 509 |
| December | 257 | - | 168 | 1.32 | 1.52 | . 853 |
| February. | 257 | - | 113 | -.890 | 1.03 | . 575 |
| March.... | 251 | 122 | 161 | 1.66 1.27 | 1.79 | . 07 |
| April. | 1,280 | 112 | 206 | 1.62 | 1.81 | $.821$ |
| May. | 232 | - | 151 | 1.19 | 1.37 | . 769 |
| June. | 1,240 | 101 | 351 | 2.76 | 3.08 | . 78 |
| July. | . 270 | 85 | 132 | 1.04 | 1.20 | -. 672 |
| August... | 1,070 | 73 | 193 | 1.52 | 1.75 | . 982 |
| September | 261 | 88 | 128 | 1.01 | 1.13 | . 653 |
| The year.................. | 1,280 | 34 | 172 | 1.35 | 18.40 | . 873 |
|  |  |  |  |  |  |  |
| November. | 166 | 76 | 90.3 | $.711$ | $\begin{aligned} & .82 \\ & .79 \end{aligned}$ | $\begin{array}{r} .461 \\ .460 \end{array}$ |
| December. | 228 | - | 96.1 | . 757 | . 87 | . 48. |
| January. | 273 | - | 118 | . 929 | 1.07 | . 600 |
| February. | 856 | - | 179 | 1.41 | 1.47 | . 911 |
| March. | 643 | 128 | 218 | 1.72 | 1.98 | 1.11 |
| April. | 1,100 | 120 | 237 | 1.87 | 2.09 | 1.21 |
| May. | 243 | 102 | 140 | 1.10 | 1.27 | . 711 |
| June | 397 | 73 | 111 | .974 | . 98 | . 565 |
| July. | 75 | 31 | 50.8 | . 400 | . 46 | . 259 |
| August. | 2 | 25 | 33.0 | . 260 | . 30 | . 168 |
| September | 82 | 23 | 32.3 | . 254 | . 28 | . 164 |
| The year. . . . . . . . . . . . . . . . | 1,100 | 23 | 116 | . 913 | 12.38 | . 590 |
| October. | 610 | 43 | 111 |  |  |  |
| November | 287 | 53 | 97.6 | . 769 | . 86 | $.497$ |
| Janu | 145 | - | 77.7 | . 612 | . 71 | . 396 |
| February. | 556 | - | 160 | .589 | . 68 | . 381 |
| March. | 891 | 87 | 145 | 1.26 | 1.31 | . 914 |
| April. | 1,010 | 87 | 145 | 1.14 | 1.31 | -737 |
| May. | , 93 | 51 | 70.8 |  | 1.37 | . 78.5 |
| June. | 86 | 28 | 45.4 | . 357 | . 64 | . 360 |
| July. | 46 | 10 | 20.9 | . 165 | . 19 | . 231 |
| August.. | 16 | 6.9 | 10.4 | . 082 | . 09 | 1.07 |
| September | 24 | 5.5 | 9.37 | .074 |  |  |
| The year. | 1,010 | 5.5 | 81.0 | . 638 | 8.65 | . 412 |
| October.. | 21 | 5.5 |  |  |  |  |
| November. | 26 | 15 | 19.4 | . 153 | . 17 | $.056$ |
| December. | $33 \overline{6}$ | - | 37.7 50.3 | .297 .396 | . 34 | . 192 |
| February. | 92 | - | 50.3 | . 396 | .46 .30 | -256 |
| March. | 319 | 37 | 64.6 | . 509 | . 59 | . 329 |
| April. | 230 | 41 | 73.2 | . 576 | . 64 | . 372 |
| May. | 291 | 34 | 62.6 | . 493 | . 57 | . 319 |
| June | 225 | 21 | 60.9 | . 480 | . 54 | . 310 |
| July... | 55 - | - | 101 | . 795 | . 92 | . 514 |
| August... | 554 | 12 | 80.5 | . 634 | . 73 | . 410 |
| September | 30 | 14 | 20.4 | . 161 | . 18 | .104 |
| The year | - | 5.5 | 51.7 | . 407 | 5.54 | . 263 |
| October. . . . . . . . . | 104 |  |  |  |  |  |
| November. | 31 | 16 | 20.6 | . 162 | . 18 | . 084 |
| December | 87 | 22 | 35.1 | .276 | . 32 | . 178 |
| January. | 208 | 48 | 91.3 | . 719 | . 83 |  |
| February. | 336 | 51 | 88.4 | . 696 | . 75 | . 450 |
| March. | 990 | 51 | 124 | . 976 | 1.13 | . 631 |
| April. | 339 | 71 | 116 | . 913 | 1.02 | . 590 |
| May.. | 850 | 65 | 134 | 1.06 | 1.22 | . 685 |
| June. | 385 | 36 | 88.4 | . 696 | . 78 | . 450 |
| July. | 59 | 12 | 33.1 | . 261 | . 30 | . 16 ? |
| August. | 234 | 9.0 | 26.4 | . 208 | .24 | .134 |
| Soptember. | 144 | 5.5 | 17.7 | . 139 | . 16 |  |
| The year... | 990 | 5.5 | 66.0 | . 520 | 7.08 | .336 |

Monthly discharge of Patuxent River near Burtonsville, Md.--Continued

| Month | Discharge in socond-feot |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| 1932-33 |  |  |  |  |  |  |
| October. | 833 | 10 | 104 | 0.819 | 0.94 | 0.529 |
| November | 933 | 81 | 196 | 1.54 | 1.72 | . 995 |
| December. | 499 | 70 | 117 | . 921 | 1.06 | . 595 |
| January. | 635 | 94 | 139 | 1.09 | 1.26 | -704 |
| February | 455 | 117 | 164 | 1.29 | 1.34 | . 834 |
| March... | 559 | 110 | 194 | 1.53 | 1.76 | . 989 |
| Apr11 | 1,010 | 171 | 280 | 2.20 | 2.46 | 1.42 |
| May. | 669 | 150 | 238 | 1.87 | 2.16 | 1.21 |
| June | . 603 | 93 | 151 | 1.19 | 1.33 | . 769 |
| July. | 2,090 | 70 | 189 | 1.49 | $\frac{1}{3} .72$ | .963 |
| August. Septemb | 6,010 449 | 54 81 | 352 115 | 2.77 .906 | 3.19 1.01 | $\begin{aligned} & 1.79 \\ & .586 \end{aligned}$ |
| The year. | 6,010 | 10 | 187 | 1.47 | 19.95 | . 950 |
| October. | 153 | 72 | 89.6 | . 706 | . 81 | . 456 |
| November. | 163 | 71 | 81.8 | . 644 | . 72 | . 416 |
| Decomber | 172 | 65 | 82.9 | . 653 | . 75 | . 422 |
| January. | 365 | 60 | 126 | . 992 | 1.14 | . 641 |
| February. | 347 | 60 | 85.2 | . 671 | . 70 | . 434 |
| March. | 1,220 | 70 | 243 | 1.91 | 2.20 | 1.23 |
| April. | 330 | 112 | 169 | 1.33 | 1.48 | . 860 |
| May... | 484 | 99 | 157 | 1.24 | 1.43 | . 801 |
| June | 424 | 59 | 102 | . 803 | - 90 | . 519 |
| July. | 118 | 33 | 46.5 | . 366 | . 42 | .237 |
| August. | 216 +530 | 27 32 | ${ }_{231}^{49.5}$ | .390 1.82 | .45 2.03 | . 21.18 |
| September | 1,530 | 32 | 231 | 1.82 | 2.03 | 1.18 |
| The year. | 1,530 | 27 | 122 | . 961 | 13.03 | . 621 |
| October....... | 235 | 78 | 102 | . 803 | . 93 | .519 |
| November. | 576 | 74 | 103 | . 811 | . 90 | . 524 |
| Decembar. | 915 | 98 | 170 | 1.34 | 1.54 | . 866 |
| January. | 450 | 109 | 167 | 1.31 | 1.51 | . 847 |
| February. | 642 | 100 | 248 | 1.95 | 2.03 | 1.26 |
| March | 608 | 167 | 227 | 1.79 | 2.06 | 1.16 |
| Apr 11 | 1,150 | 158 | 272 | 2.14 | 2.39 | 1.38 |
| May. | 1,330 | 117 | 211 | 1.66 | 1.91 | 1.07 |
| June | 439 | 76 | 119 | . 937 | 1.05 | . 606 |
| July | 502 | 55 | 102 | . 803 | . 93 | . 519 |
| August | 137 | 37 | 52.5 | . 413 | . 48 | . 267 |
| September | 1,150 | 35 | 142 | 1.12 | 1.25 | . 724 |
| The year | 1,330 | 35 | 159 | 1.25 | 16.98 | . 808 |
| October...... | 526 | 52 | 77.3 | . 609 | . 70 | . 394 |
| November. | 454 | 71 | 137 | 1.08 | 1.20 | . 698 |
| December. | 176 | 75 | 107 | . 843 | . 97 | . 545 |
| January. | 1,700 | 90 | 310 | 2.44 | 2.81 | 1.58 |
| February | 1,960 | 107 | 414 | 3.26 | 3.52 | 2.11 |
| March. . | 1,080 | 164 | 321 | 2.53 | 2.92 | 1.64 |
| Apr11. | 354 | 144 | 207 | 1.63 | 1.82 | 1.05 |
| May.. | 236 | 85 | 125 | . 984 | 1.13 | . 636 |
| June | 265 | 59 | 89.9 | . 708 | . 79 | - 458 |
| July. | 214 | 41 | 70.6 | . 556 | - 64 | . 359 |
| August. | 659 | 32 | 100 | . 787 | . 91 | . 509 |
| September | 71 | 32 | 43.8 | . 345 | . 38 | . 223 |
| The year. | 1,960 | 32 | 166 | 1.31 | 17.79 | . 847 |
| 1936-37 |  |  |  |  |  |  |
| October.... | 141 | 39 | 55.4 | . 436 | . 50 | . 282 |
| November. | 69 | 44 | 49.7 | . 391 | . 44 | . 253 |
| December. | 844 | 42 | 150 | 1.18 | 1.36 | . 763 |
| January.. | 643 | 117 | 238 | 1.87 | 2.16 | 1.21 |
| February. | 1,070 | 167 | 251 | 1.98 | 2.06 | 1.28 |
| March. | 273 | 144 | 180 | 1.42 | 1.64 | . 918 |
| April. | 2,200 | 120 | 305 | 2.40 | 2.68 | 1.55 |
| May.. | 312 | 128 | 197 | 1.55 | 1.79 | 1.00 |
| June. | 1,390 | 96 | 185 | 1.46 | 1.63 | . 944 |
| July.. | , 250 | 66 | 106 | . 835 | . 96 | . 540 |
| August... | 1,410 209 | 59 62 | 244 88.1 | 1.92 .694 | 2.21 .77 | 1.24 .449 |
| The year. | 2,200 | 39 | 170 | 1.34 | 18.20 | .866 |

Monthly discharge of Petuxent River neer Burtonsville, Md.--Continued


Monthly discharge of Patuxent RIver neer Burtonsville, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discherce in million allons per day per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meon | Per squere mile |  |  |
| $1942-43$ <br> October. <br> November. <br> December. <br> Jenuery. <br> Februery. <br> March. <br> April. <br> May. <br> June. <br> July. <br> August <br> Soptember | $\begin{array}{r} 1,130 \\ 280 \end{array}$ $872$ <br> 400 <br> 490 <br> 404 <br> 372 <br> 528 <br> 340 | 22 63 50 97 130 105 57 55 31 23 13 13 | $\begin{aligned} & 214 \\ & 116 \\ & 153 \\ & 144 \\ & 218 \\ & 201 \\ & 135 \\ & 108 \\ & 67.9 \\ & 42.6 \\ & 17.9 \\ & 18.1 \end{aligned}$ |  |  |  |
| The jear..................... | 1,130 | 13 | 119 |  |  |  |

Year'y discharge of Patixent River near Burtonsville, Md.

| Yeer | Yeer ending Sept. 30 |  |  |  | Celender yeer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in second-feet |  | Runoff in Inches | Discherge in million Eellons per day per square mile | Diecherge in second-feet |  | ```Runoff in inches``` | Discharme in million -allons pir day per squaremile |
|  | Mean | Per equere mLe |  |  | Mean | $\begin{gathered} \text { Per } \\ \text { equere } \\ \text { mile } \end{gathered}$ |  |  |
| 1914........... | 100 | 0.787 | 10.73 | 0.509 | 96.3 | 0.758 | 10.30 | 0.490 |
| 1915........... | 141 | 1.11 | 15.05 | .717 | 147 | 1.16 | 15.68 | . 750 |
| 1916... - . . . . . | 110 | . 866 | 11.85 | . 560 | 109 | .858 | 11.71 | - 5.55 |
| 1917. | 128 | 1.01 | 13.70 | . 653 | 126 | .992 | 13.45 | . 641 |
| 1918. | 124 | . 276 | 13.23 | . 631 | 124 | .976 | 13.27 | .6.1 |
| 1919........... | 151 | 1.19 | 16.10 | .769 | 168 | 1.32 | 17.94 | .853 |
| 1920........... | 184 | 1.45 | 19.66 | .937 | 172 | 1.35 | 18.28 | . 273 |
| 1921........... | 103 | . 811 | 11.00 | . 524 | 95.9 | .755 | 10.25 | . 488 |
| 1922............ | 99.1 | . 780 | 10.59 | . 504 | 95.7 | .754 | 10.22 | . 487 |
| 1923 . . . . . . . . . | 93.1 | .733 | 9.93 | . 474 | 104 | .819 | 11.15 | . 529 |
| 1924........... | 201 | 1.58 | 21.57 | 1.02 | 208 | 1.64 | 22.24 | 1.06 |
| 1925........... | 123 | . 969 | 13.16 | . 626 | 116 | $.913$ | 12.45 | .590 |
| 1926........... | 119 | .937 | 12.77 | . 606 | 141 | 1.11 | 15.11 | . 717 |
| 1927. . . . . . . . . . | 153 | 1.20 | 16.31 | - 776 | 142 | 1.12 | 15.20 | . 724 |
| 1928........... | 172 | 1.35 | 18.40 | . 873 | 160 | 1.26 | 17.10 | . 24 |
| 1929........... | 116 | .913 | 12.38 | . 590 | 117 | . 921 | 12.48 | .523 |
| 1930.......... | 81.0 | . 638 | 8.65 | . 412 | 62.6 | . 493 | 6.68 | .319 |
| 1931........... | 51.7 | . 407 | 5.54 | . 263 | 52.1 | . 410 | 5.58 | . 265 |
| 1932........... | 66.0 | . 520 | 7.08 | . 336 | 94.7 | . 746 | 10.15 | . 432 |
| 1933.......... | 187 | 1.47 | 19.95 | . 950 | 173 | 1.36 | 18.51 | .878 |
| 1934.......... | 122 | .961 | 13.03 | . 621 | 132 | 1.04 | 14.12 | . 672 |
| 1935..... . . . . | 159 | 1.25 | 16.98 | . 808 | 154 | 1.21 | 16.48 | -732 |
| 1936.......... | 166 | 1.31 | 17.79 | . 947 | 161 | 1.27 | 17.22 | -421 |
| 1937......... | 170 | 1.34 | 18.20 | . 866 | 205 | 1.61 | 21.96 | 1.04 |
| 1938.......... | 140 | 1.10 | 14.97 | . 711 | 103 | .311 | 10.96 | . 524 |
| 1939......... | 115 |  |  |  | 110 |  |  |  |
| 1940........... | 99.2 |  |  |  | 110 |  |  |  |
| 1941........... | 92.9 |  |  |  | 73.7 |  |  |  |
| 1942........... | 60.8 |  |  |  | 95.3 |  |  |  |
| 1943.......... | 119 |  |  |  |  |  |  |  |
| H1ghest. . . . | 201 |  |  |  | 208 |  |  |  |
| Average..... | 125 |  |  |  | 121\% |  |  |  |
| Lowest...... | 51.7 |  |  |  | 52.1 |  |  |  |

Little Patuxent River at Guslford, Md.
Locktion.- Steff gege, let. $39^{\circ} 10^{\prime} 04^{\prime \prime}$, long. $76^{\circ} 51^{1.07 ", ~} 75$ feot upstremm from highwey
bridge, 1 mile west of Guilford, Howerd County, 3 miles upstreem from Middle
Patuxent River, end 4 miles north of Laurel
Drainage eree.- 38.0 square miles.
Records avelloble. - Mey 1932 to September 1943.
Extremes.- Maximum discharge, 3,590 eecond-feet Aug. 23, 1933 (gege height, 12.5 feet, from floodmarks), from reting curve extended above l,200 second-feet; minimum, 3.6 second-feet Sept. 10 to Oct. 4, 1932.

Monthly discharge of Little Patuxent River at Oulford, Md.

| Month | Discherge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { m1le } \end{gathered}$ |  |  |
| 1932 |  |  |  |  |  |  |
| May 3-31. | 214 | 18 | 32.9 | 0.866 | 0.93 | 0.560 |
| June. . | 37 | 8 | 14.4 | . 379 | . 42 | . 245 |
| July | 139 | 5.5 | 13.0 | . 342 | . 39 | . 221 |
| August | 39 | 4.0 | 8.14 | .214 | . 25 | . 138 |
| September. | 6.5 | 3.6 | 3.88 | . 102 | . 11 | . 066 |
| October. |  |  |  |  |  |  |
| November. | 676 | $21^{3.6}$ | 72.2 | $\begin{array}{r}.584 \\ \hline\end{array}$ | . 67 | .377 |
| December. | 188 | 18 | 34.9 | 1.918 | 1.06 | . 593 |
| Januery. | 297 | 26 | 42.8 | 1.13 | 1.30 | . 730 |
| Februery | 216 | 31 | 57 | 1.50 | 1.56 | . 969 |
| March. | 216 | 30 | 78.1 | 2.06 | 2.38 | 1.33 |
| Apr11 | 421 | 42 | 98.7 | 2.60 | 2.90 | 1.68 |
| May. | 130 | 38 | 57.8 | 1.52 | 1.75 | . 982 |
| June | 157 | 22 | 41.7 | 1.10 | 1.23 | . 711 |
| July. | 710 | 13 | 47.6 | 1.25 | 1.44 | . 808 |
| August. | 1,540 | 11 | 82.5 | 2.17 | 2.50 | 1.40 |
| September | 210 | 26 | 38.7 | 1.02 | 1.14 | 1.659 |
| Ths yeer | 1,540 | 3.6 | 56.3 | 1.48 | 20.09 | . 957 |
| October. | 70 | 25 | 31.3 |  |  |  |
| November. | 54 | 24 | 27.9 | .734 | . 32 | .474 |
| Decembsr. | 83 | 20 | 28.4 | . 747 | . 86 | . 483 |
| Jenuary | 124 | 20 | 44.6 | 1.17 | 1.35 | . 756 |
| Fobruery | 52 | 19 | 30.6 | . 805 | . 84 | . 520 |
| Merch. | 650 | 24 | 70.9 | 1.87 | 2.16 | 1.21 |
| April | 120 | 35 | 47.8 | 1.26 | 1.41 | . 814 |
| Mey. | 234 | 30 | 52.1 | 1.37 | 1.58 | . 885 |
| June. | 100 | 16 | 28.8 | . 758 | . 85 | . 490 |
| July. | 25 | 9.3 | 12.5 | . 329 | . 38 | . 213 |
| August. | 148 | 8.7 | 22.6 | . 595 | . 69 | . 385 |
| Soptember. |  | 9.3 |  | 3.05 | 3.40 | 1.97 |
| The yeer | 925 | 8.7 | 42.7 | 1.12 | 15.29 | .724 |
| October............ | 78 | 25 | 33.9 | . 892 | 1.03 |  |
| November | 181 | 24 | 35.0 | . 921 | 1.03 | . 595 |
| December | 312 | 25 | 54.1 | 1.42 | 1.64 | . 918 |
| Jenuary. | 218 | 30 | 55.4 | 1.46 | 1.68 | . 944 |
| Februery | 218 | 40 | 78.6 | 2.07 | 2.16 | 1.34 |
| Merch | 157 | 46 | 60.0 | 1.58 | 1.32 | 1.02 |
| April | 619 | 45 | 109 | 2.87 | 3.20 | 1.85 |
| May. | 511 | 34 | 73.7 | 1.94 | 2.24 | 1.25 |
| June | 244 | 18 | 37.2 | . 979 | 1.09 | . 633 |
| July. | 385 | 15 | 42.4 | 1.12 | 1.29 | . 724 |
| August. | 51 | 12 | 15.5 | . 408 | . 47 | . 264 |
| Septsmber | 511 | 12 | 51.7 | 1.36 | 1.52 | . 879 |
| The yeer | 619 | 12 | 53.7 | 1.41 | 19.17 | .911 |
| October. . . . . . . . . |  |  |  |  |  |  |
| November. |  | 14 | 19.7 | . 518 | . 60 | . 335 |
| December. | 193 | 22 | 43.7 30.8 | 1.15 | 1.28 | . 743 |
| January. | 500 | 27 | 95.3 | 2.51 | 2.99 | 1.62 |
| Februery. | 415 | 30 | 122 | 3.21 | 3.46 | 2.07 |
| March... | 340 | 43 | 104 | 2.74 | 3.16 | 1.77 |
| April. | 135 | 33 | 53.6 | 1.41 | 1.57 | . 911 |
| Mey. | 118 | 25 | 36.7 | . 966 | 1.11 | . 624 |
| June. | 46 | 16 | 24.3 | . 639 | . 71 | . 413 |
| Ju1y. | 125 | 11 | 27.6 | . 726 | . 84 | . 469 |
| August. | 130 | 8.8 | 23.3 | . 613 | . 71 | $.396$ |
| September. | 18 | 8.8 | 10.3 | . 271 | . 30 | $.175$ |
| The jear.. | 500 | 8.8 | 49.1 | 1.29 | 17.57 | .834 |

Monthly discharga of Little Retuxent River et Guilford, Md.--Continued

| Month | Discherge in second-feet |  |  |  | Runof $f$ in Inches | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Meen | Per squere mile |  |  |
| 1936-37 |  |  |  |  |  |  |
| October. | 49 | 11 | 15.5 | 0.408 | 0.47 | 0.264 |
| November. | 17 | 10 | 12.2 | . 321 | . 36 | . 207 |
| December. | 130 | 11 | 45.5 | 1.20 | 1.38 | . 776 |
| Januery | 235 | 35 | 87.8 | 2.31 | 2.66 | 1.49 |
| February. | 511 | 39 | 76.1 | 2.00 | 2.08 | 1.29 |
| March.... | 87 | 36 | 49.3 | 1.30 | 1.50 | . 840 |
| Apr11 | 1,360 | 31 | 141 | 3.71 | 4.14 | 2.40 |
| May. | 70 | 37 | 48.8 | 1.28 | 1.48 | . 827 |
| June. | 232 | 24 | 41.0 | 1.08 | 1.20 | - 69 |
| July.... | 159 | 15 | 28.7 | . 755 | . 87 | - 488 |
| August... | 208 42 | 14 14 | 35.6 19.7 | . 9378 | 1.08 .58 | . .3065 |
| The yee | 1,360 | 10 | 49.8 | 1.31 | 17.80 | . 847 |
| October. | 1,180 | 14 | 80.8 | 2.13 | 2.46 | 1.38 |
| November | 848 | 30 | 72.8 | 1.92 | 2.14 | 1.24 |
| Dacember. | 58 | 31 | 38.2 | 1.01 | 1.16 | -653 |
| Jenuery. | 169 | 29 | 44.7 | 1.18 | 1.36 | . 763 |
| Pebruary | 244 | 32 | 58.5 | 1.54 | 1.60 | . 995 |
| Merch. | 82 | 34 | 47.3 | 1.24 | 1.43 | . 801 |
| April. | 59 | 26 | 36.6 | . 963 | 1.07 | . 622 |
| May.. | 87 | 22 | 30.5 | . 803 | . 93 | . 519 |
| June | 24 | 14 | 17.8 | . 468 | . 52 | . 302 |
| July. | 66 | 9.3 | 17.5 | . 461 | . 53 | . 298 |
| August. | 41 | 7.8 | 13.9 | . 366 | . 42 | . 237 |
| Septamber | 47 | 8.2 | 13.5 | . 355 | . 40 | . 229 |
| The ye | 1,180 | 7.9 | 39.2 | 1.03 | 14.02 | . 666 |
| October.... . . . . | 22 | 10 | 13.0 | .342 | . 39 | - 221 |
| Novamber. | 26 | 13 | 15.7 | . 413 | . 46 | . 267 |
| December. | 95 | 17 | 30.2 | . 795 | . 92 | . 514 |
| January. | 491 | 17 | 39.0 | 1.03 | 1.19 | . 666 |
| February. | 232 | 36 | 75.6 | 1.99 | 2.07 | 1.29 |
| March. | 109 | 39 | 57.8 | 1.52 | 1.75 | - 982 |
| Apr11.... | 109 | 37 | 55.6 | 1.46 | 1.63 | - 944 |
| May..... | 5 | 14 | 19.9 | . 524 | -. 58 | . 339 |
| June | 33 | 11 | 14.3 | . 376 | . 43 | . 243 |
| August. | 166 | 7.4 | 17.2 | . 453 | . 52 | . 293 |
| SeptemberThe jee | 43 | 7.4 | 10.3 | . 271 | . 30 | .175 |
|  | 491 | 7.4 | 31.5 | . 829 | 11.25 | . 536 |
| October........... | 223 | 12 | 26.8 | . 705 | . 81 | . 456 |
| November. | 53 | 15 | 19.3 | . 508 | . 57 | . 328 |
| Decembar. | 29 | 14 | 18.1 | . 476 | . 55 | . 308 |
| January. | 209 | 11 | 22.6 | . 595 | . 69 | . 385 |
| Februery. | 314 | 13 | 45.8 | 1.21 | 1.30 | . 782 |
| March. | 242 | 22 | 47.3 | 1.24 | 1.43 | . 801 |
| Apr11. | 1,540 | 27 | 127 | 3.34 | 3.73 | 2.16 |
| Mey. | 231 | 31 | 51.7 | 1.36 | 1.57 | . 879 |
| Juna. | 51 | 16 | 25.4 | . 668 | . 75 | . 432 |
| July. | 59 | 11 | 16.9 | . 445 | . 51 | . 288 |
| August. | 87 | 8.9 | 15.5 | . 408 | . 47 | . 264 |
| Soptamber | 290 | 10 | 24.7 | . 650 | . 73 | . 420 |
| The yeer | 1,540 | 8.9 | 36.6 | . 963 | 13.11 | . 622 |
| October............ | 37 | 12 | 14.9 | . 392 | . 45 | . 253 |
| November. | 257 | 16 | 47.9 | 1.26 | 1.41 | . 814 |
| Decamber. | 224 | 24 | 41.9 | 1.10 | 1.27 | . 711 |
| January. | 121 | 27 | 47.0 | 1.24 | 1.42 | . 901 |
| Febmiery. | 88 | 29 | 43.0 | 1.13 | 1.18 | . 730 |
| Merch. | 109 | 25 | 48.1 | 1.27 | 1.46 | . 821 |
| April. | 276 | 28 | 53.4 | 1.41 | 1.57 | . 911 |
| Mey. | 31 | 16 | 22.5 | . 592 | . 68 | . 383 |
| June. | 242 | 15 | 35.5 | - 934 | 1.04 | . 604 |
| July. | 94 | 10 | 22.3 | . 587 | . 68 | . 379 |
| August. . | 32 | 7.6 | 11.0 | . 289 | .33 | 1.87 |
| Soptember. | 11 | 3.7 | 5.56 | .146 | . 16 | . 944 |
| The yeer.. | 276 | 3.7 | 32.6 | . 858 | 11.65 | . 555 |

Monthly discharge of Little Patuxent River at Gullford, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{array}{\|c} \text { Runot } \mathrm{f} \\ \text { In } \\ \text { Inches } \end{array}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| October.. | $9{ }^{9.4}$ | 3.8 | 5.90 | 0.155 | 0.18 | 0.100 |
| November. | 20 | 7.6 | 9.31 | . 245 | . 27 | .158 |
| December. | 51 | 8.0 | 14.2 | . 374 | . 43 | . 242 |
| February. | 38 149 | 8.7 | 13.8 | . 363 | . 42 | . 235 |
| March.... | 184 | 12 | 24.3 | . 639 | . 67 | . 413 |
| April. | 260 | 19 | 50. |  | 1.24 | . 698 |
| May. | 110 | 14 | 24.8 | -. 654 | 1.49 | . 868 |
| June | 104 | 10 | 20.2 | . 532 | . 59 | . 344 |
| July. | 671 | 9.9 | 38.1 | 1.00 | 1.16 | . 646 |
| August. | 288 | 10 | 40.2 | 1.06 | 1.22 | . 685 |
| September | 31 | 8.2 | 12.0 | . 316 | . 35 | .204 |
| The year. | 671 | 3.8 | 24.6 | .647 | 9.77 | . 418 |
| October. | 304 | 11 |  |  |  |  |
| November. | 64 | 23 | 31.5 | 1.28 | 1.42 | . .536 |
| December. | 430 | 17 | 51.8 | 1.36 | 1.57 | . 879 |
| January. | 60 | 30 | 37.4 | . 984 | 1.13 | . 636 |
| February. | 231 | 33 | 69.6 | 1.83 | 1.91 | 1.18 |
| March. | 214 | 33 | 68.7 | 1.81 | 2.08 | 1.17 |
| April. | 182 | 35 | 52.4 | 1.38 | 1.54 | . 892 |
| May. | 593 | 32 | 70.5 | 1.86 | 2.14 | 1.20 |
| June. | 56 | 16 | 25.8 | . 679 | . 76 | . 439 |
| July. | 27 | 11 | 15.2 | . 400 | . 46 | . 259 |
| August | 10 | 6.0 | 7.87 | .207 | . 24 | . 134 |
| September. | 12 | 5.6 | 7.09 | .187 | . 21 | . 121 |
| The year.. | 593 | 5.6 | 40.3 | 1.06 | 14.39 | . 685 |

Yearly discharge of IIttle Patuxent River at Guilford, Md.


Little Patuxent River at Savare, N.
Location.- Water-stace recorder, lat. $39^{\circ} 08^{\prime} 00^{\prime \prime}$, long. $76^{\circ} 48^{\prime} 58^{\prime \prime}$, 400 feet downstream from highay bridge, half a mile southeast of Savage, Howard County, and mile downstream from Middle Patuxent River
Drainage area.- 98.4 square miles.
Records avallable. - November 1939 to September 1943.
Extremes.-Maximum discharce, 3,040 second-feet May 12, 1943 (a-e height, 8.58 feet); minimum de11y, 7.0 second-feet (regulated) Sept. 19, 1943.

Maximum sta enown, about 17 feet in A gust 1933, from information by local resident $\theta$.
Remarks.- Reculation caused by power plant of Savace Manufacturint Company l mile above station.

Monthly discharge of Little Patuxent River at Savace, Md


Yearly discharge of Little Patuxent River at Savaga, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharee in million gallons per day par square mile | Diecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gellons per dey per square mile |
|  | Mean | Per square mile |  |  | Mean | Per equare mile |  |  |
| 1940. | - | - | ~ | - | 93.4 | 0.949 | 12.93 | 0.613 |
| 1941. | 77.3 | 0.786 | 10.67 | 0.508 | 62.4 | . 634 | 8.61 | . 410 |
| 1942. | 59.3 | . 603 | 8.17 | . 390 | 81.2 | . 825 | 11.20 | . 533 |
| 1943. | 98.8 | 1.00 | 13.63 | . 646 | - | - |  |  |

## POTOMAC RIVER BASIN

North Branch Potomac River at Bloomington, Md.
Location.- Water-stage recorder, lat. $39^{\circ} 28^{\prime} 48^{\prime \prime}$, long. $799^{9} 04^{\prime \prime}$, at highway bridga at Bloomington, Garrett County, and 600 feet upstream from Savage River. Datum of gage is 951.98 feet above mean sea level, adjustment of 1912. Prior to September 1929, chain gage at same eite and datum.
Dralnaga area.- 287 square mileo.
Records avallable.- October 1924 to September 1927, July 1929 to September 1943.
Extremee.- Maximum discharge, 22,500 eecond-feet Mar. 17, 1936, Oct. 28, 1937 (gage halght, 14.85 feet), by slope-area determination; minimum, 5.4 eecond-faet Sept. 22, 1932 (gage height, 1.81 feet).

Maximum stage known, 20.3 feet, from floodmark on left bank, or about 17 feet (revised) on right bank, at gago Mar. 29, 1924 (dischargo, 29,000 eecond-foet, from rating curve extended above slope-area determination of 22,500 second-feet).
Remarke.- Some regulation at low etagee by Stony River Reeervoir (capacity, 1,982,000,000 gallons) about 45 miles above etation. Yearly figuree published ae they ara not appreciably affected by change in otorage. Recorde of change in otorage in Stony River Resarvoir can be obtalned from West Virginia Pulp \& Paper Co., Luke, Md.

Monthly discharge of North Branch Potomec River at Bloomington, Md.

| Month | Diecharge in eecond-feet |  |  |  | $\begin{gathered} \text { Runaff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per equare milo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | Per square mile |  |  |
| 1924-25 |  |  |  |  |  |  |
| November... | 484 | 30 | 102 |  |  |  |
| December. | 806 | 66 | 334 |  |  |  |
| January. | 2,340 | 84 | 389 |  |  |  |
| February. | 2,780 | 330 | 1,010 |  |  |  |
| March... | 1,420 | 312 | 530 |  |  |  |
| April. | 1,590 | 183 | 516 |  |  |  |
| May.. | 2,240 | 180 | 704 |  |  |  |
| June. | 696 | 41 | 188 |  |  |  |
| July. | 548 | 56 | 119 |  |  |  |
| August. | 312 | 41 | 90 |  |  |  |
| Sept ember. | 104 | 40 | 61.3 |  |  |  |
| 1825-26 |  |  |  |  |  |  |
| October. | 3,640 |  | 530 |  |  |  |
| November. | 4,560 | 315 | 830 |  |  |  |
| December. | 806 3,770 | - | 328 |  |  |  |
| January.. | 3,770 4,030 | 282 | 694 1,153 |  |  |  |
| February. | 4,030 1,760 | 282 350 | 1,153 939 |  |  |  |
| March..... | 3,020 | 236 | 809 |  |  |  |
| May.. | 236 | 80 | 148 |  |  |  |
| June. | 332 | 70 | 142 |  |  |  |
| July.. | 864 | 37 | 129 |  |  |  |
| August.. | 4,700 1,340 | 34 121 |  |  |  |  |
| September. |  |  |  |  |  |  |
| The yoar | 4,700 | 34 | 579 | 2.02 | 27.36 | 1.31 |

Monthly discharge of North Branch Potomac River at Bloomington, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runof } f^{\prime} \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Manımum | Mean | Per equare mile |  |  |
| 1926-27 |  |  |  |  |  |  |
| October. . . . . . . . .NovemberDecember . . . . . . .JanuaryFebruary . . . . . . . . .March.April. . . . . . . . . .May.June....................July. . . . . . . . . | 1,670 | 192 | 504 |  |  |  |
|  | 1,850 | 267 | 659 |  |  |  |
|  | 3,140 | 332 | 1,010 |  |  |  |
|  | 4,160 | $5{ }^{-}$ | 936 |  |  |  |
|  | 3,270 | 545 | 1,280 |  |  |  |
|  | 2,450 4,290 | 453 | $\begin{array}{r} 860 \\ 1,070 \end{array}$ |  |  |  |
|  | 2,2940 | 332 | 1,721 |  |  |  |
|  | 1,670 | 192 | 566 |  |  |  |
|  | 315 | 44 | 106 |  |  |  |
|  | 924 162 | $\begin{aligned} & 53 \\ & 50 \end{aligned}$ | $\begin{aligned} & 191 \\ & 70.6 \end{aligned}$ |  |  |  |
|  | 4,290 | 44 | 661 | 2.30 | 31.24 | 1.49 |
| July 6-31 <br> August. <br> September <br> 1929-30 | 368 | 50 | 92.0 |  |  |  |
|  | 155 269 | 39 | 65.3 53.7 |  |  |  |
|  | - | - | 475 |  |  |  |
| November <br> December <br> January. <br> February <br> March. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September. <br> The year. | 3,220 | - | 630 |  |  |  |
|  | 1,570 | - | 568 |  |  |  |
|  | 859 | - | 342 |  |  |  |
|  | 1,100 | 130 | 512 |  |  |  |
|  | 2,250 | 372 | 743 |  |  |  |
|  | 1,170 | 257 | 561 |  |  |  |
|  | 405 | 82 | 200 |  |  |  |
|  | 1,040 | 48 | 170.5 |  |  |  |
|  | 168 81 | 34 | $45.2$ |  |  |  |
|  | 68 | 21 | 38.7 |  |  |  |
|  | - | 21 | 361 | 1.26 | 17.07 | . 814 |
| October......................... | 35 | 17 | 23.5 |  |  |  |
| November. <br> December. | 32 | 12 | 18.8 |  |  |  |
| December January. | 309 | 17 | 81.6 |  |  |  |
|  | 1,570 | - | 253 |  |  |  |
| February | 1,500 | - | 488 |  |  | - |
| March. | 2,400 | 200 | 615 |  |  |  |
| April | 2,770 | 341 | 1,080 |  |  |  |
| May. . June. | 4,300 | 435 | 1,240 |  |  |  |
|  | 827 753 | 72 28 | 309 106 |  |  |  |
| July. | 753 580 | 28 32 | 106 120 |  |  |  |
| Augus Septe | 1,300 | 29 | 211 |  |  |  |
| The yea | 4,300 | 12 | 378 | 1.32 | 17.98 | .853 |
| October.......... | 206 | 56 | 100 |  |  |  |
| November. . . . . . . | 186 | 59 | 91.0 |  |  |  |
| December. . . . . . . . | 2,170 | 113 | 581 |  |  |  |
| January. | 2,040 | 229 | 644 |  |  |  |
| February | 6,380 | 226 | 922 |  |  |  |
|  | 4,100 | 200 | 1,070 |  |  |  |
|  | 3,950 | 269 | $786$ |  |  |  |
| April May.. | 6,840 | 138 58 | 1,030 |  |  |  |
| June. | 1,960 | 52 | 252 |  |  |  |
| July . | 1,413 | 36 | 108 |  |  |  |
| Auguet. Septembe | 77 | 5.4 | 38.4 |  |  |  |
| The | 6,840 | 5.4 | 486 | 1.69 | 23.04 | 1.09 |

Monthly discharge of North Brench Potomac River et Bloomington, Md.--Continued


Monthly discharge of North Branch Potomac River at Bloomington, Md.--Continued

| Month | Diecharge in eecond-feet |  |  |  | Runoff in 1nches | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | Per square mile |  |  |
| 1937-38 |  |  |  |  |  |  |
| October. | 17,900 |  |  |  |  |  |
| November. | 1,160 | 165 | 428 |  |  |  |
| December. | 2,720 | 150 | 603 |  |  |  |
| January. | 849 | 150 | 374 |  |  |  |
| February. | 1,390 | 346 | 578 |  |  |  |
| March. . . | 2,240 | 310 | 805 |  |  |  |
| April. | 3900 | 354 | 610 |  |  |  |
| May... | 3,430 | 197 | 1,007 378 |  |  |  |
| June. | -846 | 149 | 378 359 |  |  |  |
| July. . | 2,510 | 56 36 | $\begin{aligned} & 359 \\ & 143 \end{aligned}$ |  |  |  |
| August... September | 456 144 | 34 | 143.5 |  |  |  |
| The jear. | 17,900 | 34 | 561 | 1.95 | 26.50 | 1.26 |
| October. . . . . . . . | 65 | 35 | 41.1 |  |  |  |
| November. | 520 | 36 | 977.9 |  |  |  |
| December. | 673 | 121 | 277 |  |  |  |
| January. | 2,250 | 165 | 432 |  |  |  |
| February. | 5,530 | 596 |  |  |  |  |
| March. | 3,800 | 457 | 1,033 |  |  |  |
| May. | , 690 | 81 | 271 |  |  |  |
| June | 1,970 | 80 | 491 |  |  |  |
| July. |  | 119 | 526 |  |  |  |
| August.. | $\begin{aligned} & 600 \\ & 182 \end{aligned}$ | $\begin{aligned} & 60 \\ & 51 \end{aligned}$ | $\begin{aligned} & 178 \\ & 74.5 \end{aligned}$ |  |  |  |
| The jear. | 5,530 | 35 | 498 | 1.74 | 23.52 | 1.12 |
| October........... | 446 | 59 | 131 |  |  |  |
| November. | 457 | 76 | 152 |  |  |  |
| December. | 478 | 86 | 213 |  |  |  |
| January. | 270 | 90 | 125 |  |  |  |
| February. | 3,000 | 91 | 569 |  |  |  |
| March... | 2,970 | 503 | - 572 |  |  |  |
| May. | 4,040 | 223 | - 559 |  |  |  |
| June. | 1,950 | 192 | 538 |  |  |  |
| July. | 1,770 | 62 | 299 |  |  |  |
| Auguet. | 1,940 1,250 | 31 78 | $\begin{aligned} & 257 \\ & 308 \end{aligned}$ |  |  |  |
| The year | 4,710 | 31 | 468 | 1.63 | 22.17 | 1.05 |
| October... 1940-41. | 345 | 96 | 132 |  |  |  |
| November. | 980 | 186 | 334 |  |  |  |
| December. | 945 | 321 | 551 |  |  |  |
| January.. | 1,390 | 250 | 521 |  |  |  |
| February. | 600 | 200 | 280 |  |  |  |
| March. | 1. 610 | 170 | 708 |  |  |  |
| April | 2,370 | 156 | 644 |  |  |  |
| May.. | 1,070 | 107 | 237 |  |  |  |
| June. | 3,660 | 111 | 624 |  |  |  |
| July. | 3,730 | 93 | 731 |  |  |  |
| August. | 1,540 | 54 | 261 |  |  |  |
| September. | 530 | 58 | 124 |  |  |  |
| The jear | 3,730 | 54 | 430 | 1.50 | 20.34 | .969 |
| October..... | 150 |  | 75.4 |  |  |  |
| November. | 580 | 62 | 155 |  |  |  |
| December. | 1,520 | 72 | 287 |  |  |  |
| January.. | 700 | 95 | 270 |  |  |  |
| February. | 1,870 | 180 | 532 |  |  |  |
| March.... | 3,110 | 190 | 999 |  |  |  |
| April. | 4,540 3,830 | 212 | 910 |  |  |  |
| May. . | +,830 | 113 | 204 |  |  |  |
| July. | 280 | 37 | 103 |  |  |  |
| August. | 1,780 | 49 | 386 |  |  |  |
| September. | 855 | 100 | 249 |  |  |  |
| The jear. | 4,540 | 37 | 424 | 1.48 | 20.03 | . 957 |

Monthly discharge of North Branch Potomac River at Bloomington, Md. - Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Marimum | M1n2mum | Mean | Per square m11e |  |  |
| $1942-43$ <br> October............................ <br> November. <br> December <br> January. <br> February <br> March. <br> Apr11. <br> May. <br> June <br> July. <br> August. <br> September. . . . . . . . . . . . . . . . . . . . | $\begin{array}{r} 8,220 \\ 1,310 \\ 4,900 \\ 3,060 \\ 2,780 \\ 2,520 \\ 3,210 \\ 837 \\ 429 \\ 989 \\ 1,100 \\ 139 \end{array}$ | $\begin{array}{r} 121 \\ 216 \\ 250 \\ 354 \\ 450 \\ 287 \\ 228 \\ 185 \\ 39 \\ 46 \\ 53 \\ 36 \end{array}$ | $\begin{array}{r} 988 \\ 478 \\ 1,064 \\ 989 \\ 1,074 \\ 800 \\ 770 \\ 382 \\ 119 \\ 307 \\ 190 \\ 61.0 \end{array}$ |  |  |  |
| The year.................... | 3,220 | 36 | 601 | 2.09 | 28.40 | 1.35 |

Yearly discharge of North 8ranch Potomac River at 81 oomingtion, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diacharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Diacharge in second-feet |  | Runofe 1n inchee | Discharge in million gallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per equare mile |  |  |
| 1925.......... | - | - | - | - | 431 | 1.50 | 20.66 | 0.969 |
| 1926.......... | 579 | 2.02 | 27.36 | 1.31 | 621 | 2.16 | 29.36 | 1.40 |
| 1927........... | 661 | 2.30 | 31.24 | 1.49 | - | - | - | - |
| 1930.......... | 361 | I. 26 | 17.07 | .814 | 231 | .805 | 10.91 | . 520 |
| 1931......... | 378 | 1.32 | 17.88 | .853 | 433 | 1.51 | 20.47 | .976 |
| 1932.......... | 486 | 1.69 | 23.04 | 1.09 | 490 | 1.71 | 23.26 | 1.11 |
| 1933......... | 597 | 2.08 | 28.27 | 1.34 | 607 | 2.11 | 28.71 | 1.36 |
| 1934*....... | 370 | 1.29 | 17.49 | . 834 | 369 | 1.29 | 17.50 | . 834 |
| 1935.......... | 552 | 1.92 | 26.11 | 1.24 | 541 | 1.89 | 25.58 | 1.22 |
| 1936........ | 573 | 2.00 | 27.18 | 1.29 | 586 | 2.04 | 27.81 | 1.32 |
| 1937.......... | 589 | 2.05 | 27.85 | 1.32 | 708 | 2.47 | 33.50 | 1.60 |
| 1938......... | 561 | 1.95 | 26.50 | 1.26 | 395 | 1.38 | 18.65 | . 892 |
| 1939......... | 498 | 1.74 | 23.52 | 1.12 | 504 | 1.76 | 23.85 | 1.14 |
| 1940.......... | 468 | 1.63 | 22.17 | 1.05 | 511 | 1.78 | 24.25 | 1.15 |
| 1941.... | 430 | 1.50 | 20.34 | . 969 | 388 | 1.35 | 18.36 | .873 |
| 1942.......... | 424 | 2.48 | 20.03 | .957 | 593 | 2.07 | 28.07 | 2.34 |
| 1943........ | 601 | 2.09 | 28.40 | 1.35 |  |  |  |  |
| Highest.... | 661 | 2.30 | 31.24 | 1.49 | 708 | 2.47 | 33.50 | 1.60 |
| Average... | 508 | 1.77 | 24.03 | 1.14 | 494 | 1.72 | 23.40 | 1.11 |
| Loweet.... | 361 | 1.26 | 17.07 | . 814 | 231 | . 805 | 10.91 | .520 |

North granch Potomac River at Fiedmont, W. Va.
Location - Chain gage, lat. $39^{\circ} 2^{\prime} 41^{\prime \prime}$, Iong. $79^{\circ} 03^{\prime 1} 16^{\pi}$, at highway bridge connecting Luke, Md., with Piedmont, Mineral County, 1.6 miles downstream from Savage River. Drainage area. - 410 equare miles.
Records avaIIable - June 1899 to July 1906.
Extremes.- Maximum daily diecharge, 13, 400 gecond-feet, Feb. 28, 1902; minimum daily,
6 second-feet (regulated), sept. 4, 1904.
Remarks.- Some regulation at low etages by West Virginia pulp a Paper co.

Monthly discharge of North Branch Potomac River at Pledmont, W. Va.

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | DIscharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| June 27-30..... | 595 | 292 | 387 | 0.944 | 0.14 | 0.610 |
| July. . . . | 418 | 95 | 209 | . 510 | . 59 | . 330 |
| August | 350 | 50 | 119 | . 290 | . 33 | . 187 |
| Sept ember. | 540 | 67 | 157 | .383 | . 43 | . 248 |
| 1899-1900 |  |  |  |  |  |  |
| October. | 105 | 67 | 88.4 | .216 | . 25 | . 140 |
| November. | 840 | 105 | 275 | .671 | . 75 | . 434 |
| December | 2,130 | 140 | 421 | 1.03 | 1.19 | . 666 |
| January. | 2,970 | 240 | 838 | 2.04 | 2.35 | 1.32 |
| February | 3,130 | 350 | 1,032 | 2.52 | 2.62 | 1.63 |
| March. | 3,210 | 622 | 1,306 | 3.19 | 3.68 | 2.06 |
| April | 1,660 | 465 | 821 | 2.00 | 2.23 | 1.29 |
| May.. | 875 | 240 | 392 | . 956 | 1.10 | . 618 |
| June | 6,220 | 240 | 802 | 1.96 | 2.19 | 1.27 |
| July. | 1,250 | 116 | 308 | . 751 | . 87 | . 485 |
| August. | 330 | 67 | 136 | . 332 | . 38 | .215 |
| September | 240 | 34 |  | .131 | .15 | . 085 |
| The yeat | 6,220 | 34 | 536 | 2.31 | 17.76 | . 847 |
| October. | 440 | 67 | 143 | .349 | . 40 | . 226 |
| November | 7,090 | 81 | 579 | 1.41 | 1.57 | . 911 |
| December | 2,970 | 310 | 692 | 1.69 | 1.95 | 1.09 |
| January. | 2,900 | 310 | 705 | 1.72 | 1.98 | 1.11 |
| February | 650 | 292 | 407 | . 993 | 1.03 | . 642 |
| March. | 4,910 | 292 | 1,387 | 3.38 | 3.90 | 2.18 |
| Apr 11 | 6,330 | 680 | 2,234 | 5.45 | 6.08 | 3.52 |
| May | 6,220 | 490 | 1,681 | 4.10 | 4.73 | 2.65 |
| June | 1,830 | 395 | 925 | 2.26 | 2.52 | 1.46 |
| July. | 2,260 | 153 | 490 | 1.20 | 1.38 | . 776 |
| August. | 1,830 | 128 | 409 | 1.00 | 1.15 | . 646 |
| Soptember | 359 | 57 | 149 | .363 | . 40 | . 235 |
| The year. | 7,090 | 57 | 818 | 2.00 | 27.09 | 1.29 |
| October. |  |  |  |  |  |  |
| November | 277 | 28 | 73.6 | . 179 | . 20 | .116 |
| December. | 7,540 | 125 | 1,472 | 3.59 | 4.14 | 2.32 |
| January | 2,900 | 242 | 644 | 1.57 | 1.81 | 1.01 |
| February. | 13,400 | 210 | 1,082 | 2.64 | 2.75 | 1.71 |
| March. | 7,430 | 990 | 2,578 | 6.29 | 7.25 | 4.07 |
| Apr11 | 5,200 | 542 | 1,980 | 4.83 | 5.39 | 3.12 |
| May.. | 945 | 248 | 483 | 1.18 | 1.36 | . 763 |
| June | 406 | 100 | 215 | . 524 | - 58 | . 339 |
| July. | 1,600 | 77 | 265 | . 646 | . 74 | . 418 |
| August | 226 | 20 | 85.8 | . 209 | - 24 | . 135 |
| Septembe | 166 | 20 | 40.9 | .100 | . 11 | . 065 |
| The year | 13,400 | 20 | 748 | 1.82 | 24.75 | 1.18 |
| October. | 635 | 100 | 213 |  | . 60 | . 336 |
| November. | 2,460 | 100 | 288 | . 702 | . 78 | . 454 |
| December. | 6,330 | 484 | 1.764 | 4.30 | 4.96 | 2.78 |
| January. | 5,700 | 359 | 1,292 | 3.15 | 3.63 | 2.04 |
| Fobruary. | 9,070 | 635 | 2,223 | 5.42 | 5.64 | 3.50 |
| March.. | 4,530 | 571 | 1,662 | 4.05 | 4.67 | 2.62 |
| April. | 3,380 | 635 | 1,506 | 3.67 | 4.10 | 2.37 |
| May.. | 1,550 | 210 | 580 | 1.41 | 1.63 | . 911 |
| June. | 4,440 | 359 | 1,292 | 3.15 | 3.51 | 2.04 |
| July. | 2,130 | 166 | 570 | 1.39 | 1.60 | . 898 |
| Auguet. | 277 | 77 | 163 | $.3!8$ | . 46 | .257 |
| Soptember. | 210 | 28 | 90.5 | . 221 | . 25 | .143 |
| The year.. | 9,070 | 28 | 962 | 2.35 | 31.83 | 1.52 |

Monthly discharge of North Branch Potomac River at Pledmont, W. Va.--Continued

| Month | Diecharge in aecond-feet |  |  |  | Runoff <br> in <br> Inches | Discharee in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Par square mile |  |  |
| 1903-4 |  |  |  |  |  |  |
| October.. | 180 | 34 | 103 | 0.251 | 0.29 | 0.162 |
| November. | 603 | 57 | 134 | . 327 | . 36 | . 211 |
| December. | 1,280 | 48 | 193 | . 471 | . 54 | . 304 |
| Janusiry. | 4,720 | 110 | 643 | 1.57 | 1.81 | 1.01 |
| February. | 3,630 | 224 | 795 | 1.94 | 2.09 | 1.25 |
| March. | 4,340 | 484 | 1,433 | 3.50 | 4.04 | 2.26 |
| April | 2,200 | 372 | 937 | 2.29 | 2.56 | 1.48 |
| Mey. | 3,210 | 302 | 792 | 1.93 | 2.22 | 1.25 |
| June | 786 | 134 | 392 | . 956 | 1.07 | . 618 |
| July. | 425 | 60 | 160 | . 390 | . 45 | . 252 |
| August. | 99 | 9 | 37.0 | . 090 | . 10 | . 058 |
| September | 30 | 6 | 17.1 | . 042 | . 05 | .027 |
| The year. | 4,720 | 6 | 469 | 1.14 | 15.58 | .737 |
| October...... | 68 | 12 | 27.6 | . 067 | . 08 |  |
| November | 51 | 15 | 33.5 | . 082 | . 09 | $.053$ |
| December. | 1,660 | 15 | 243 | . 593 | . 68 | . 343 |
| Jenuery. | 3,210 | 99 | 360 | . 878 | 1.01 | . 567 |
| Febriary. | 484 | 99 | 232 | . 566 | . 59 | . 366 |
| March. | 7,420 | 282 | 2,484 | 6.06 | 6.99 | 3.82 |
| Aprel | 830 | 161 | 585 | 1.43 | 1.60 | . 924 |
| May. | 1,910 | 191 | 496 | 1.21 | 1.40 | . 782 |
| June | 1,600 | 242 | 588 | 1.43 | 1.60 | . 924 |
| July. | 2,460 | 161 | 653 | 1.59 | 1.83 | 1.03 |
| August. ${ }_{\text {Septembe }}$ | 1,780 | 88 51 | 376 195 | . .9176 | 1.06 .53 | $\begin{aligned} & .593 \\ & .308 \end{aligned}$ |
| The year | 7.420 | 12 | 527 | 1.29 | 17.46 | . 834 |
| October...... | 1,720 | 36 | 348 |  |  |  |
| November. | 1,380 | 148 | 267 | . 651 | . 98 | . 5421 |
| December. | 2,900 | 208 | - 815 | 1.99 | 2.29 |  |
| Jenuery.. | 7,500 | 327 | 1,255 | 3.06 | 3.53 | 1.98 |
| February. | 488 | 88 | ,220 | . 537 | . 56 | . 347 |
| March. | 5,710 | 121 | 1,161 | 2.83 | 3.26 | 1.83 |
| Apri | 4,520 | 700 | 2,013 | 4.91 | 5.48 | 3.17 |
| May. | 740 | 109 | 323 | . 788 | . 91 | . 509 |
| June | 2,080 | 160 | 413 | 1.01 | 1.13 | . 653 |
| July 1-15 | 224 | 70 | 120 | . 293 | . 16 | . 189 |

Yearly discharge of North Branch Potomac River at Pledmont, W. Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff <br> in <br> Inches | Discharge in million gallons per day per aquare mile | Discharge in second-feet |  | Runoff in Inches | Disciare in million Eallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per aquare mile |  |  |
| 1900. | 536 | 1.31 | 17.76 | 0.847 | 592 | 1.44 | 19.49 | 0.931 |
| 1901 | 818 | 2.00 | 27.09 | 1.29 | 831 | 2.03 | 27.69 | 1.31 |
| 1902 | 748 | 1.82 | 24.75 | 1.18 | 804 | 1.96 | 26.57 | 1.27 |
| 1903 | 962 | 2.35 | 31.83 | 1.52 | 806 | 1.97 | 26.68 | 1.27 |
| 1904. | 469 | 1.14 | 15.58 | . 737 | 459 | 1.12 | 15.24 | .724 |
| 1905.. | 527 | 1.29 | 17.46 | . 834 | 622 | 1.52 | 20.61 | . 982 |

## North 8ranch Potomac River at Pinto, Ma

Location. - Water-etage recorder", lat. $399^{\circ} 33^{\prime} 5^{\prime \prime \prime} 7^{\prime \prime}$, long. $788^{\circ} 50^{\prime} 22^{\prime \prime \prime}$, at Weetern Maryland Rallway bridge at P1nto, Allegany County. Datum of gage 1s 648.23 feet above mean sea level (Corpe of Engineers, U. 3 Amm, bench mark). Prior to Dec. 10, 1938, wire-weight gage at highway bridge, 250 feet downetream, present datum.
Drainage area.- 596 equare miles
Records avallable. - October 1938 to September 1943
fxtremes. - Maximum discharge, 45,900 second-feet Oct. 16, 1942 (gage height, 22.87 reet, from rating curve extended above 19,000 second-feet; minimum, 46 second-feet Sept. 30,1943 (gage height, 1.47 feet).

Flood of March 17,1936 reached a stage of about 23.5 feat, from floodmarka, (discharge, 50,000 second-feet); flood of March 29, 1924 reached a etage of about 24 feet (discharge, 55,000 second-feet)
Remarke. - 3ome regulation at low etagee by Stony R1ver Reeervolr (capacity, 1,982,000,000 gallone) about 45 milee above station. Yearly figire published as they are not appreciabiy affected by change in stordge. Recorde of change in storege in stony River Reesrvoir can be obtained from West Virginia Pulp \& Paper Co., Iuke, Ma.

Monthly diecharge of North Branch Potomac River at Pinto, Md


Monthiy diecharze of North Branch Potomac River at Pinto, Md.--Continued


Yearly discharge of North Branch Potomac River at Pinto, Md.

| Year | Year ending sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in eecond-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per square mile |  |  |
| 1939. | 819 | 1.37 | 18.63 | 0.885 | 832 | 1.40 | 18.95 | 0.905 |
| 1940. | 858 | 1.44 | 18.59 | . 931 | 945 | 1.59 | 21.58 | 1.03 |
| 1941. | 761 | 1.28 | 17.34 | . 827 | 673 | 1.13 | 15.33 | . .730 |
| 1942. | . 693 | 1.16 | 15.78 | . 750 | 1,068 | 1.79 | 24.33 | 1.16 |
| 1943. | 1,092 | 1.83 | 24.88 | 1.18 | 1, - | 1.73 | 24.33 | 1.16 |

North Branch Potomac River at Cumberland, Md.
Location.- Staff ago, lat. $39^{\circ} 38^{\prime} 49^{\prime \prime}$, long. $78^{\circ} 45^{\prime} 48^{\prime \prime}$, on abutment of Chesapeake \& Ohio Canal feeder gate, at Cumberland, Allogany County, 1,000 feet downstream from Wills Creek.
Drainage area.- 873 square miles.
Records avaliable. - June 1894 to November 1897.
Extremes - Maxlmum dally diecharge, 24,100 second-feet Feb. 22, 1897. No flow at timee when all water is diverted into Cheoapeake \& Onio.
Remarks. - Records do not include flow in Chesapeske \& Ohio Canal which divert water at the gage. No record of caral flow.

Monthly discharge of North Branch Potomac River at Cumberland, Md.

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mlle |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1894 |  |  |  |  |  |  |
| June 11-30... | 990 | 350 | 632 |  |  |  |
| July... | 235 | 0 | 56.5 |  |  |  |
| August.... | 350 | 0 | 77.5 |  |  |  |
| Sept ember. | 480 | 0 | 63.8 |  |  |  |

Monthly discharge of North Brench Potomec River et Cumberlend, Md.--Continued

| Month | Discherge in second-feot |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | squere mile |  |  |
|  | 235 990 4,000 7,900 4,860 7,900 6,660 1,650 630 1,420 50 0 | 0 0 135 235 630 1,420 480 350 50 7 0 0 | 47.0 323 547 1,669 1,099 3,094 1,810 853 267 348 2.5 0 |  |  |  |
| The year. | 7,800 | 0 | 839 |  |  |  |
| October. November December. Januery February March. April Mey. June. July. August September. | $\begin{array}{r} 0 \\ 0 \\ 480 \\ 2,640 \\ 4,570 \\ 14,600 \\ 4,860 \\ 3,440 \\ 2,380 \\ 22,100 \\ 1,650 \\ 22,100 \end{array}$ | 0 0 0 135 350 235 630 135 480 135 50 0 | $\begin{gathered} 0 \\ 0 \\ 71.3 \\ 357 \\ \mathbf{1}, 426 \\ 2,024 \\ 1,709 \\ \mathbf{1}, 275 \\ 927 \\ 2,224 \\ 568 \\ 916 \end{gathered}$ |  |  |  |
| The yeer. | 22,100 | 0 | 956 |  |  |  |
| October. <br> November. <br> December. <br> Jenuery. <br> February <br> March. <br> April. <br> Mey. <br> June. <br> July. <br> August... <br> September. | $\begin{array}{r} 6,350 \\ 6,350 \\ 1,420 \\ 2,130 \\ 24,100 \\ 7,300 \\ 6,050 \\ 12,800 \\ 235 \\ 480 \\ 990 \\ 480 \end{array}$ | $\begin{array}{r} 135 \\ 350 \\ 350 \\ 480 \\ 800 \\ 1,200 \\ 135 \\ 135 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}$ | 820 1,073 627 801 3,770 2,704 1,554 2,156 103 132 215 55.6 |  |  |  |
| The jeer.. | 24,100 | 0 | 1,151 |  |  |  |
| october.......... <br> November 1-20. | $2,130^{7}$ | 0 50 | $572^{.45}$ |  |  |  |

Yearly discharge of North Branch Potomac River at Cumberland, Md.

| Year | Yeer ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in second-feet |  | Runoff in inches | Discharge in million gallone per dey per squere mile | Diacherge in second-feet |  | Runoff in <br> inches | Discharge in million gellons per day per square mile |
|  | Mean | Per squere mile |  |  | Meen | Per squere mile |  |  |
| 1895. 1896. 1897 | $\begin{array}{r} 839 \\ 956 \\ 1,151 \end{array}$ |  |  |  | 768 1,162 |  |  |  |

## North Branch Potomac River near Cumberland, Md.

Location. - Water-atage recorder, lat. $39^{\circ} 37116^{\prime \prime}$, long. $78^{\circ} 45^{\prime \prime} 4^{\prime \prime}$, at W1leys Ford Bridge, 2 miles south of Cumberland, Allegany County, and 2.1 miles downstream from Wills Creek. Datum of gage is 585.22 faet above mean sea level (Corps of Engineers, U. S. Army, bench mark). Prior to June 18, 1929 chain gage at sama sita and datum.
Drainaze area.- 875 square miles.
Focoris available.- May 1929 to September 1943
Extremes.- Maximum discharee, 88,200 socond-feet Mar. 17, 1936 (gace height 29.1 feet), by slope-area determination; minimum (river oniy), 12 second-feet Sept. 22, 1932; minimum dally (including flow in canal), 38 second-feet Sept. 24, 1932. Maximum stage known, 29.2 fart June 1, 1889 (discharge, ahout 89,000 sacond-feet).
Remarks.- Records do not include flow past gage in Chesapeake \& Ohio Canal (see page 117) but prior to Nov. 15, 1935 do include small amount of sewage and industrial wastes from Cumberland which obtains its water from Evitts Creek, mouth of which is below station. Flow in Chesapeake \& Ohio Canal negligible after Septembar 1934. Some regulation at low stajes by Stony River Reservoir. Recorda of changa in storage can be obtained from West Virginia Pulp \& Paper Co., Luke, Md. Information remardIng the amount of inflow from sewaga may ba obtained from office of Chiaf fingineer, Maryland State Department of Health, Baltimore.

Monthly discharce of North Branch Potomac RIvar near Cumberland, Md.

| Month | Discharge in second-feet |  |  |  | $\left.\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered} \right\rvert\,$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max1mum | Minimum | Mean | Per square mile |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| October.......................... |  |  |  |  |  |  |
| November . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 5,010 | 70 584 | 1,130 |  |  |  |
|  | 4,730 | - | 1, 1,440 |  |  |  |
| January. <br> February | 1,910 | - | 1,822 |  |  |  |
| February March... | - | - | 1,050 |  |  |  |
|  | 2,550 | 770 | 1,520 |  |  |  |
|  | 2,370 | 695 | 1,240 |  |  |  |
|  | 962 | 169 | - 460 |  |  |  |
|  | 2,060 | 120 | 341 |  |  |  |
| July. | 148 | 45 | 89.7 |  |  |  |
| August | 123 | 28 | 57.7 |  |  |  |
| Septamber. <br> The year | 88 | 32 | 51.1 |  |  |  |
|  | - | 28 | 799 |  |  |  |
| Octobar. . 1930-31 |  |  |  |  |  |  |
| Octobar. . . . . . . . . . | 39 54 | 23 38 | 28.9 |  |  |  |
| Dacember. | 356 | 44 | 1344 |  |  |  |
| January. | 2,190 | 90 | 406 |  |  |  |
| February | 2,330 | 229 | 837 |  |  |  |
|  | 5,750 | 430 | 1,380 |  |  |  |
| April | 6,190 | 716 | 2,500 |  |  |  |
| May.. | 11,000 | 950 | 3,290 |  |  |  |
|  | 1,700 | 180 | 637 |  |  |  |
| July.... | 1,700 | 78 | 376 |  |  |  |
| August... <br> September | 1,010 | 70 | 280 |  |  |  |
|  | 2,040 | 60 | 311 |  |  |  |
| The yea | 11,000 | 23 | 852 |  |  |  |
| October............. |  |  |  |  |  |  |
| Oc tober. . . . . . . . . . . <br> November . . . . . . . . . . | 381 | 86 | 154 |  |  |  |
| November <br> December | 3,470 | 180 | 955 |  |  |  |
| Januery | 4,430 | 473 | 1,310 |  |  |  |
| February | 11,300 | 511 | 1,830 |  |  |  |
| March... | 8,930 | 420 | 2,410 |  |  |  |
| April. | 12,000 | 578 | 2,160 |  |  |  |
| May.. | 18,400 | 420 | 2,860 |  |  |  |
| June | 1,530 | 152 | 394 |  |  |  |
| July.: | 1,790 | 73 | 346 |  |  |  |
| August... | - 398 | 59 | 122 |  |  |  |
|  | 85 | 13 | 40.3 |  |  |  |
| Tha 9 | 18,400 | 13 | 1,060 |  |  |  |

Monthly diecharga of North Branch Potomac River near Cumberland, Md.--Continuad

| Month | Discharga in second-faet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharya in million gallons per day per aquare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Maan | Par squara mila |  |  |
| 1932-33 |  |  |  |  |  |  |
| Octobar. | 2,170 | 32 | 339 |  |  |  |
| Novambar | 4,710 | 256 | 1,130 |  |  |  |
| Decamber | 2,200 | 157 | -680 |  |  |  |
| January. | 3,600 | 613 | 1,200 |  |  |  |
| Fabruary. | 3,140 | 1,1.50 | 1,670 |  |  |  |
| March..- | 17,300 | 895 | 4,060 |  |  |  |
| April. | 15,700 | 1,430 | 4,060 |  |  |  |
| May. | 9,160 | 842 | 3,080 |  |  |  |
| Juna. | 958 | 125 | 386 |  |  |  |
| July. | 3,922 | $81$ | $\begin{aligned} & 191 \\ & 461 \end{aligned}$ |  |  |  |
| August... Saptambar | 3,920 | $\begin{array}{r} 68 \\ 180 \end{array}$ | $\begin{aligned} & 461 \\ & 563 \end{aligned}$ |  |  |  |
| Tha yaar. | 17,300 | 32 | 1,480 |  |  |  |
| October | 300 | 79 | 140 |  |  |  |
| November. | 800 | 96 | 344 |  |  |  |
| Dacamber. | 4,290 | 188 | 929 |  |  |  |
| January. | 11,000 | 574 | 2,130 |  |  |  |
| February. | 859 | 184 | 393 |  |  |  |
| March. | 4,990 | 200 | 1,660 |  |  |  |
| April | 6,040 | 581 | $\begin{array}{r} 1,810 \\ 374 \end{array}$ |  |  |  |
| May.. | 530 2,270 | 255 135 | $\begin{aligned} & 374 \\ & 347 \end{aligned}$ |  |  |  |
| Juna. | 2,588 | 79 | 171 |  |  |  |
| August. | 3,870 | 122 | 392 |  |  |  |
| Septembar | 3,080 | 94 | 402 |  |  |  |
| The year. | 11,000 | 79 | 760 |  |  |  |
| October....... | 1,600 | 172 | 350 | 0.400 | 0.46 | 0.259 |
| Novambar | 3,230 | 227 | 714 | . 816 | . 91 | . 527 |
| Dacembar. | 3,890 | 462 | 1,237 | 1. 42 | 1.63 | . 911 |
| January. | 10,600 | 799 | 2,403 | 2.75 | 3.17 | 1.78 |
| Fabruary. | 7,910 | 735 | 2,287 | 2.61 | 2.72 | 1.69 |
| March. | 3,750 | 1,180 | 2,103 | 2.40 | 2.77 | 1.55 |
| April. | 7,100 | 791 | 2,335 | 2.67 | 2.98 | 1.73 |
| May.. | 6,700 | 621 | 2,184 | 2.50 | 2.88 | 1.62 |
| June. | 1,400 | 340 | 686 456 | . 784 | . 87 | . .307 |
| July. | 1,970 | 188 | 616 | . .721 | . 81 | . 455 |
| Saptamber | 7,350 | 1.89 | 966 | 1.10 | 1. 23 | . 711 |
| The jear. | 10,600 | 172 | 1,356 | 1.55 | 21.03 | 1.00 |
| October........... | 437 | 150 | 210 | . 240 | . 28 | . 155 |
| Novembar | 1,750 | 200 | 652 | . 631 | . 70 | . 408 |
| Dacamber | 3,620 | 243 | 999 | 1.14 | 1.32 | . 737 |
| January.. | 6,940 | 521 | 2,036 | 2.33 | 2.68 | 1.51 |
| February. | 15,300 | 501 | 2,340 | 2.67 | 2.88 | 1.73 |
| March. | 47,400 | 2,980 | 8,763 | 10.01 | 11.55 | 6.47 |
| April. | 9,100 | 700 | 2,633 | 3.01 | 3.36 | 1.95 |
| May. | . 764 | 242 | 489 | . 559 | . 64 | . 361 |
| June | 1,110 | 104 | 285 | . 326 | . 36 | .211 |
| JuIy. | 1,310 | 52 | 210 | . 240 | - 28 | . 155 |
| August. | 623 | 111 | 184 | . 210 | . 24 | .136 |
| Saptambar. | 175 | 70 | 98.4 | . 112 | . 13 | . 072 |
| The yaar. | 47,400 | 52 | 1,570 | 1.79 | 24.42 | 1.16 |
| Octobar........... | 4,720 | 89 | 535 | . 611 | . 70 | . 395 |
| November. | 2,800 | 1.82 | 511 | . 584 | . 65 | . 377 |
| Decambar. | 3,750 | 145 | 1,393 | 1.59 | 1.84 | 1.03 |
| January.. | 15,300 | 2,070 | 5,115 | 5.85 | 6.74 | 3.78 |
| Fabruary. | 6,140 | 1,110 | 2,243 | 2.56 | 2.67 | 1.65 |
| March. . . | 8,250 | 820 | 1,916 | 2.19 | 2.53 | 1.42 |
| Apr11.. | 41,500 | 836 | 3,901 | 4.46 | 4.97 | 2.88 |
| May..... | 3,360 | 700 | 1,553 | 1.77 | 2.05 | 1.14 |
| June. | 1,020 | 302 | 598 | . 683 | . 76 | . 441 |
| July. | 5 441 | 109 | $216$ | $.247$ | . 28 | . 160 |
| Auguat...... | 5,580 1,090 | 91 116 | $\begin{aligned} & 605 \\ & 335 \end{aligned}$ | $\begin{array}{r} .691 \\ .383 \end{array}$ | .80 .43 | .447 .248 |
| Saptamber. | 1,090 | 116 | 335 | . 383 | - 43 | . 248 |
| The yaar. | 41,500 | 89 | 1,574 | 1.80 | 24.42 | 1.16 |

Monthly discharga of North 8ranch Potomac River near Cumbarland, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million Eallons per day per Aquare mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Moan | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { m11e } \end{aligned}$ |  |  |
| 1937-38 |  |  |  |  |  |  |
| October | 36,800 | 124 | 3,111 | 3.56 | 4.10 | 2.30 |
| November. | 2,920 | 435 | 1,026 | 1.17 | 1.31 | . 756 |
| December | 5,610 | 284 | 1,249 | 1.43 | 1.65 | . 924 |
| January. | 3,370 | 435 | 1,050 | 1. 20 | 1. 38 | . 776 |
| Fobruary. | 3,490 | 788 | 1,410 | 1.61 | 1.68 | 1.04 |
| March. . | 6,000 | 716 | 1,910 | 2.18 | 2.52 | 1.41 |
| April | 2,120 | 740 | 1,345 | 1.54 | 1.71 | . 995 |
| May. | 6,780 | 418 | 1,872 | 2.14 | 2.47 | 1.38 |
| June. | 1,240 | 345 | 655 | . 749 | . 83 | . 484 |
| July. | 4,590 | 151 | 590 | . 674 | . 78 | .436 |
| Auguet. | 581 | 79 | 233 | . 266 | .31 | .172 |
| Saptember | 216 | 77 | 128 | .146 | .16 |  |
| The year | 36,800 | 77 | 1,218 | 1.39 | 18.90 | . 898 |
|  |  |  |  |  |  |  |
| October.. | 116 | 90 | 95.9 | . 110 | . 13 | . 071 |
| November. | 530 | 96 | 163 | . 186 | . 21 | . 120 |
| Decomber. | 872 | 136 | 379 | . 433 | . 50 | . 280 |
| January. | 4,940 | 221 | 777 | . 888 | 1.02 | . 574 |
| February | 14,500 | 1,190 | 3,813 | 4.36 | 4.54 | 2.82 |
| March.... | 9,080 | 758 | 2,387 | 2.73 | 3.14 | 1.76 |
| April | 12,700 | 1,340 | 2,784 | 3.18 | 3.55 | 2.06 |
| May.. | 2,340 | 297 | 828 | . 946 | 1.09 | . 611 |
| Juno | 3,500 | 266 | 926 | 1.06 | 1.18 | . 685 |
| July. | 2,980 | 292 | 989 | 1.13 | 1.30 | .730 |
| August.. | 992 266 | 108 | 327 137 | .374 .157 | - $\begin{array}{r}.43 \\ .17\end{array}$ | .242 .101 |
| Tha yex | 14,500 | 90 | 1,113 | 1.27 | 17.26 | . 821 |
| October............ | 747 | 116 | 227 | . 259 | . 30 | . 167 |
| November. | 705 | 164 | 298 | . 341 | . 38 | . 220 |
| Decembar. | 674 | 168 | 365 | . 417 | . 48 | . 270 |
| January. | 639 | 182 | 269 | . 307 | . 35 | . 198 |
| Fabruary | 4,910 | 197 | 1,373 | 1.57 | 1.69 | 1.01 |
| March. | 8,130 | 709 | 2,702 | 3.09 | 3.56 | 2.00 |
| April | 14,600 | 1,340 | 4,379 | 5.00 | 5.58 | 3.23 |
| May. | 8,260 | 548 | 1,287 | 1.47 | 1.70 | . 950 |
| June | 6,540 | 512 | 1,477 | 1.69 | 1.88 | 1.09 |
| July.. | 2,980 | 168 | 591 | . 675 | . 78 | . 436 |
| August. | 4,420 | 101 | 556 | . 635 | . 73 | . 410 |
| September | 2,920 | 164 | 652 | . 745 | . 83 | . 482 |
| Tha yaar | 14,600 | 101 | 1,175 | 1.34 | 18.26 | . 866 |
| October. | 406 | 186 | 249 | . 285 | . 33 | . 184 |
| Novamber | 2,080 | 434 | 771 | . 881 | . 98 | . 569 |
| Dacambar | 2,720 | 826 | 1,559 | 1.78 | 2.05 | 1.15 |
| January | 2,840 | 558 | 1,207 | 1.38 | 1.59 | . 882 |
| February. | 1,530 | 540 | - 770 | . 880 | . 92 | . 569 |
| March. | 4,470 | 492 | 1,928 | 2.20 | 2.54 | 1.42 |
| April. | 8,990 | 462 | 1,985 | 2.27 | 2.53 | 1.47 |
| May. | 1,880 | 305 | . 512 | . 585 | . 67 | . 378 |
| June | 13,800 | 320 | 1.093 | 2.28 | 2.54 | 1.47 |
| July. | 7,810 | 268 | 1,426 | 1.63 | 1.88 | 1.05 |
| August. | 1,950 | 142 | 434 | . 496 | . 57 | . 321 |
| Saptambar | 618 | 114 | 203 | . 232 | . 26 | . 150 |
| The yaar. | 13,800 | 114 | 1,087 | 1.24 | 16.86 | . 801 |
|  |  |  |  |  |  |  |
| November. | 1868 | 125 | $\begin{aligned} & 133 \\ & 251 \end{aligned}$ | $\begin{aligned} & .152 \\ & .287 \end{aligned}$ | $\begin{array}{r} 18 \\ .32 \end{array}$ | $\begin{array}{r} .098 \\ .185 \end{array}$ |
| December. | 3,200 | 142 | 513 | . 586 | . 68 | . 379 |
| January. | 1,520 | 270 | 562 | . 642 | . 74 | . 415 |
| February. | 3,610 | 385 | 1,212 | 1.39 | 1.44 | . 898 |
| March. | 7,770 | 468 | 2,336 | 2.67 | 3.08 | 1.73 |
| Apr11. | 14,200 | 540 | 2,381 | 2.72 | 3.04 | 1.76 |
| May.. | 9,160 | 462 | 2,526 | 2.89 | 3.33 | 1.87 |
| June. | 1,080 | 340 | 591 | . 675 | . 75 | . 436 |
| July. | . 700 | 142 | 266 | . 304 | . 35 | - 196 |
| August | 2,200 | 154 | 624 | . 713 | . 82 | . 461 |
| September. | 1,730 | 203 | 450 | . 514 | . 57 | . 332 |
| The year.. | 14,200 | 103 | 986 | 1.13 | 15.30 | . 730 |

Monthly discharge of North Branch Potomac River near Cumberland, Md.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge In million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Per square mile |  |  |
| October......... | 37,600 | 242 | 3,791 | 4.33 | 4.99 | 2.80 |
| November. | 2,340 | 539 | 984 | 1.12 | 1.25 | . 724 |
| December. | 19,200 | 491 | 2,863 | 3.27 | 3.77 | . 11 |
| January.. | 7,810 | 889 | 2,509 | 2.87 | 3.31 | 1.85 |
| February. | 8,580 | 1,300 | 2,832 | 3.24 | 3.37 | 2.09 |
| March.... | 6,390 | 743 | 2,159 | 2.47 | 2.84 | 1.60 |
| April. | 12,400 | 610 | 2,227 | 2.55 | 2.84 | 1.65 |
| May... | 2,880 | 624 | 1,282 | 1.47 | 1.69 | . 850 |
| June. | 1,450 | 146 | 402 | . 459 | . 51 | . 297 |
| July... | 1.410 | 140 | 260 | . 297 | . 34 | . 192 |
| August. | 196 | 69 | 108 | . 123 | . .34 |  |
| The jear | 37,600 | 69 | 1,652 | 1.85 | 25.62 | 1.22 |

Yearly discharge of North Branch Potomac River near Cumberland, Md.


Potomac River at Paw Paw, W. Va
Location. - Water-stage recorder, lat $39^{\circ} 32^{\prime 1} 13^{\prime \prime}$, long. $78^{\circ} 27^{\prime 2} 8^{\prime \prime}$, on Maryland side of river, 250 feet upatream from highway bridee at Paw Paw, Morean County, and 3.3 miles downstream from Little cacapon River. Datum of gage is 487.88 feet above mean sea level (Corps of Engineers, U. S. Army, bench mark). Prior to Mar. 25, 1939 wire-wefght gage on highway tridue at same datum.
Drainage area.-3,109 square miles.
Recoras available:- October 1938 to September 1943.
Fxtremes.- Maxlmum discharge, 111,000 second-feet Oct. 16, 1942 (rage height, 38.36 feet); minimum, 238 second-feet Oct. 13, 1941 (gage helght 3.05 feet).

Maximun stece known, 54.0 feet Mar. 18, 1936 (discharge, 240,000 second-feet).

Monthly discharge of Potomac River at Paw Paw, W. Va

| Month | Diecharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Dlecharge in million gallone per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m 11 l |  |  |
| 1938-39 |  |  |  |  |  |  |
| October | 353 | 271 | 302 | 0.097 | 0.11 | 0.063 |
| November | 860 | 310 | 491 | . 158 | . 18 | . 102 |
| December. | 5,490 | 565 | 1,602 | . 515 | . 59 | . 333 |
| January. | 27,200 | 755 | 2,923 | . 940 | 1.08 | . 608 |
| February. | 58,200 | 3,180 | 11,440 | 3.68 | 3.83 | 2.38 |
| March. | 26,400 | 2,260 | 6,585 | 2.12 | 2.44 | 1.37 |
| April | 35,300 | 3,010 | 6,956 | 2.24 | 2.50 | 1.45 |
| May. | 5,030 | 1,390 | 2,404 | . 773 | . 89 | . 500 |
| June. | 4,980 | 804 | 1,957 | . 597 | . 67 | . 386 |
| July. | 11,400 | 642 | 3,068 | . 987 | 1.14 | . 638 |
| August. | 5,040 | 504 | 1,300 | . 418 | . 48 | . 270 |
| September | 746 | 274 | 416 | . 134 | . 15 | . 087 |
| The year. | 58,200 | 271 | 3,221 | 1.04 | 14.06 | . 672 |
| October | 2,560 |  |  |  |  |  |
| November | 1,760 | 521 | 887 | . 285 | . 32 | .148 |
| December | 1,570 | 533 | 838 | . 270 | . 31 | . 175 |
| January. | 1,900 | 520 | 805 | . 259 | . 30 | . 167 |
| February | 11,600 | 600 | 3,740 | 1.20 | 1.29 | .776 |
| March. | 15,600 | 2,570 | 5,545 | 1.78 | 2.05 | 1.15 |
| Apr 11 | 39,500 | 4,180 | 10,930 | 3.52 | 3.93 | 2.28 |
| May . . | 17,600 | 1,480 | 3,360 | 1.08 | 1.24 | . 698 |
| June | 37,600 | 1,660 | 6,597 | 2.12 | 2.36 | 1.37 |
| July. | 4,940 | 533 | 1,351 | . 435 | . 50 | . 281 |
| August. | 7,460 | 346 | 1,430 | . 460 | . 53 | . 297 |
| Septembe | 4,570 | 445 | 1,525 | . 491 | . 55 | .317 |
| The year | 39,500 | 346 | 3,120 | 1.00 | 13.64 | . 646 |
| October. . . . . . . . | 883 | 434 | 581 | . 187 | . 22 |  |
| November | 4,180 | 890 | 1,833 | . 590 | . 66 | . 381 |
| December | 6,500 | 1,860 | 3,405 | 1.10 | 1.26 | . 712 |
| January | 5,780 | 1,610 | 3,042 | . 978 | 1.13 | . 632 |
| February | 2,790 | 1,290 | 1,810 | . 582 | . 61 | . 376 |
| March. | 8,400 | 1,010 | 4,304 | 1.38 | 1.60 | . 892 |
| April | 25,400 | 1,240 | 4,813 | 1.55 | 1.73 | 1.00 |
| May | 2,520 | 631 | 1,074 | . 345 | . 40 | . 223 |
| June | 25,700 | 637 | 3,456 | 1.11 | 1.24 | . 717 |
| July. | 14,400 | 619 | 2,902 | . 933 | 1.08 | . 603 |
| August. | 2,570 | 295 | 900 | . 289 | . 33 | .187 |
| September | 976 | 256 | 486 | . 156 | . 17 | . 101 |
| The year | 25,700 | 256 | 2,386 | . 767 | 10.43 | . 496 |
| October. | 329 |  | 276 | . 089 | . 10 | . 058 |
| November. | 1,140 | 295 | 478 | . 154 | .17 | . 100 |
| December. | 4,960 | 375 | 1,055 | . 339 | . 39 | . 219 |
| January.. | 2,890 | 800 | 1,291 | . 415 | . 48 | . 268 |
| February. | 6,520 | 950 | 2,472 | . 795 | . 83 | . 514 |
| March. | 17,300 | 1,060 | 5,252 | 1.69 | 1.95 | 1.09 |
| April | 19,800 | 1,300 | 4,805 | 1.55 | 1.72 | 1.00 |
| May. | 47,300 | 1,100 | 7,166* | 2.30 | 2.66 | 1.49 |
| June | 3,850 | 1,020 | 2,060 | . 663 | . 74 | . 429 |
| July. | 1,140 | 362 | 603 | . 134 | . 22 | . 125 |
| August. | 6,580 | 401 | 2,612 | . 840 | . 97 | . 543 |
| September. | 2,720 | 578 | 1,090 | . 351 | . 39 | . 227 |
| The yoar. | 47,300 | 241 | 2,433 | . 783 | 10.62 | .506 |
| October..... |  |  |  |  |  |  |
| November. | 104,900 | 1,260 | 8,962 2,317 | 2.88 .745 | 3.32 | $1.86$ |
| December. | 47,200 | 1,220 | 7,079 | 2.28 | 2.63 | 1.47 |
| January.. | 20,000 | 2,340 | 6,230 | 2.00 | 2.31 | 1.29 |
| February. | 26,400 | 3,250 | 8,080 | 2.60 | 2.71 | 1.68 |
| March. | 17,200 | 1,950 | 6,604 | 2.12 | 2.45 | 1.37 |
| April | 26,600 | 1,820 | 5,594 | 1.80 | 2.01 | 1.16 |
| May. | 7,500 | 1,820 | 3,627 | 1.17 | 1.35 | -.756 |
| June | 3,370 | 590 | 1,329 | . 427 | . 48 | . 276 |
| July. | 5,330 | 523 | 1,673 | . 538 | . 62 | . 348 |
| August. | 1,380 | 341 | - 596 | . 192 | . 22 | . 124 |
| September. | 492 | 244 | 308 | . 099 | . 11 | . 064 |
| The year. | 104,000 | 244 | 4,358 | 1.40 | 19.04 | .905 |

Yearly discharge of Potomac River at Paw Paw, W. Va.

| Year | Year snding Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Punoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallone per day per square mile | Dlecharge in second-feet |  | Runoff <br> in <br> inches | Di scharge in million gallons per day per square mile |
|  | Mean | Per square m11e |  |  | Mean | Per equare mile |  |  |
| 1939. | 3,221 | 1.04 | 14.06 | 0.672 | 3,223 | 1.04 | 14.07 | 0.672 |
| 1940. | 3,120 | 1.00 | 13.64 | . 646 | 3,404 | 1.09 | 14.89 | . 704 |
| 1941. | 2,386 | . 767 | 10.43 | . 496 | 2,049 | . 659 | 8.95 | . 426 |
| 1942. | 2,433 | . 783 | 10.62 | . 506 | 3,834 | 1.23 | 16.74 | . 795 |
| 1943 | 4,358 | 1.40 | 19.04 | .805 | - | - | - |  |

Potomac River at Hancock, Md.
Location. - Water-stage recorder, lat. $39^{\circ} 41^{\prime \prime} 49^{m}$, long. $78^{\circ} 10^{\prime \prime} 39^{m}$, at Hancock, Washington County, 1.1 miles upstream from Great Tonoloway Creek. Datum of gage is 383.46 feet above mean sea level, adjustment of 1912. Prior to Jan. 5, 1935 and from Mar. 22, 1936 to Jan. 21, $1: 37$ wire-weight or chain gage, present site and datum.
Drainage area. - 4.073 square $m 11$ es
Records avallable.- october 1932 to September 1943.
Extremes.- Maximum discharge, 340,000 second-feet Mar. 18, 1936 (gace helght, 47.6 feet, by slope-area determination; minimum observed, 180 second-feet oct. 4, 1932 (gage height, 2.01 feet).

Maximum stage known prior to 1932, about 40 feet in May 1889 (discharge about 220,000 second-feet).
Remarks.- Slight regulation at low stages from power plants above station.
Monthly discharge of Potomac River at Hancock, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1932-33 |  |  |  |  |  |  |
| October | 11,000 | 184 | 1,530 | 0.376 | 0.43 | 0.243 |
| November | 19,300 | 1,320 | 4,880 | 1.20 | 1.34 | . 776 |
| December | 9,730 | 700 | 2,350 | . 577 | . 67 | .373 |
| January | 23,300 | 1,710 | 4,740 | 1.16 | 1.34 | . 750 |
| February | 7,050 | 3,380 | 4,770 | 1.17 | 1.22 | . 756 |
| March. | 33,300 | 2,620 | 11,100 | 2.73 | 3.15 | 1.76 |
| April | 54,000 | 4,780 | 14,100 | 3.46 | 3.86 | 2.24 |
| May. | 25,200 | 3,540 | 10,400 | 2.55 | 2.94 | 1.65 |
| June. | 3,710 | 612 | 1,520 | . 373 | . 42 | . 241 |
| July. | 4,410 | 472 | 1,040 | . 255 | . 29 | . 165 |
| August. | 29,700 | 612 | 2,860 | . 702 | . 81 | . 454 |
| September | 6,610 | 890 | 2,390 | .587 | . 65 | .379 |
| The year. | 54,000 | 184 | 5,130 | 1.26 | 17.12 | . 814 |
| October. | 825 |  |  |  |  |  |
| November | 1,320 | 480 | 825 | . 203 | . 23 | . 131 |
| December. | 6,390 | 660 | 1,830 | . 449 | . 52 | . 290 |
| January. | 24,800 | 1,100 | 4,920 | 1.21 | 1.40 | . 782 |
| February. | 1,600 | 700 | 1,040 | . 255 | . 27 | . 165 |
| March. | 16,700 | 700 | 5,310 | 1.30 | 1.50 | . 840 |
| April | 12,700 | 1,830 | 5,060 | 1.24 | 1.38 | . 801 |
| May. | 2,480 | 1,110 | 1,530 | . 376 | . 43 | .243 |
| June | 4,590 | 480 | 1,050 | . 260 | . 29 | . 168 |
| July | 5 915 | 285 | 450 | .113 | . 13 | . 073 |
| August. | 5,760 | 365 | 894 | .219 | . 25 | . 142 |
| Soptember | 7,280 | 305 | 1,260 | . 309 | . 34 | . 200 |
| The year | 24,800 | 285 | 2,070 | . 508 | 6.91 | . 328 |
| October............ | 4,590 | 450 |  |  | . 30 | . 169 |
| November. | 5,360 | 515 | 1,317 | . 323 | . 36 | . 209 |
| December. | 22,700 | 1,260 | 4,477 | 1.10 | 1.27 | . 711 |
| January. | 33,700 | 2,020 | 6,645 | 1.63 | 1.88 | 1.05 |
| February. | 26,100 | 3,540 | 9,072 | 2.23 | 2.32 | 1.44 |
| March. | 16,700 | 3,540 | 6,579 | 1.62 | 1.87 | 1.05 |
| April. | 27,700 | 2,480 | 10,028 | 2.46 | 2.74 | 1.59 |
| May. | 18,700 | 2,020 | 5,966 | 1.46 | 1.68 | . 944 |
| June | 3,060 | 1,000 | 1,730 | . 425 | . 47 | . 275 |
| July. | 2,910 | 652 | 1,313 | . 322 | . 37 | . 208 |
| Aisgust. | 4,590 | 620 | 1,846 | . 453 | . 52 | . 293 |
| September | 18,000 | 606 | 3,019 | . 741 | . 83 | . 479 |
| The year. | 33,700 | 450 | 4,388 | 1.08 | 14.61 | . 698 |

Monthly discharge of Potomac River at Hancock, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mila |  |  |
| 1935-36 |  |  |  |  |  |  |
| October. |  | 450 |  | 0.135 | 0.16 | 0.087 |
| November | 7,740 | 599 | 2,224 | . 546 | . 61 | . 353 |
| December. | 9,470 | 1,060 | 2,863 | . 703 | . 81 | . 454 |
| January. | 24,500 | 1,700 | 8,597 | 2.11 | 2.43 | 1.56 |
| February | 51,600 | 2,100 | 9,324 | 2.29 | 2.47 | 1.48 |
| March.. | 261,000 | 9,990 | 32,280 | 7.93 | $9 \cdot 14$ | 5.13 |
| April | 30,200 | 2,570 | 8,916 | 2.19 | 2.44 | 1.42 |
| May. | 2,440 | 1,060 | 1,778 | . 437 | . 50 | . 282 |
| June | 3,920 | 648 | 1,203 | . 295 | . 33 | . 191 |
| July. | 2,060 | 457 | 915 | . 225 | . 26 | . 145 |
| August | 1,060 | 431 | 627 | . 154 | . 18 | . 100 |
| September |  | 258 | 368 | . 090 | . 10 | . 058 |
| The year | 261,000 | 258 | 5,813 | 1.43 | 19.43 | . 924 |
| October. | 15,600 | 347 | 1,729 | . 425 | . 49 | .275 |
| November | 4,520 | 627 | 1,181 | . 290 | . 32 | . 187 |
| December | 11,400 | 579 | 4,476 | 1.10 | 1.27 | . 711 |
| January | 46,300 | 6,410 | 15,450 | 3.79 | 4.37 | 2.45 |
| February | 24,500 | 4,070 | 8,954 | 2.20 | 2.29 | 1.42 |
| March. | 18,200 | 2,630 | 5,258 | 1.29 | 1.49 | . 834 |
| Apri1 | 134,000 | 2,280 | 13, 430 | 3.30 | 3.68 | 2.13 |
| May. | 14,100 | 2,090 | 4,730 | 1.16 | 1.34 | . 750 |
| June | 2,780 | 1,060 | 1,666 | . 409 | . 46 | . 264 |
| July | 1.450 | 401 | 800 | . 196 | . 23 | . 127 |
| August | 31,400 | 342 | 3,075 | . 755 | . 87 | . 488 |
| September | 7,280 | 533 | 1,960 | -431 | . 54 | .311 |
| The year | 134,000 | 342 | 5,202 | 1.28 | 17.35 | .827 |
| October........ | 115,000 | 527 | 10,950 | 2.69 | 3.10 | 1.74 |
| November | 13,200 | 1,500 | 3,700 | . 908 | 1.01 | . 587 |
| December | 10,400 | 1,150 | 2,857 | . 701 | . 81 | . 453 |
| January | 13,300 | 1,400 | 3,126 | . 767 | . 88 | . 496 |
| February | 7,730 | 2,280 | 3,622 | . 889 | . 93 | . 575 |
| March. | 13,600 | 2,420 | 4,747 | 1.17 | 1.35 | . 756 |
| Aprl1 | 5,780 | 2,020 | 3,421 | . 840 | . 94 | .543 |
| May. | 14,700 | 1,340 | 4,991 | 1.23 | 1.42 | . 795 |
| June | 4,250 | 1,080 | 2,267 | . 557 | . 62 | .360 |
| July. | 9,080 | 600 | 1,948 | . 478 | . 55 | . 309 |
| August. | 3,000 | 374 | 1,179 | . 289 | . 33 | . 187 |
| September | 882 | 342 | 516 | .127 | . 14 | . 082 |
| The year | 115,000 | 342 | 3,623 | . 890 | 12.08 | . 575 |
| Oc tober | 435 | 326 | 374 | . 092 | . 11 | . 060 |
| November | 972 | 368 | 589 | . 145 | . 16 | . 094 |
| December. | 12,600 | 662 | 2,303 | . 565 | . 65 | . 365 |
| Jamuary. | 28,900 | 1,080 | 3,107 | . 763 | . 88 | . 493 |
| February | 62,800 | 3,840 | 14,270 | 3.50 | 3.64 | 2.26 |
| March. | 31,400 | 2,640 | 8,208 | 2.02 | 2.33 | 1.31 |
| April. | 37,800 | 3,440 | 8,401 | 2.06 | 2.30 | 1.33 |
| May. | 6,620 | 1,760 | 2,961 | . 727 | . 84 | . 470 |
| June | 5,550 | 1,010 | 2,168 | . 532 | . 59 | . 344 |
| July. | 13,800 | 790 | 3,465 | . 851 | . 98 | . 550 |
| August. | 7,670 | 638 | 1,760 | - 432 | . 50 | . 27 ¢ |
| September. | 1,000 | 336 | 537 | . 132 | .15 | . 085 |
| The year | 62,800 | 326 | 3,940 | . 967 | 13.13 | . 625 |
| Octaber. . . . . . . . ${ }^{\text {a }}$. |  |  |  |  |  |  |
| November. | 3,140 | 766 | 1,351 | . 332 | . 37 | .215 |
| December. | 2,240 | 726 | 1,094 | . 269 | . 31 | . 174 |
| January. | 2,300 | 760 | 1,084 | . 266 | . 31 | . 172 |
| February. | 16,500 | $\begin{array}{r}800 \\ \hline 890\end{array}$ | 5,107 | 1.25 | 1.35 | . 808 |
| March. | 18,700 | 2,990 | 6,763 | 1. 66 | 1.91 | 1.07 |
| April | 54,200 | 4,800 | 14,330 | 3.52 | 3.93 | 2.28 |
| May. | 8,660 | 1,760 | 3,573 | . 877 | 1.01 | . 567 |
| June. | 48,300 4,420 | 2,060 | 8,718 1,593 | 2.14 .391 | 2.38 .45 | 1.38 .253 |
| July... | 4,420 | 766 450 | $1,593$ | $.391$ | .45 .48 | $.253$ |
| August..... | 9,880 6,410 | 450 555 | 1,699 1,860 | . 417 | . 48 | $\begin{aligned} & .270 \\ & .295 \end{aligned}$ |
| September. | 6,410 | 555 | 1,860 | . 457 | . 51 | . 295 |
| The jear... | 54,200 | 444 | 3,982 | .978 | 13.31 | . 632 |

Monthly diacharge of Potomac R1ver at Hancock, Md.--Continued


Yearly discharge of Potomac River at Hancock, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diacharge in second-feet |  | $\begin{aligned} & \text { Pun off } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million callons per day per square mile | Diecharge in second-feet |  | $\begin{aligned} & \text { Runof } \begin{array}{l} \text { In } \\ \text { inchas } \end{array} \end{aligned}$ | Discharge in million callons per day per square mile |
|  | Mean | Per squara mile |  |  | Mean | $\begin{aligned} & \text { Par } \\ & \text { squara } \\ & \text { milo } \end{aligned}$ |  |  |
| 1933. | 5,130 | 1.26 | 17.12 | 0.814 | 4,678 | 1.15 | 15.60 | 0.743 |
| 1934. | 2,070 | . 508 | 6.91 | . 328 | 2,378 | . 584 | 7.92 | . 377 |
| 1935 | 4,388 | 1.08 | 14.61 | . 698 | 4,281 | 1.05 | 14.26 | . 679 |
| 1936. | 5,813 | 1.43 | 19.43 | . 924 | 5,964 | 1.46 | 19.93 | . 944 |
| 1937. | 5,202 | 1.28 | 17.35 | . 827 | 6,055 | 1.49 | 20.19 | . 963 |
| 1938. | 3,623 | . 890 | 12.08 | . 575 | 2,422 | . 595 | 8.08 | . 385 |
| 1939 | 3,940 | . 967 | 13.13 | . 625 | 3,955 | . 971 | 13.18 | . 628 |
| 1940. | 3,982 | . 978 | 13.31 | . 632 | 4,331 | 1.06 | 14.48 | . 685 |
| 1941 | 2,986 | . 733 | 9.95 | . 474 | 2,524 | . 620 | 8.40 | . 401 |
| 1942. | 2,985 | . 733 | 9.96 | . 474 | 4,902 | 1.20 | 16.34 | . 776 |
| 1943. | 5,652 | 1.39 | 18.83 | . 898 | - | - | - | - |
| R1ghast | 5,813 | 1.43 | 19.43 | . 924 | 6,055 | 1.49 | 20.19 | . 963 |
| Average | 4,161 | 1.02 | 13.88 | . 659 | 4,149 | 1.02 | 13.84 | . 659 |
| Lowest. | 2,070 | . 508 | 6.91 | . 328 | 2,378 | . 584 | 7.92 | .377 |

Potomac RIver at Shepherdstown, W. Va.
 from Rumsey 8ridge et Shepherdstown, Jefferson County, end 3.3 miles upstreem from Antietem Creek. Datum of gece is 281.00 feet ebove meen see level, adjustment of 1912.

Trainate eree - 5,936 square miles.
Records avelleble.- August 1928 to September 1943.
Extremes - Moximum discharge, 335,000 second-feet, Mar. 19, 1936 (care he1ght 42.1 feet, from floodmarks), by slope-eree determination; minimum, 231 second-feet (regulated) Auy. $17,19,1930 ; \mathrm{min} 1 \mathrm{mum}$ da11y, 252 second-feet (reguleted) oct. 2 , 1932.

Remerks.-Some requlation at low steges by power plants above stetion. Renords do not inciude weter diverted ebove stetion by city of he cerstown for municipel supply Records of diversion can be obtained irom office of Chief Fngineer, Maryland Stete Depertment of Health, Faltimore.

Monthly discharge of Potomac RIver et Shepherdstown, W. Ve.

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| August $20-31 \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ 5,900 3,030 3,860 0.650 0.29 <br> Scpt ember $\ldots \ldots \ldots \ldots \ldots \ldots$ 6,760 1,540 2,590 .436 .49 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1928-29 |  |  |  |  |  |  |
| October......... | 2,240 | 985 | 1,420 | .239 | . 28 | . 154 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| May. | 22,000 | 4,390 | 8,690 | 1.46 | 1.68 | . 844 |
|  |  |  |  |  |  |  |
| July | 2,950 | 742 | 1,470 | . 248 | . 29 | . 160 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| October.................... 68,400 . 855 10,000 1.68 1.94 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| February..................... 13,800 2, 2,300 5,480 .923 .96 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| The yeer.............. | 68,400 | 300 | 4,200 | . 708 | 9.59 | . 458 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| April........................ 23,700 . 3,060 10,400 1.75 1.95 1.13 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| The y | 30,400 | 307 | 3,440 | . 580 | 7.88 | .375 |
| October...................... 1,600 443 731 .123 14 - 080 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| July.......................... 4,590 . 472 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| The yeer....... | 96,600 | $275$ | $4,710$ | $.793$ | 10.79 | .513 |

Monthly discharge of Potomac River at Shepherdstown, W. Va.--Continued

| Month | Diecharge in eecond-feet |  |  |  | Runoff in inches | Discharge in million callcns per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mils |  |  |
| 1932-33 |  |  |  |  |  |  |
| October. | 13,800 | 252 | 2,580 | 0.435 | 0.50 | 0.291 |
| November | 32,200 | 2,240 | 8, 80 | 1.50 | 1.67 | . 968 |
| December | 13,000 | 1,280 | 3,670 | . 618 | . 71 | . 399 |
| January. | 36,500 | 2,920 | 7,230 | 1.22 | 1.41 | 780 |
| February | 9,320 | 5,360 | 7,020 | 1.18 | 1.23 | . 763 |
| March. .. | 47,900 | 4,280 | 15,700 | 8.64 | 3.04 | 1.71 |
| Apr11 | 69,600 | -, 100 | 20,200 | 3.40 | 3.79 | 2.20 |
| May. . | 35,000 | 5,630 | 14,200 | 2.39 | 2.76 | 1.54 |
| June. | 6,190 | 1,180 | 2,730 | . 460 | . 51 | . 237 |
| July | 4,050 | 876 | 1,620 | .273 | . 31 | . 176 |
| August. | 37,200 | 1,170 | 4,540 | . 765 | . 86 | . 494 |
| Septembar | 12,300 | 1,700 | 3,820 | .644 | . 72 | .416 |
| The year | 69,600 | 252 | 7,670 | 1.29 | 17.53 | . 854 |
| Octobar. | 2,360 | 920 | 1,420 | . 239 | . 29 | . 154 |
| Novembar. | 1,650 | 905 | 1,290 | -217 | . 24 | -140 |
| Docember | 6,910 | 764 | 2,360 | . 398 | . 46 | . 257 |
| January | 27,600 | 1,610 | 6,800 | 1.15 | 1.33 | . 743 |
| Fobruar | 2,450 | 1,000 | 1,580 | . 256 | . 28 | . 172 |
| March. | 17,900 | 1,000 | 6,530 | 1.10 | 1.27 | . 711 |
| April | 17,100 | 3,060 | 7,550 | 1.27 | 1.42 | . 821 |
| May.. | 3,810 | 1,990 | 2,670 | . 450 | - 52 | .291 |
| June | 5,360 | 935 | 1,720 | . 290 | .32 | .187 |
| July | 3,200 | 392 | 856 | . 144 | .17 | . 093 |
| August | 6,480 | 597 | 1,610 | -271 | .31 | . 175 |
| September | 17,100 | 484 | 3,070 | . 517 | . 58 | . 334 |
| The year | 27,600 | 392 | 3,130 | . 527 | 7.18 | . 341 |
| October | 10,600 | 905 | 2,258 | . 380 |  | . 246 |
| November | 5,380 | 995 | 1,880 | . 317 | . 35 | . 205 |
| Dacember. | 57,100 | 2.610 | 8,565 | 1.44 | 1.66 | . 931 |
| January. | 36,500 | 3,450 | 8,627 | 1.45 | 1.en | . 937 |
| February. | 35,500 | 4,560 | 12,770 | 2.15 | 2.24 | 1.39 |
| March. | 19,900 | 5,770 | 9,288 | 1.56 | 1.80 | 1.01 |
| Apri1 | 35,500 | 4,060 | 13,150 | 2.22 | 2.48 | 1.43 |
| May. | 20,800 | 3,100 | 7,828 | 1.32 | 1.52 | . 953 |
| June | 3,690 | 1,700 | 2,465 | . 415 | . 46 | . 268 |
| July | 3,340 | 920 | 1,809 | . 305 | . 85 | .197 |
| Auguet | 5,220 | 965 | 2,283 | . 385 | . 44 | . 249 |
| Saptamba | 19,100 | 1,010 | 3,585 | . 604 | . 67 | . 390 |
| The year | 57,100 | 905 | 6,166 | 1.04 | 14.08 | . 672 |
| Octobar.......... | 2,260 | 474 | 91.3 | . 154 | . 18 | .100 |
| November. | 10,900 | 965 | 3,276 | . 552 | . 62 | . 357 |
| December. | 11,600 | 1,750 | 4,016 | . 677 | . 78 | . 438 |
| January | 33,200 | 2,400 | 11,740 | 1.98 | $2 \cdot 28$ | 1.29 |
| February. | 75,200 | 3,100 | 12,730 | 2.14 | 2.31 | 1.38 |
| March. | 287,000 | 16,000 | 45,9:0 | 7.75 | 8.94 | 5.01 |
| April. | 40,000 | 4,260 | 13,490 | 2.27 | 2.53 | 1.47 |
| May.. | 4,020 | 1,770 | 2,923 | . 492 | . 57 | . 318 |
| Juna | 5,300 | 1,240 | 2,0:5 | . 343 | . 38 | . 222 |
| July | 2,980 | 778 | 1,441 | . 243 | . 28 | .157 |
| August | 2,220 | 778 | 1,111 | . 187 | . 22 | . 121 |
| September | 945 | 298 | -624 | . 105 | . 12 | . 068 |
| The year. | 287,000 | 298 | 8,372 | 1.41 | 19.21 | . 911 |
| October. . . . . . . . | 16,400 | 552 | 2,564 |  |  |  |
| November | 5,160 | 886 | 1,681 | . 283 | . 32 | .183 |
| December | 13,000 | 886 | 6,515 | 1.10 | 1.27 | . 711 |
| Januar. | 57,700 | 9,310 | 20,480 | 3.45 | 3.98 | 2.23 |
| February. | 40,000 | 6,700 | 13,510 | 2.28 | 2.37 | 1.47 |
| March. | 20,000 | 4,260 | 7,664 | 1.29 | 1.49 | . 834 |
| April | 194,000 | 3,600 | 20,330 | 3.42 | 3.32 | 2.21 |
| May. | 24,500 | 3,540 | 7,842 | 1.38 | 1.52 | . 853 |
| June | 5,700 | 2,220 | 3,164 | . 533 | . 59 | . 344 |
| Ju1y. | 6,120 | 684 | 2,022 | . 341 | . 39 | . 220 |
| Auguat | 34,700 | 405 | 4,060 | . 684 | . 79 | . 442 |
| Septamber. | 8,050 | 930 | 2,790 | . 470 | . 52 | .304 |
| Tha yaar.. | 194,000 | 405 | 7,678 | 1.29 | 17.56 | . 834 |

Monthly discharge of Potomac fiver at shapherdstow, W. Va.--Continued


Monthly discharge of Potomac RIver at Shepherdstown, W. Va.-mContinued

| Month | Diecharge in eecond-feet |  |  |  | Runoff in inches | Discharce In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. | 176,000 | 1,570 | 19, 940 | 3.34 | 3.85 | 2.16 |
| November | 7,440 | 2,980 | 4,910 | . 827 | . 92 | . 535 |
| December | 88,500 | 2,400 | 11,650 | 1.96 | 2.26 | 1.27 |
| January. | 52,700 | 4,640 | 11,550 | 1.95 | 2.24 | 1.26 |
| February | 45,700 | 6,840 | 14,990 | 2.53 | 2.63 | 1.64 |
| March. | 29,000 | 4,260 | 12,270 | 2.07 | 2.38 | 1.34 |
| April | 49,400 | 3,540 | 10,250 | 1.73 | 1.93 | 1.12 |
| May. | 23,300 | 3,660 | 7,841 | 1.32 | 1.52 | . 853 |
| June | 5,980 | 1,430 | 2,923 | . 492 | . 55 | . 318 |
| July. | 6,260 | 1,160 | 2,275 | . 383 | . 44 | . 248 |
| August. | 2,020 | - 573 | 1,084 | . 183 | .21 | . 118 |
| September | 1,340 | 369 | -651 | . 110 | .12 | . 071 |
| The year | 176,000 | 369 | 8,338 | 1.40 | 19.05 | . 905 |

Yearly discharge of Potomac River at Shepherdstown, W. Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million callons per day per square mile | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per equare mile |  |  |
| 1929. | 5,210 | 0.878 | 11.91 | 0.567 | 6,750 | 1.14 | 15.41 | 0.737 |
| 1930. | 4,200 | . 708 | 9.59 | . 458 | 2,310 | . 389 | 5.28 | . 251 |
| 1931 | 3,440 | . 580 | 7.88 | . 375 | 3,600 | . 606 | 8.22 | 392 |
| 1932. | 4,710 | . 793 | 10.79 | . 513 | 5,710 | . 962 | 13.07 | . 622 |
| 1933 | 7,670 | 1.29 | 17.53 | . 834 | 6,840 | 1.15 | 15.63 | .743 |
| 1934. | 3,130 | . 527 | 7.18 | . 341 | 3,778 | . 636 | 8.65 | . 411 |
| 1935 | 6,166 | 1.04 | 14.08 | . 672 | 5,780 | . 74 | 13.21 | . 630 |
| 1936 | 8,372 | 1.41 | 19.21 | .911 | 8,593 | 1.45 | 19.72 | . 937 |
| 1937. | 7,678 | 1.29 | 17.56 | . 834 | 8,865 | 1.49 | 20.26 | . 963 |
| 1938 | 5,078 | . 855 | 11.61 | . 553 | 3,477 | . 586 | 7.95 | .379 |
| 1939. | 5,574 | . 939 | 22.75 | . 607 | 5,651 | . 952 | 12.93 | . 615 |
| 1940 | 5,677 | . 956 | 13.01 | . 618 | 6,273 | 1.06 | 14.37 | . 685 |
| 1941 | 4,583 | . 772 | 10.47 | . 499 | 3,755 | . 633 | 8.58 | . 409 |
| 1942. | 4,696 | . 791 | 10.74 | . 511 | 7, 431 | 1.25 | 16.99 | . 808 |
| 1943 | 8,338 | 1.40 | 19.05 | . 905 | - | - | - | - |
| H1 gheet | 8,372 | 1.41 | 19.21 | . 911 | 8,865 | 1.49 | 20.26 | . 963 |
| Average | 5,635 | . 949 | 12.89 | . 613 | 5,630 | . 948 | 12.88 | . 613 |
| Loweet. | 3,130 | . 527 | 7.18 | . 341 | 2,310 | .389 | 5.28 | . 251 |

Potomac River at Point of Rocks, Md.
Location.- Water-stage recorler, lat. $39^{\circ} 16^{\prime 2} 25^{\prime \prime}$, long. $77^{\circ} 32^{\prime} 35^{\prime \prime}$, at hishway bridee at Polnt of Rocks, Frederick County, 6 miles upstream from Monocacy River. Datum of Eage is 200.54 feet above mean sea level, adjustment of 1912. Prior to October 1929, chain gage at same site and datum
Dralnage area.- 9,651 square mlles.
Kecords avallable.- February 1895 to September 1943.
Extremes.- Maximum discharce, 480,000 second-feet Mar. 19, 1:36 (race height, 41.03 feet); minimum, 540 second-feet Sept. 10, 1914 (fage height, 0.38 foot). Flood of June 2, 1889 reached a stace of 40.2 feet, from floodmarke (discharge, about 460,000 second-feet, from rating cirve for flood of 1936).
Remarks. - Records do not include flow in Chesapeake \& Ohio Canal. No flow in canal slnce November 1935 (see page 164). No record of flow in canal prior to July 1931

Monthly discharge of Potomac River at Point of Rocks, Md.

| Month | Discharge in eecond-feet |  |  |  | Runoff in inchos | D1scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | Per square mile |  |  |
| 1895 |  |  |  |  |  |  |
| Fobruary 17-28.. | 15,300 | 5,320 | 7,413 | 0.768 | 0.34 | 0.496 |
| March. | 66,000 | 11,500 | 24,560 | 2.54 | 2.93 | 1.64 |
| April | 67,600 | 6,200 | 14,500 | 1.50 | 1.67 | . 969 |
| May. | 29,300 | 7,120 | 12,540 | 1.30 | 1.50 | . 840 |
| June | 7,580 | 2,280 | 3,910 | . 405 | . 45 | - 262 |
| July | 10,500 | 2,600 | 4,462 | . 462 | . 53 | . 299 |
| August | 3,300 | 1,340 | 1,997 | . 207 | . 24 | . 134 |
| September. | 2,600 | 1,180 | 1,565 | .162 | . 18 | . 105 |
| October......... | 1,340 | 1.040 | 1.163 | . 121 |  |  |
| November | 1,540 | 1,180 | 1,333 | . 138 | . 15 | . 089 |
| December. | 5,320 | 1,180 | 2,259 | .234 | . 27 | . 151 |
| January | 24,100 | 1,180 | 5,257 | . 545 | . 63 | . 352 |
| Pobruary. | 37,100 | 2,600 | 10.470 | 1.08 | 1.16 | -698 |
| May 11-31 | 5,320 | 1,540 | 2,560 | . 265 | .21 | - 171 |
| June. | 14,200 | 1,180 | 5,429 | . 562 | . 63 | . 363 |
| July. | 50,300 | 2,940 | 9,283 | . 962 | 1.11 | . 622 |
| August | 9,500 | 1,540 | 3,449 | .357 | . 41 | . 231 |
| Soptember | 25,400 | 1,180 |  | . 226 | . 25 | . 146 |
| October......... | 159,000 | 2,000 | 12,490 | 1.29 | 1.49 | . 834 |
| November | 30,000 | 2,000 | 6,828 | . 718 | . 80 | . 464 |
| December | 12,000 | 2,000 | 4,723 | . 489 | . 56 | . 316 |
| Januery. | B,540 | 2,280 | 4,284 | . 444 | . 51 | . 287 |
| February. | 182,000 | 6,660 | 42,660 | 4.42 | 4.60 | 2.86 |
| March. | 31,400 | 11,500 | 20,850 | 2.16 | 2.49 | 1.40 |
| Apr11. | 28,000 | 5,760 | 10,830 | 1.12 | 1.25 | . 724 |
| May.. | 94,200 | 5,760 | 22,950 | 2.38 | 2.74 | 1.54 |
| June | 7,580 | 4,080 | 5,897 | . 621 | -69 | . 401 |
| July. | 10,500 | 2,940 | 5,315 | . 551 | -64 | . 356 |
| August. | 6,200 | 3,300 | 4,092 | . 424 | . 49 | . 274 |
| September | 2,940 | 2,000 | 2,337 | . 242 | . 27 | . 156 |
| The jear | 182,000 | 2,000 | 11,760 | 1.22 | 16.53 | . 788 |
| October........... | 2,600 | 1,760 | 1,968 | . 204 | . 24 | .132 |
| November | 4,480 | 1,340 | 2,096 | . 217 | . 24 | . 140 |
| December | 19,300 | 2,600 | 6,579 | . 682 | . 79 | . 441 |
| January | 41,600 | 3,300 | 14,660 | 1.52 | 1.75 | . 982 |
| February. | 18,100 | 5,760 | 8,339 | . 864 | . 90 | . 558 |
| March.. | 65,200 | 4,480 | 15,330 | 1.59 | 1.83 | 1.03 |
| April | 52,700 | 9,020 | 15,970 | 1.65 | 1.84 | 1.07 |
| May. | 69,700 | 6,200 | 18,060 | 1.87 | 2.16 | 1.21 |
| June | 8,060 | 2,600 | 4,178 | . 433 | . 48 |  |
| July. | 5,760 | 1,540 | 2,418 | . 250 | . 29 | $.162$ |
| August. | 111,000 | 3,680 | 22,140 2,497 | 2.29 .259 | 2.64 .29 | $1.48$ |
| Septermber | 3,680 | 2,000 | 2,497 | . 259 |  | . 167 |
| The year | 111,000 | 1,340 | 9,566 | . 991 | 13.45 | . 641 |
| October | 86,700 | 1,760 | 13,670 | 1.42 | 1.64 | . 918 |
| November. | 15,300 | 5,320 | 8,557 | . 887 | . .99 | . 573 |
| December. | 54,400 | 6,200 | 15,330 | 1.59 | 1.83 | 1.03 |
| Jenuary. | 45,500 | 8,540 | 18,680 | 1.94 | 2.24 | 1.25 |
| February | 101,000 | 7,120 | 28,130 | 2.91 | 3.03 | 1.88 |
| March... | 115,000 | 14,200 | 35,240 | 3.65 | 4.21 | 2.36 |
| April. | 25,400 | 5,760 | 11,750 | 1.22 | 1.36 | . 789 |
| May.. | 49,100 | 5,320 | 11,600 | 1.20 | 1.38 | - 776 |
| June. | 16,400 | 2,940 | 5,314 | . 551 | . 62 | . 356 |
| July. | 7,120 | 1,540 | 2,519 | . 261 | . 30 | . 169 |
| August. | 3,680 3,680 | 1,540 1,760 | 2,335 2,345 | .242 .243 | .28 | .156 .157 |
| The year. | 115,000 | 1,540 | 12,900 | 1.34 | 18.15 | . 866 |

Monthly discharge of Potomac River at Point of Rocks, Md.--Continued


Monthly discharge of Potomec R1ver et Point of Rocks, Md.--Continued

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge In million gellons per doy per square rile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | M1ndmum | Mean | Per <br> squere mile |  |  |
| 1904-5 |  |  |  |  |  |  |
| October. | 2,000 | 900 | 1,164 | 0.121 | 0.14 | 0.078 |
| November | 1,520 | 1,090 | 1,340 | . 139 | . 16 | . 090 |
| December | 5,020 | 1,520 | 2,201 | . 228 | . 26 | . 147 |
| Jenuary | 17,400 | 4,670 | 8,626 | . 894 | 1.03 | . 578 |
| Februery | 6,520 | 5,020 | 5,625 | . 583 | . 61 | . 377 |
| Merch. . | 63,900 | 6,520 | 23,480 | 2.43 | 2.80 | 1.57 |
| April. | 10,000 | 4,010 | 6,581 | . 682 | . 76 | . 441 |
| Mey... | 9,070 | 2,810 | 4,493 | . 466 | . 54 | . 301 |
| June | 32,800 | 2,810 | 6,979 | . 723 | . 81 | . 467 |
| July | 22,300 | 3,400 | 10,190 | 1.06 | 1.22 | . 685 |
| August | 13,500 | 2,810 | 5,830 | . 604 | . 70 | . 390 |
| September | 5,750 | 2,000 | 3,205 | . 332 | .37 | . 215 |
| The yeer. | 63,900 | 900 | 6,675 | .692 | 9.40 | . 447 |
| October. | 5,380 |  |  |  |  |  |
| November. | 3,700 | 1,750 | 2,888 | . 235 | . 24 |  |
| December. | 37,100 | 3,400 | 10,640 | 1.10 | 1.27 | . 711 |
| Jenuery | 44,500 | 8,180 | 14,990 | 1.55 | 1.79 | 1.00 |
| Februery. | 9,070 | 3,700 | 5,116 | . 530 | . 55 | . 343 |
| Merch | 79,700 | 4,330 | 15,900 | 1.65 | 1.90 | 1.07 |
| April | 64,700 | 8,180 | 22,440 | 2.33 | 2.60 | 1.51 |
| Mey. | 10,500 | 2,810 | 5,538 | . 574 | . 66 | . 371 |
| June | 19,800 | 3,400 | 7,007 | . 726 | . 81 | . 469 |
| July | 8,620 | 2,530 | 4,380 | . 454 | . 52 | . 293 |
| August. | 37,100 | 3,400 | 15,200 | 1.57 | 1.81 | 1.01 |
| Soptember | 12,500 | 2,530 | 4,280 | . 443 | . 49 | . 286 |
| The year | 79,700 | 1,750 | 9,257 | .959 | 13.00 | . 620 |
| October | 106,000 | 2,530 | 16,300 | 1.69 | 1.95 | 1.09 |
| November. | 15,200 | 4,010 | 6,340 | . 657 | . 73 | . 425 |
| December | 55,600 | 4,010 | 11,100 | 1.15 | 1.33 | . 743 |
| January | 72,200 | 9,530 | 27,000 | 2.80 | 3.23 | 1.81 |
| Februery. | 13,500 | 7,330 | 9,560 | . 991 | 1.03 | . 641 |
| Merch. | 114,000 | 9,530 | 30,500 | 3.16 | 3.64 | 2.04 |
| April | 51,600 | 6,920 | 14,900 | 1.54 | 1.72 | . 995 |
| Mey. | 37,800 | 6,920 | 11,100 | 1.15 | 1.33 | . 743 |
| June | 93,800 | 7,330 | 23,200 | 2.40 | 2.68 | 1.55 |
| July. | 11,000 | 4,330 | 6,010 | . 623 | . 72 | . 403 |
| August. | 5,020 | 3,100 | 3,710 | . 384 | . 44 | . 248 |
| September | 26,800 | 2,810 | 6,430 | . 666 | . 74 | . 430 |
| The year | 114.000 | 2.530 | 13.890 | 1.44 | 19.54 | . 931 |
| October | 6,130 | 2,260 |  |  |  |  |
| November | 26,500 | 2,530 | 7,850 | . 813 | . 91 | . 2325 |
| December. | 69,700 | 5,380 | 17,800 | 1.84 | 2.12 | 1.19 |
| January. | 136,000 | 6,920 | 25,400 | 2.63 | 3.03 | 1.70 |
| Februery | 129,000 | 6,920 | 24,100 | 2.50 | 2.70 | 1.62 |
| March. | 72,200 | 10,000 | 28,600 | 2.96 | 3.41 | 1.91 |
| April | 16,800 | 5,750 | 10,200 | 1.06 | 1.18 | . 685 |
| Мау. | 97,100 | 6,130 | 32,100 | 3.33 | 3.84 | 2.15 |
| June | 15,200 | 4,010 | 7,250 | . 751 | . 84 | . 485 |
| July. | 11,000 | 2,530 | 4,470 | . 463 | . 53 | . 299 |
| August. | 8,180 | 2,530 | 3,880 | . 402 | . 46 | . 260 |
| September. | 4,010 | 1,520 | 2,500 | . 259 | .29 | . 167 |
| The year. | 136,000 | 1,520 | 14,000 | 1.45 | 19.73 | . 93.7 |
| October. . . . . . . |  |  |  |  |  |  |
| Novamber. | 4,670 | 1,750 | 2,780 | . 288 | .33 | -186 |
| December. | 3,400 | 1,520 | 2,440 | . 253 | . 29 | . 174 |
| January | 29,400 | 3,090 | 6,950 | . 720 | . 83 | . 465 |
| February | 31,500 | 4,330 | 11,300 | 1.17 | 1.22 | . 756 |
| March. | 14,600 | 5,020 | 8,700 | . 901 | 1.04 | . 582 |
| April | 74,300 | 4,670 | 16,700 | 1.73 | 1.93 | 1.12 |
| May. | 24,800 | 5,020 | 8,660 | . 857 | 1.03 | . 580 |
| June | 19,800 | 5,380 | 11,000 | 1.14 | 1.27 | . 737 |
| July. | 7,330 | 1,480 | 2,700 | . 280 | . 32 | . 181 |
| August | 4,170 | 1,240 | 2,110 | . 219 | . 25 | .142 |
| September. | 2,380 | 1,360 | 1,780 | . 184 | . 21 | . 119 |
| The year. | 74,300 | 1,240 | 6,430 | . 666 | 9.03 | . 430 |

Monthly discharge of Potomac River et Point of Rocks, Md.--Continued

| Month | Diecherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Dischar, e in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { squere } \\ \text { mile } \end{gathered}$ |  |  |
| 1909-10 | 5,020 | 1,010 | 2,190 | 0.227 | 0.26 | 0.147 |
| November. | 2,260 | 1,480 | 1,850 | . 192 | . 21 | .124 |
| December. | 6,720 | 1,740 | 3,130 | . 324 | . 37 | . 209 |
| January.. | 84,600 | 2,200 | 11,700 | 1.21 | 1.40 | . 782 |
| Februery. | 44,500 | 4,330 | 13,800 | 1.43 | 1.49 | . 924 |
| March... | 33,500 37,100 | 3,390 2,800 | 10,960 | 1.03 | 1.17 | . 679 |
| Apr1l. | 12,000 | 3,860 | 1,520 | . 57.0 | . 66 | . 370 |
| June | 155,000 | 3,700 | 26,400 | 2.74 | 3.06 | 1.77 |
| July. | 9,070 | 2,660 | 5,500 | . 570 | . 66 | . 368 |
| Auguet. | 3,090 | 1,480 | 2,000 | . 207 | . 24 | .134 |
| September. | 2,940 | 900 | 1,740 | . 180 | . 20 | . 116 |
| The jear. | 155,000 | 900 | 7,750 | . 803 | 10.91 | . 519 |
| October........... | 2,120 | 1,360 | 1,560 | . 162 | . 19 | . 105 |
| November. | $\frac{1}{3}, 860$ | 1.240 | 1,440 | . 149 | .17 | . 096 |
| December. | 3,390 | 1,360 | 2,080 | - 1.217 | . 2.45 |  |
| January.. | 57,300 | 5,750 | 11,300 | 1.17 | 1.22 | . 756 |
| February. | 18,000 | 5,020 | 11,670 | 1.00 | 1.15 | . 646 |
| April. | 51,600 | 6,920 | 15,100 | 1.56 | 1.74 | 1.01 |
| Mey.. | 8,180 | 2,250 | 4,330 | . 449 | . 52 | . 290 |
| June | 7,750 | 2,380 | 3,690 | . 382 | . 43 | .247 |
| July. | 4,010 | 680 | 2,160 | . 224 | . 26 | -145 |
| August. | 26,100 93,800 | 1,010 | 2,440 12,600 | 1.31 | $\begin{array}{r} .29 \\ 1.46 \end{array}$ | $.164$ |
| The yeer | 93,800 | 680 | 6,500 | . 674 | 9.13 | .436 |
| October............ | 33,500 | 4,010 | 8,510 | - 882 | 1.02 | . 570 |
| November | 13,000 | 2,940 | 5,970 | . 619 | . 69 | . 400 |
| December | 29,400 | 3,390 | 10,200 | 1.06 | 1.22 | . 685 |
| Jemuary | 21,100 | 4,670 | 9,450 | . 979 | 1.13 | . 633 |
| Februery. | 80,500 | 6,520 | 16,400 | 1.70 | 1.83 | 1.10 |
| March. | 80,500 | 8,180 | 28,700 | 2.97 | 3.42 | 1.92 |
| April | 37,100 | 7,330 | 14,900 | 1.54 | 1.72 | . 995 |
| May. | 68,900 | 6,130 | 19,800 | 2.05 | 2.36 | 1.32 |
| June | 7,330 | 3,700 | 5,280 | . 5477 | . 61 | . 254 |
| July | 46,000 | 3,860 | 8,550 | . 886 | 1.02 | $\begin{array}{r} .573 \\ .232 \end{array}$ |
| August. Septembe | 7,750 39,200 | 2,120 1,640 | 3,460 | . 359 | .41 .74 | $\begin{aligned} & .232 \\ & .426 \end{aligned}$ |
| The yeer | 80,500 | 1,640 | 11,500 | 1.19 | 16.17 | .769 |
| October....... | 6,920 | 2,120 | 3,090 | . 320 | . 37 | . 207 |
| November | 7,330 | 2,120 | 3,270 | . 339 | . 38 | . 219 |
| December | 8,180 | 2,120 | 3,390 | . 351 | . 40 | . 227 |
| Januery | 28,800 | 6,130 | 11,700 | 1.21 | 1.40 | . 782 |
| Februery | 8,180 | 3,390 | 5,890 | . 610 | . 64 | $\begin{aligned} & .394 \\ & 1.22 \end{aligned}$ |
| Merch. | 118,000 | 3,090 | 18,200 | 1.89 | 2.18 | $1.22$ |
| April | 62,200 | 7,750 | 16,100 | 1.67 | 1.86 | $1.08$ |
| May.. | 66,400 | 3,700 | 13,600 | 1.41 | 1.63 1.20 | . 911 |
| June | 50,800 | 2,660 2,800 | 10,400 4,490 | 1.08 .465 | 1.20 .54 | . 698 |
| July.. | 8,620 | $\begin{aligned} & 2,800 \\ & 1,640 \end{aligned}$ | - 3 , 4910 | $\begin{array}{r} 465 \\ .312 \end{array}$ | . 34 | . 202 |
| August. Septembe | 5,020 3,860 | $\begin{array}{r} 1,640 \\ 748 \end{array}$ | 3,010 1,770 | $\begin{aligned} & .312 \\ & .183 \end{aligned}$ | .36 <br> .20 | $\begin{aligned} & .202 \\ & .118 \\ & \hline \end{aligned}$ |
| The yeer | 118,000 | 748 | 7,930 | . 822 | 11.16 | . 531 |
| October | 43,000 | 1,580 | 6,850 | . 710 | . 82 | . 459 |
| November. | 53,200 | 3,240 | 13,500 | 1.40 | 1.56 | . 905 |
| December. | 24,200 | 4,170 | 8,120 | . 841 | . 97 | . 544 |
| January. | 45,300 | 8,180 | 20,000 | 2.07 | 2.39 | 2.34 |
| Februery | 39,200 | 5,750 | 15,900 | 1.65 | 1.72 | 1.07 |
| March. | 67,200 | 5,750 | 19,300 | 2.00 | 2.31 | 1.29 |
| Apr11. | 52,400 | 9,070 | 20,900 | 2.17 | 2.42 | 1.40 |
| May.. | 22,900 | 3,090 | 9,600 | . 395 | 1.15 | . 613 |
| June. | 4,840 | 2,120 | 3,190 | . 331 | .37 | .214 |
| July. | 7.750 | 966 | 3,020 | . 313 | . 36 | . 202 |
| Auguet. | 3,390 | 769 | 1,750 | -1.81 | .21 | . 117 |
| September. | 2,660 | 540 | 1,270 | .132 | .15 | . 085 |
| The yeer. | 67.200 | 540 | 10,200 | 1.06 | 14.43 | . 685 |

Monthly discharge of Potomac River at Point of Rocks, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | D1 acharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Per square mile |  |  |
|  |  |  |  |  |  |  |
|  | 2,800 | 706 | 1,400 | 0.145 | 0.17 | 0.094 |
|  | 2,940 | 643 | 1,540 | . 160 | . 18 | . 103 |
|  | 15,700 | 1,100 | 6,000 | . 622 | . 72 | . 402 |
|  | 84,600 | 4,500 | 28,500 | 2.96 | 3.41 | 1.91 |
|  | 121,000 | 10,000 | 27,000 | 2.80 | 2.92 | 1.81 |
|  | 16,300 | 4,670 | 8,230 | . 853 | . 98 | . 551 |
|  | 5,750 | 3,090 | 4,370 | . 453 | . 51 | . 293 |
|  | 15,200 | 3,240 | 5,900 | . 611 | . 70 | . 395 |
|  | 127,000 | 3,540 | 20,400 | 2.11 | 2.35 | 1.36 |
|  | 3,390 | 1,910 | 2,670 | .277 | . 32 | 1.79 |
|  | 19,800 | 1,240 | 6,760 | . 700 | . 81 | . 452 |
|  | 11,000 | 2,800 | 5,350 | . 554 | . 62 | . 358 |
| The y | 127,000 | 643 | 9,730 | 1.01 | 13.69 | . 653 |
| October........... | 34,200 | 2,800 | 6,730 | 698 |  |  |
| November | 7,330 | 1,310 | 3,590 | . 372 | . 42 | . 240 |
| December | 47,600 | 2,380 | 6,650 | . 689 | . 79 | . 445 |
| Janunry. | 26,800 | 6,130 | 12,500 | 1.30 | 1.50 | . 840 |
| February | 43,000 | 9,070 | 15,600 | 1.62 | 1.75 | 1.05 |
| March | 121,000 | 8,180 | 24,700 | 2.56 | 2.95 | 1.65 |
| April | 38,500 | 10,000 | 19,800 | 2.05 | 2.29 | 1.32 |
| May. | 16,300 | 5,020 | 7,950 | . 824 | . 95 | . 533 |
| June | 4.,200 | 3,700 | 14,000 | 1.45 | 1.62 | . 937 |
| July | 33,500 | 2,380 | 7,170 | . 743 | . 86 | . 480 |
| Augus | 5,750 | 2,120 | 3,600 | . 373 | . 43 | . 241 |
| Septembe | 3,240 | 1,120 | 2,330 | . 241 | . 27 | . 156 |
| The year | 121,000 | 1,120 | 10,400 | 1.08 | 14.63 | . 688 |
| Cotoler |  |  |  |  |  |  |
| November | 2,120 | 1,100 | 2,190 | . 227 | . 26 | -147 |
| December | 10,300 | 1,260 | 3,250 | .337 | . 39 | . 218 |
| Sanuary. | 29,400 | 3,240 | 9,170 | . 950 | 1.10 | . 614 |
| February | 19,200 | 4,900 | 7,630 | . 791 | . 82 | . 511 |
| March. | 118,000 | 12,000 | 38,400 | 3.98 | 4.59 | 2.57 |
| Apr? | 24,800 | 5,020 | 10,700 | 1.11 | 1.24 | . 717 |
| May | 14,600 | 2,380 | 5,590 | . 579 | . 67 | . 374 |
| June | 20,400 | 1,990 | 7,870 | . 815 | . 91 | . 527 |
| July. | 6,640 | 2,250 | 3,890 | . 403 | . 46 | . 260 |
| $A_{11}, 7,19$ | 5,420 | 1,030 | 2,620 | . 271 | . 31 | . 175 |
| September | 2,200 | 643 | 1,380 | .143 | . 16 | . 092 |
| The year | 118,000 | 643 | 7,880 | . 816 | 11.09 | . 527 |
| October. | 30,100 | 770 |  |  | . 57 | . 319 |
| November. | 18,600 | 1,260 | 3,830 | . 397 | . 44 | . 257 |
| December |  | , | 2,550 | . 264 | . 30 | . 171 |
| January. | - | - | 2,500 | . 259 | . 30 | . 167 |
| Tebruary | - | - | 28,300 | 2.93 | 3.05 | 1.89 |
| March | 43,000 | 4,500 | 13,600 | 1.41 | 1.63 | . 911 |
| April | 111,000 | 4,010 | 39,800 | 4.12 | 4.60 | 2.66 |
| May. | 16,300 | 2,660 | 5,990 | .621 | . 72 | . 401 |
| June | 5,750 | 2,250 | 3,310 | . 343 | . 38 | . 222 |
| July. | 4,840 | 2,120 | 3,360 | . 348 | . 40 | . 225 |
| Aurust. | 3,700 | 2,120 | 2,910 | . 302 | . 35 | . 195 |
| Sentember | 6,920 | 1,890 | 3,940 | . 408 | . 46 | . 264 |
| The year | 111,000 | 770 | 9,390 | .973 | 13.20 | . 629 |
| October. | 2,940 |  |  |  |  |  |
| November. | 7,750 | 2,120 | 5,610 | . 581 | . 65 | .376 |
| December. | 43,000 | 2,520 | 13,000 | 1.35 | 1.56 | . 873 |
| January | 50,000 | 7,330 | 14,800 | 1.53 | 1.76 | . 989 |
| February. | 11,000 | 4,170 | 5,980 | . 620 | . 65 | . 401 |
| \#arch. | 26,800 | 6,920 | 12,700 | 1.32 | 1.52 | . 853 |
| Apri | 14,100 | 5,380 | 8,860 | . 918 | 1.02 | . 593 |
| May. | 64,700 | 4,670 | 18,300 | 1.90 | 2.19 | 1.23 |
| June | 14,100 | 4,010 | 7,130 | .739 | . 82 | . 478 |
| July. | 21,700 | 1,990 | 7,220 | . 748 | . 86 | . 483 |
| August | 5,380 | 1,480 | 3,130 | . 324 | . 37 | . 209 |
| Serstember | 2,250 | 1,240 | 1,720 | .178 | . 20 | .115 |
| The year. | 64,700 | 1,080 | 8,390 | .969 | 11.80 | .562 |

Mcwhly discharee of Potomac Rlver at Polrt of Rocks, M...-Ccntinued

| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{c} \text { Rimoff } \\ \text { in } \\ \text { inicies } \end{array}\right.$ | DPCchar re I: million -allora per ${ }^{3}$ ay per soare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Fer square mile |  |  |
| 1019-20 |  |  |  |  |  |  |
| October | 4,340 | 2,010 | 2,420 | 0.2.1. | 0.28 | 0.162 |
| November | 14,100 | 2,250 | 4,420 | . 479 | .3 | . 310 |
| December | 12,000 | , '700 | 6,880 | . 713 | . 02 | . 481 |
| January. | - | - | 10,800 | 1.12 | 1.29 | . 784 |
| February. | - | - | 18,200 | 1.98 | 8.04 | 1.22 |
| March... | 103,000 | 9,070 | 32,300 | ?. 35 | 3.46 | 2.17 |
| Apr11 | 32,800 | 8,620 | 14,500 | 1.50 | 1.67 | . 989 |
| May.. | 13,500 | 4,740 | 8,700 | . 901 | 1.04 | . 592 |
| June | 18,600 | 4,010 | 8,550 | - cine | .90 | . 573 |
| July. | 7,750 | 2,60 | 3,790 | - 393 | . 45 | . 254. |
| August | 32,100 | 1,990 | 7,150 | . 741 | - 85 | . $4^{\text {mes }}$ |
| Sertember | 18,000 | 2,250 | 4,960 | .514 | . 57 | .378 |
| The year. | 103, 300 | 2,010 | 10,200 | 1.06 | 14.40 | . 6.95 |
| October. | 6,920 | 1,480 | 2,780 | . 232 | . 33 | .152 |
| November | 15,700 | 1,480 | 4,780 | . 405 | . 55 | .220 |
| December | 19,300 | 5,750 | 5,500 | .984 | 1.13 | -636 |
| January. | 11,500 | 5,020 | 6,360 | . $65 \%$ | . 76 | - 426 |
| February. | 8,620 | 4,010 | 6,170 | . 639 | . 67 | . 413 |
| March. | 36,300 | 5,380 | 12,900 | 1.34 | 1.54 | - 6F |
| April | 8,620 | 4,010 | 4,40 | . 512 | . 57 | .331 |
| May. | 85,500 | ־,750 | 20,700 | 2.14 | 2.47 | 1.3 |
| June | 9,070 | 2,520 | 4,150 | . 430 | - 48 | . 27. |
| July | 2,530 | 1,990 | 4,260 | . 441 | . 51 | .285 |
| August | 16,800 | 1,370 | 3,910 | . 405 | .47 | . 262 |
| September | 10,700 | 1,270 | 3,950 | . 378 | . 42 | .241 |
| The year. | 85,500 | 1,270 | 7,040 | .729 | $3.9 n$ | .471 |
| October.......... | 2,600 | 1,040 | 1,750 | . 181 | . 21 | . 117 |
| November. | 25,500 | 1,170 | 4,400 | . 456 | . 51 | - 2.95 |
| December. | 25,500 | ᄃ,750 | 11,300 | 2.17 | 1.35 | -re |
| January. | 27,200 | 2,970 | 8,110 | . 840 | . 97 | . $544^{*}$ |
| Fabruary. | 46,300 | 6,120 | 17,500 | 1.31 | 1.88 | 1.17 |
| March. | 55,200 | 9, 410 | 21,600 | 2.24 | 2.58 | 1.45 |
| Apr 11 | 19,600 | 5,000 | 9,120 | . 945 | 1.05 | - 5111 |
| May. | 38,100 | 3,250 | 9,710 | 1.01 | 1.16 | .652\% |
| June | 16,500 | 2,920 | c, 660 | -690 | . 77 | . 446 |
| July | 8,130 | 2,290 | 4,400 | . 456 | . 5 \% | . 295 |
| Algust... | 3,250 | 1,320 | 2,080 | .216 | . 25 | .140 |
| September. | \%,580 | 780 | 1,760 | . 182 | . 20 | .11 |
| The year. | 55,200 | 780 | 8,260 | . 840 | 11.46 | . $5.4 \%$ |
|  |  |  |  |  |  |  |
| November. | 1,270 | 780 | $989$ | . 102 | . 11 | $.066$ |
| Dacember | 4,630 | 780 | 2,340 | . 242 | . 2 | - 256 |
| January. | 19,600 | 3,250 | 6,780 | .703 | .31 | 454 |
| February | 23,900 | 5,000 | 12,500 | 1.30 | 1.25 | . 9190 |
| March.. | 22,300 | 3,20 | 10,700 | 1.11 | 1.28 | . 717 |
| Apr 11 | 36,100 | 3,250 | 10,300 | 1.07 | 1.19 | . 692 |
| May. | 8,980 | 2,20 | 5,420 | - 562 | . 65 | .368 |
| Juna | 3.580 | 1,700 | 2, 510 | . 260 | -29 | -16R |
| July. | 3,920 | . 950 | 1,560 | . 162 | -19 | -105 |
| August | $6,130$ | 1,130 | 2,360 | - 216 | . 34 | . 191 |
| September. | 10,700 | , 916 | 3,770 | . 301 |  | .21 .3 |
| The jear, | 36,100 | 780 | 5,030 | .521 | 7.08 | -23\% |
|  |  |  |  |  |  |  |
| November | 2,920 | 780 | 2,030 | -210 | . 23 | .136 |
| December | 14,000 | 2,920 | 6, 880 | . 717 | . $R 2$ | . 461 |
| January. | 68,300 | 8,550 | 13,700 | 2.94 | 2.24 | 1.2E |
| Febmary | 14,500 | 5,000 | 8,170 | -.347 | . 21 | . 547 |
| Narch.. | 156,000 | 6,120 | 33,800 | 3.50 | 4.04 | 2.28 |
| April | 76,500 | 8,130 | 21,000 | 2.18 | 2. $4^{\text {a }}$ | 1.41 |
| May.. | 237,000 | 3,130 | 42,000 | 4.35 | 5.02 | 2.81 |
| June | 24,400 | 7,300 | 14,400 | 1.49 | 1.66 | -603 |
| July | 19,600 | 3,580 | 8, 100 | . 928 | $1.0 \%$ | . 600 |
| August.... | 4,270 15,500 | 1,590 | 3,120 8,680 | .323 $.27 a$ | .37 .31 | .209 .1 .0 |
| September. . . . | 15,500 | 1,420 | 2,680 | . 27 7 | -31 | -1-0 |
| The year. | 237,000 | 676 | 12,600 | 1.41 | 17.22 | .911 |


| Month | Discharge in second-feet |  |  |  | $\left\lvert\, \begin{gathered} \text { Runorf } \\ \text { in } \\ \text { inches } \end{gathered}\right.$ | Discharce in million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1924-25 |  |  |  |  |  |  |
| October. | 53, 700 | 2,290 | 7,100 | 0.736 | 0.85 | 0.476 |
| November | 9,410 | 2,290 | 3,810 | . 395 | . 44 | . 255 |
| December | 8,980 | 3,580 | 4,680 | . 485 | . 56 | . 313 |
| January. | 18,600 | 7,300 | 10,400 | 1.08 | 1.24 | . 688 |
| February | 76,400 | 9,410 | 23,600 | 2.45 | 2.55 | 1.58 |
| March... | 28,300 | 5,750 | 9,680 | 1.00 | 1.15 | . 646 |
| April | 18,600 | 3,580 | 5,990 | .621 | . 69 | . 401 |
| May. | 35,500 | 3,580 | 11,300 | 1.17 | 1.35 | . 756 |
| June | 3,410 | 1,700 | 2,710 | . 281 | . 31 | . 182 |
| July. | 3,920 | 1,700 | 2,420 | . 251 | . 29 | . 162 |
| August. | 2,290 | 1,000 | 1,580 | . 164 | . 19 | . 106 |
| September | 1,530 | 822 | 952 | . 099 | . 11 | . 064 |
| The jear | 76,400 | 822 | 6,920 | . 717 | 9.73 | . 463 |
| October | 8,130 | 922 | 2,760 | . 286 | . 33 | . 185 |
| Novembe | 35,500 | 2,600 | 6,820 | .707 | . 79 | . 457 |
| December | 18,100 | - | 5,290 | . 548 | . 63 | . 354 |
| January. | 32,900 | - | 9,210 | . 954 | 1.10 | . 617 |
| February. | 55,200 | 8,550 | 23,000 | 2.38 | 2.48 | 1.54 |
| March. | 26,600 | 6,130 | 10,800 | 1.12 | 1.29 | . 724 |
| April | 23,400 | 6,900 | 11,500 | 1.19 | 1.33 | . 769 |
| May.. | 9,850 | 2,920 | 4,550 | . 471 | . 54 | . 304 |
| June | 3,750 | 1,930 | 2,640 | . 274 | . 31 | . 177 |
| July. | 4,450 | 1,370 | 2,650 | .275 | . 32 | -178, |
| August | 36,100 | 1,900 | 9,600 | . 995 | 1.15 | . 643 |
| September | 23,400 | 2,440 | 8,200 | . 850 | . 95 | . 549 |
| The year | 55,200 | 922 | 7.970 | . 826 | 11.22 | . 534 |
| October | 18,600 | 2,140 | 6, 570 | . 681 | . 79 |  |
| November | 72,300 | 2,920 | 18,100 | 1.88 | 2.10 | 1.22 |
| December | 58,200 | 3,920 | 12,900 | 1.34 | 1.54 | . 866 |
| January | 20,200 | 6,130 | 10,700 | 1.11 | 1.28 | . 717 |
| February | 60,500 | 8,550 | 21,600 | 2.24 | 2.33 | 1.45 |
| March | 26,600 | 8,550 | 14,500 | 1.50 | 1.73 | . 969 |
| April | 41,400 | 8,980 | 23,200 | 2.40 | 2.68 | 1.55 |
| May. | 47,700 | 4,270 | 14,000 | 7.45 | 1.67 | . 9377 |
| June | 25,500 | 3,580 | 9,420 | .976 | 1.09 | . 631 |
| July. | 4,630 | 2,760 | 3,210 | . 333 | . 38 | . 215 |
| August. | 4,270 | 2,290 | 3,110 | . 322 | .37. | . 208 |
| September | 2,440 | 974 | 1,540 | . 160 | . 18 | .103 |
| The year | 72,300 | 974 | 11,500 | 1.19 | 16.14 | . 769 |
| October........... | 71,500 | 970 | 12,400 | 1.28 | 1.48 |  |
| November | 24,400 | 3,580 | 8,400 | . 8.870 | 1.97 | . 562 |
| December. | 29,400 | 5,370 | 11,800 | 1.22 | 1.41 | . 78. |
| January | 9,850 | 3,200 | 6,100 | . 632 | . 73 | . 408 |
| February | 22,800 | 5,370 | 10,700 | 1.11 | 1.20 | . $\because 1$ |
| March. | 39,400 | 6,510 | 14,200 | 1.47 | 1.70 | . 950 |
| April | 94,200 | 10,300 | 21,200 | 2.20 | 2.46 | 1.42 |
| May. | 144,000 | 5,370 | 21,600 | 2.24 | 2.58 | 1.45 |
| June. | 49,900 | 6,130 | 16,100 | 1.67 | 1.86 | 1.08 |
| July. | 27,200 | 3,250 | 9,560 | . 991 | 1.14 | . 641 |
| August. | 11,200 | 1,700 | 6,240 | . 647 | . 74 | . 418 |
| September. | 13,500 | 3,250 | 5,770 | . 508 | . 67 | . 386 |
| The year | 144,000 | 970 | 12,000 | 1.24 | 16.94 | . 801 |
| October.......... | 3,960 | 1,900, | 2,750 | .285 | . 33 |  |
| Novembe | 3,000 | 1,340 | 1,980 | .205 | .23 | . 132 |
| December | 10,100 | 1,650 | 4,600 | . 477 | . 55 | . 308 |
| January. | 7,560 | 2,020 | 4,620 | . 479 | . 55 | . 310 |
| February | 61,300 | 4,130 | 8,030 | .832 | . 87 | . 538 |
| March. | 81,400 | 7,160 | 24,600 | 2.55 | 2.94 | 1.65 |
| Apr11 | 156,000 | 5,590 | 27,400 | 2.84 | 3.17 | 1.84 |
| May. | 43,500 | 7.160 | 14,700 | 1.52 | 1.75 | . 988 |
| June | 16,900 | 3,150 | 7,070 | . 7.3 | . 82 | .474 |
| July. | 7,560 | 1,770 | 3,320 | . 406 | . 47 | . 282 |
| August. | 2,020 | 1,130 | 1,500 | . 155 | . 18 | . 100 |
| September. | 2,280 | 1,130 | 1,500 | .155 | .17 | .100 |
| The year. | 156,000 | 1,130 | 8,550 | . 886 | 12.03 | .573 |

Monthly discharge of Potomac River at Point of Rocks, Md.--Continued


Monthly discharge of Potomac River at Point of Rocks, Md.--Continued

| Month | Discharge in second-faet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maxi mum | M1n1mum | Mean |  |  |  |
| October. ......... <br> November <br> December <br> Jenuary <br> February. <br> March. $\qquad$ <br> Apri1. $\qquad$ <br> May. <br> June. <br> July. <br> August <br> Sertember. | $\begin{array}{r} 16,700 \\ 6,220 \\ 117,000 \\ 63,700 \\ 52,600 \\ 36,000 \\ 55,000 \\ 28,400 \\ 6,700 \\ 5,660 \\ 14,100 \\ 49,700 \end{array}$ | $\begin{array}{r} 1,640 \\ 1,570 \\ 4,940 \\ 4,940 \\ 9,000 \\ 10,300 \\ 7,780 \\ 5,850 \\ 3,200 \\ 2,340 \\ 2,160 \\ 2,180 \end{array}$ |  | $\begin{gathered} 0.438 \\ . .281 \\ 1.71 \\ 1.45 \\ 2.18 \\ 1.64 \\ 2.33 \\ 1.16 \\ .463 \\ .381 \\ .471 \\ .852 \end{gathered}$ | $\begin{array}{r} 0.50 \\ .31 \\ 1.97 \\ 1.67 \\ 2.27 \\ 1.89 \\ 2.60 \\ 1.34 \\ .52 \\ .44 \\ .54 \\ .95 \\ \hline \end{array}$ | $\begin{aligned} & 0.283 \\ & .182 \\ & 1.11 \\ & .937 \\ & 1.41 \\ & 1.06 \\ & 1.51 \\ & .750 \\ & .209 \\ & .246 \\ & .304 \\ & .551 \end{aligned}$ |
| The yea | 117,000 | 1,570 | 10,670 | 1.11 | 15.00 | . 717 |
| October. <br> November <br> Jecember. <br> January. <br> February <br> March. <br> Arr11... <br> May..... . <br> June..... <br> July. . . . . <br> August... <br> Sertember | $\begin{array}{r} 3,650 \\ 15,000 \\ 19,000 \\ 49,700 \\ 103,000 \\ 434,000 \\ 54,700 \\ 7,400 \\ 8,270 \\ 3,830 \\ 4,240 \\ 3,570 \end{array}$ | $\begin{array}{r} 1,280 \\ 1,750 \\ 4,000 \\ 4,500 \\ 6,000 \\ 22,600 \\ 7,800 \\ 3,600 \\ 2,600 \\ 1,610 \\ 1,580 \\ 1,130 \end{array}$ | $\begin{array}{r} 1,823 \\ 5,946 \\ 7,300 \\ 19,650 \\ 21,040 \\ 68,360 \\ 20,570 \\ 5,613 \\ 3,888 \\ 2,865 \\ 2,356 \\ 1,629 \end{array}$ | $\begin{gathered} .189 \\ .616 \\ .756 \\ 2.04 \\ 2.18 \\ 7.08 \\ 2.13 \\ .582 \\ .403 \\ .297 \\ .244 \\ .169 \\ \hline \end{gathered}$ | $\begin{array}{r} .22 \\ .69 \\ .87 \\ 2.35 \\ 2.35 \\ 8.16 \\ 2.38 \\ .67 \\ .45 \\ .34 \\ .28 \\ .19 \\ \hline \end{array}$ | $\begin{gathered} .122 \\ .388 \\ .489 \\ 1.32 \\ 1.41 \\ 4.58 \\ 1.38 \\ .376 \\ .260 \\ .192 \\ .158 \\ .109 \end{gathered}$ |
| The year | 434,000 | 1,130 | 13,440 | 1.39 | 18.95 | . 898 |
| October. <br> November. <br> December. <br> January.. <br> Febmary. <br> March. <br> Aprll $\qquad$ <br> May..... . <br> June. . . . . <br> July..... <br> Atrust... <br> September | $\begin{array}{r} 30,300 \\ 5,960 \\ 17,000 \\ 82,300 \\ 77,600 \\ 25,500 \\ 277,000 \\ 42,200 \\ 9,530 \\ 9,000 \\ 54,000 \\ 14,000 \end{array}$ | $\begin{array}{r} 1,370 \\ 1,680 \\ 1,860 \\ 15,000 \\ 12,000 \\ 7,960 \\ 6,540 \\ 6,540 \\ 4,690 \\ 2,420 \\ 1,900 \\ 2,160 \end{array}$ | $\begin{array}{r} 4,701 \\ 2,657 \\ 10,100 \\ 31,350 \\ 23,440 \\ 12,010 \\ 32,200 \\ 13,340 \\ 6,183 \\ 4,020 \\ 7,352 \\ 5,581 \end{array}$ | $\begin{gathered} .487 \\ .275 \\ 1.05 \\ 3.25 \\ 2.43 \\ 1.24 \\ 3.34 \\ 1.38 \\ .641 \\ .417 \\ .762 \\ .578 \end{gathered}$ | $\begin{array}{r} .56 \\ .31 \\ 1.21 \\ 3.75 \\ 2.53 \\ 1.43 \\ 3.73 \\ 1.59 \\ .72 \\ .48 \\ .88 \\ .64 \end{array}$ | $\begin{gathered} .315 \\ .178 \\ .679 \\ 2.10 \\ 1.57 \\ .301 \\ 2.16 \\ .892 \\ .414 \\ .270 \\ .492 \\ .374 \end{gathered}$ |
| The jear | 277,000 | 1,370 | 12,670 | 1.31 | 17.83 | . 847 |
| October.. <br> November. <br> December. <br> January. <br> February. <br> March.... <br> Apr11.... <br> May...... <br> June..... <br> July..... <br> August... <br> September | $\begin{array}{r} 154,000 \\ 38,600 \\ 16,100 \\ 19,800 \\ 12,300 \\ 22,600 \\ 10,800 \\ 28,400 \\ 8,270 \\ 19,000 \\ 10,700 \\ 2,900 \end{array}$ | $\begin{aligned} & 2,450 \\ & 6,540 \\ & 4,540 \\ & 4,220 \\ & 5,580 \\ & 5,960 \\ & 5,580 \\ & 3,420 \\ & 3,100 \\ & 1,790 \\ & 1,420 \\ & 1,320 \end{aligned}$ | $\begin{array}{r} 23,840 \\ 13,320 \\ 7,332 \\ 7,094 \\ 8,022 \\ 10,280 \\ 8,019 \\ 9,275 \\ 5,3.37 \\ 4,982 \\ 4,616 \\ 1,925 \end{array}$ | $\begin{gathered} 2.47 \\ 1.38 \\ .760 \\ .735 \\ .831 \\ 1.07 \\ .831 \\ .961 \\ .553 \\ .516 \\ .478 \\ .199 \end{gathered}$ | $\begin{array}{r} 2.85 \\ 1.54 \\ .38 \\ .85 \\ .87 \\ 1.23 \\ .93 \\ 1.11 \\ .62 \\ .59 \\ .55 \\ .22 \end{array}$ | $\begin{gathered} 1.60 \\ .892 \\ .491 \\ .475 \\ .537 \\ .692 \\ .537 \\ .621 \\ .357 \\ .333 \\ .309 \\ .129 \end{gathered}$ |
| The year. | 154,000, | 1,320 | 8,692 | . 901 | 12.24 | . 582 |
| October... <br> November.. <br> December. <br> January.. <br> February.. <br> :arch..... <br> April..... <br> May....... <br> June. <br> July..... <br> August.... <br> September. | $\begin{array}{r} 1,700 \\ 2,530 \\ 38,400 \\ 32,400 \\ 117,000 \\ 54,700 \\ 61,400 \\ 13,700 \\ 11,300 \\ 27,800 \\ 24,800 \\ 2,680 \end{array}$ | $\begin{array}{r} 1,110 \\ 1,360 \\ 2,130 \\ 3,770 \\ 10,800 \\ 7,560 \\ 8,610 \\ 4,830 \\ 2,730 \\ 1,850 \\ 2,250 \\ 1,120 \end{array}$ | $\begin{array}{r} 1,400 \\ 1,927 \\ 7,700 \\ 6,515 \\ 31,370 \\ 18,270 \\ 16,670 \\ 7,362 \\ 4,648 \\ 6,987 \\ 5,019 \\ 1,675 \end{array}$ | $\begin{gathered} .145 \\ .200 \\ .798 \\ .675 \\ 3.25 \\ 1.89 \\ 1.73 \\ .763 \\ .513 \\ .724 \\ .520 \\ .174 \end{gathered}$ | $\begin{array}{r} .17 \\ .22 \\ .92 \\ .78 \\ .38 \\ 2.18 \\ 1.93 \\ .88 \\ .57 \\ .83 \\ .60 \\ .15 \end{array}$ | $\begin{gathered} .094 \\ .129 \\ .516 \\ .436 \\ 2.10 \\ 1.28 \\ 1.12 \\ .493 \\ .382 \\ .468 \\ .336 \\ .112 \end{gathered}$ |
| The jear..... | 117,000 | 1,110 | 9,002 | .933 | 12.65 | . 603 |

Monthly discharge of Potomac River at Point of Roriks, rd.--Continued


Yearly discharge of Potomac River at Point of Rocks, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Diacharge in million gallons per day per square mile | Discharge in second-feet |  | Runoff in Inches | Di scharge in million Eallons per dey per square mile |
|  | Mean | Per square mile |  |  | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { m1le } \end{gathered}$ |  |  |
| 1897 | 11,760 | 1.22 | 16.53 | 0.789 | 10,630 | 1.10 | 14.95 | 0.711 |
| 1898 | 9,566 | . 991 | 13.45 | . 641 | 11,830 | 1.23 | 16.64 | . 795 |
| 1899 | 12,900 | 1.34 | 18.15 | . 866 | 10,480 | 1.09 | 14.75 | . 704 |
| 1900 | 6,395 | . 653 | 9.00 | . 429 | 6,665 | . 691 | 9.37 | . 447 |
| 1901 | 12,260 | 1.27 | 17.26 | . 821 | 14,170 | 1.47 | 19.94 | . 950 |
| 1902. | 15,240 | 1.58 | 21.42 | 1.02 | 14,360 | 1.49 | 20.19 | .963 |
| 1903. | 13,740 | 1.42 | 19.32 | . 918 | 12,390 | 1.28 | 17.42 | . 827 |
| 1904. | 6,594 | . 683 | 9.30 | . 441 | 6,291 | . 652 | 8.88 | . 421 |
| 1905 | 6,675 | . 692 | 9.40 | . 447 | 7,614 | . 789 | 10.71 | . 510 |
| 1906. | 9,257 | . 959 | 13.00 | . 620 | 10,770 | 1.12 | 15.14 | . 724 |
| 1907 | 13,890 | 1.44 | 19.54 | . 931 | 13,500 | 1.40 | 18.98 | . 905 |
| 1908 | 14,000 | 1.45 | 19.73 | .937 | 12,200 | 1.26 | 17.21 | . 814 |
| 1909. | 6,430 | . 666 | 9.03 | . 430 | 6,370 | . 660 | 8.94 | . 427 |
| 1910. | 7,750 | . 803 | 10.91 | . 519 | 7,570 | . 784 | 10.68 | . 507 |
| 1911. | 6,500 | .674 | 9.13 | . 436 | 8,150 | . 844 | 11.45 | . 545 |
| 1912.......... | 11,500 | 1.19 | 16.17 | . 769 | 10,200 | 1.06 | 14.39 | . 685 |
| 1913.......... | 7,930 | . 822 | 11.16 | . 531 | 19,490 | . 983 | 13.36 | . 635 |
| 1914 | 10,200 | 1.06 | 14.43 | . 685 | 8,620 | .993 | 12.15 | . 577 |
| 191 | 9,730 | 1.01 | 13.69 | . 653 | 10,400 | 1.08 | 14.63 | . 698 |
| 1916...... . . . | 10,400 | 1.08 | 14.63 | . 698 | 9,520 | . 986 | 13.45 | . 637 |
| 1917 | 7,880 | .816 | 11. 09 | . 527 | 8,230 | . 853 | 11.57 | . 551 |
| 1918 | 2,390 | . 973 | 13.20 | . 629 | 10,200 | 1.06 | 14.30 | . 685 |
| 1919 | 2,390 | . 869 | 11.80 | . 562 | 7,850 | . 813 | 11.03 | . 525 |
| 1920......... | 10,200 | 1.06 | 14.40 | . 685 | 10,500 | 1.09 | 14.77 | . 704 |
| 1921 | 7,040 | .729 | 9.90 | . 471 | 7,080 | . 734 | 9.97 | . 474 |
| 1922. | 8,160 | . 846 | 11.46 | . 547 | 7,070 | . 733 | 9.93 | . 474 |
| 1923. | 5,030 | . 521 | 7.08 | . 337 | 5,480 | . 568 | 7.71 | . 367 |
| 1924 | 13,500 | 1.41 | 19.22 | . 911 | 14,100 | 1.46 | 19.90 | . 944 |
| 1925 | 6,920 | . 717 | 9.73 | . 463 | 6,860 | . 711 | 9.63 | . 460 |
| 1926 | 7,970 | . 826 | 11.22 | . 534 | 9,870 | 1.02 | 13.90 | . 659 |
| 1927. | 11,500 | 1.19 | 16.14 | . 769 | 11,100 | 1.15 | 25.57 | . 743 |
| 1928. | 12,000 | 1.24 | 16.94 | . 801 | 10,100 | 1.05 | 14.18 | - 679 |
| 1929 | 8,550 | . 886 | 12.03 | . 573 | 10,700 | 1.11 | 15.14 | . 717 |
| 1930. | 6,490 | . 672 | 9.14 | . 434 | 3,760 | .390 | 5.28 | . 252 |
| 1931. | 4,920 | . 510 | 6.92 | . 330 | 5,050 | . 523 | 7.11 | . 338 |
| 1932. | 6,920 | .717 | 9.78 | . 463 | 8,860 | . 918 | 12.51 | . 593 |
| 1933. | 12,700 | 1.32 | 17.83 | . 853 | 11,100 | 1.15 | 15.57 | . 743 |
| 1934. | 4,856 | . 503 | 6.84 | . 325 | 6,123 | -634 | 8.61 | . 410 |
| 1935. | 10,670 | 1.31 | 15.00 | . 717 | 9,948 | 1.03 | 14.00 |  |
| 1936. | 13,440 | 1.39 | 18.95 | . 898 | 13,650 | 1.41 | 19.25 | . 311 |
| 1937.......... | 12,670 | 1.31 | 17.83 | . 847 | 14,940 |  | 21.02 |  |
| 1938......... | 8,692 | . 901 | 12.24 | . 582 | 5,881 | . 609 | 8.28 | . 394 |
| 1939. | 9,002 | .933 | 12.65 | . 603 | 8,944 | .927 | 12.57 | . 599 |
| 1940 | 9,108 | . 944 | 12.86 | . 610 | 10,200 | 1.06 | 14.41 | . 685 |
| 1941 | 7,317 | . 758 | 10.31 | . 490 | 5,841 | . 605 | 8.23 | . 391 |
| 1942. | 6,744 | . 699 | 9.48 | . 452 | 11,350 | 1.18 | 15.94 | . 763 |
| 1943. | 13,480 | 1.40 | 18.96 | . 905 | - | - | - | - |
| H1 chest.... | 15,240 | 1.58 | 21.42 | 1.02 | 14,940 | 1.55 | 21.02 | 1.00 |
| Averago.... | 9,497 | . 984 | 13.37 | . 636 | 9,478 | . 982 | 13.34 | . 635 |
| Lowest.... . | 4,856 | . 503 | 6.84 | . 325 | 3,760 | .390 | 5.28 | . 252 |

Potomac River near Weshington, D. C.
Locetion. - Weter-stege recorder, lat. $38^{\circ} 5^{7} 736^{\prime \prime}$, long. $77^{\circ} 08133^{\prime \prime}$, $1 \frac{2}{4}$ miles northeest of Lanctey, Falrfex County, Va., and $2 \frac{1}{2}$ mlles upstream from Chaln Bridpe. Datum of gege Is 38.00 feet above meen sea level, adjustment of 1912.
Drainage erea.- 11,560 square miles.
Fecords evellable.- Merch 1930 to September 1943.
Extremes. - Maximum discharge, 484,000 second-feet Mer. 19, 1936 (eage helght, 28.1 feet); minimum daily, 448 second-feet Aug. 25, 1930.

Flood of June 2, 1889 was of epproximetely the same megnitude es that of Mar. 19, 1936.

Remerks.- Records do not include water diverted at Great Falls through aqueducts for municipal supply of Washington, D. C., or efter Sept. 3, 1941, flow in Chesepeake a flow throukh equeducts can be obtained from the United Stetes Engineer office. Flow in Chesapeake \& Ohio cenal can be obteined from the U. S. Geological Survey.

Monthly discharge of Potomec River near we shington, D. C

| Month | Diecherge in second-feet |  |  |  | Runoff in inches | Discherge in million gellons per dey per square rile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Meen | Per square mile |  |  |
| March 22-31 <br> April <br> May. <br> June. <br> July. <br> August. <br> September $1930-31$ <br> October. <br> November <br> December <br> January. <br> Pebruery. <br> March. <br> April. <br> Mey. <br> June <br> July. <br> August. <br> September |  |  | 8,910 |  |  |  |
|  | 17,800 | 5,820 | 9,200 |  |  |  |
|  | 5,820 | 2,420 | 3,950 |  |  |  |
|  | 4,860 2,830 | 1,740 -632 | $\begin{aligned} & 2,870 \\ & 1,280 \end{aligned}$ |  |  |  |
|  | -698 | 448 | - 569 |  |  |  |
|  | 1,020 | 546 |  |  |  |  |
|  |  |  | 583 |  |  |  |
|  | 1,360 | 467 | 700 |  |  |  |
|  | 8,300 | 632 | 1,730 |  |  |  |
|  | 5,820 | 1,760 | 3,000 |  |  |  |
|  | 5,820 | 1,800 | 3,670 |  |  |  |
|  | 26,600 | 3,200 | 6,500 |  |  |  |
|  | 36,100 | 5,230 | 15,900 |  |  |  |
|  | 31,600 | 5,230 | 14,400 |  |  |  |
|  | 11,800 | 2,750 | 6,390 |  |  |  |
|  | 13,800 | 2,060 | 4,450 |  |  |  |
|  | 5,230 | 1,160 | 2,540 |  |  |  |
| The jeer | 36,100 | 467 | 5,540 |  |  |  |
| October........... | 3,150 | 755 | 1,400 |  |  |  |
| November.. | 1,240 | 770 | -,938 |  |  |  |
| December. | 6,810 | 1,030 | 2,710 |  |  |  |
| January. | 15,400 | 2,870 | 6,780 |  |  |  |
| February. | 58,300 | 3,560 | 11,900 |  |  |  |
| March. | 60,000 | 3,270 |  |  |  |  |
| Aprl1 | 53,500 163,000 | 6,140 | 27,800 |  |  |  |
| May. | -5,520 | 2,950 | 4,030 |  |  |  |
| July. | 6,810 | 1,410 | 3,120 |  |  |  |
| Angust. | 1,660 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| The year. | 163,000 | 585 | 7,950 |  |  |  |
| 1932-33 |  |  |  |  |  |  |
| October. November. | 39,500 | 7, 285 | 21,000 |  |  |  |
| December. | 27,700 | 2,740 | 8,410 |  |  |  |
| Jenuary | 63,900 | 6,580 | 15,600 |  |  |  |
| Februery. | 21,200 | 10,900 | 14,700 |  |  |  |
| Merch.. | 70,900 | 8,300 | 24,900 |  |  |  |
| April | 121,000 | 14,600 | 36,400 |  |  |  |
| Mey. | 48,400 | 10,600 3,440 | $\begin{array}{r} 22,700 \\ 6,030 \end{array}$ |  |  |  |
| June | 24,800 | 2,420 | 5,400 |  |  |  |
| August | 86,700 | 2,980 | 13,400 |  |  |  |
| September. | 26,400 | 4,010 | 7,920 |  |  |  |
| The year. | 121,000 | 595 | 15,300 |  |  |  |

Monthly discharge of Potomac River near Washington, D. C.--Continued

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | Per squere mile |  |  |
|  |  | 2,600 2,040 1,840 2,700 2,500 2,600 6,580 4,760 2,420 1,190 1,320 1,350 |  |  |  |  |
| The jear. | 47,200 | 1,190 | 6,170 |  |  |  |
| October. <br> November <br> December <br> Jenuery. <br> Februery. <br> March. $\qquad$ <br> Apri1. <br> ........... <br> May. $\qquad$ <br> June <br> ........... <br> July. <br> August. <br> September | $\begin{array}{r} 28,800 \\ 9,120 \\ 120,000 \\ 66,700 \\ 63,900 \\ 40,000 \\ 58,700 \\ 29,900 \\ 7,780 \\ 5,720 \\ 11,800 \\ 47,200 \end{array}$ | $\begin{array}{r} 2,260 \\ 2,240 \\ 6,360 \\ 6,810 \\ 11,200 \\ 12,200 \\ 9,400 \\ 6,360 \\ 3,530 \\ 2,680 \\ 2,040 \\ 2,260 \end{array}$ | $\begin{array}{r} 5,744 \\ 3,425 \\ 19,390 \\ 15,990 \\ 25,130 \\ 18,170 \\ 26,030 \\ 12,990 \\ 5,203 \\ 3,964 \\ 4,442 \\ 8,843 \end{array}$ |  |  |  |
| The year | 120,000 | 2,040 | 12,360 |  |  |  |
| October.. November. December. Jenuery. <br> February. March. Apri1.... May. June $\qquad$ July..... A11Eา2st... September | $\begin{array}{r} 5,930 \\ 17,500 \\ 21,600 \\ 53,700 \\ 126,000 \\ 426,000 \\ 59,200 \\ 8,580 \\ 9,100 \\ 4,170 \\ 9,700 \\ 3,350 \end{array}$ | $\begin{array}{r} 1,640 \\ 2,420 \\ 4,700 \\ 5,200 \\ 7,200 \\ 25,100 \\ 8,850 \\ 3,970 \\ 2,760 \\ 2,140 \\ 1,710 \\ 1,220 \end{array}$ | $\begin{array}{r} 2,209 \\ 7,217 \\ 8,533 \\ 24,010 \\ 24,220 \\ 76,510 \\ 23,690 \\ 6,415 \\ 4,327 \\ 3,192 \\ 3,173 \\ 1,736 \end{array}$ |  |  |  |
| The year | 426,000 | 1,220 | 15,460 |  |  |  |
| October.... November December. January February. Merch. April ..... May......... June July. August September. | $\begin{array}{r} 31,100 \\ 6,120 \\ 23,100 \\ 91,300 \\ 77,800 \\ 27,800 \\ 310,000 \\ 55,000 \\ 15,400 \\ 11,500 \\ 80,800 \\ 15,000 \end{array}$ | 1,670 1,960 1,770 17,100 15,000 9,700 7,280 8,040 5,900 2,900 2,010 2,840 | $\begin{array}{r} 5,326 \\ 2,966 \\ 12,260 \\ 37,190 \\ 29,080 \\ 13,810 \\ 36,400 \\ 16,000 \\ 7,970 \\ 5,118 \\ 11,060 \\ 6,678 \end{array}$ |  |  |  |
| The year. | 310,000 | 1,670 | 15,230 |  |  |  |
| October. <br> November <br> December. <br> January. <br> February. <br> Merch... <br> Apr11...... <br> Mey......... <br> June. <br> July........ <br> August. <br> September.. | $\begin{array}{r} 175,000 \\ 47,900 \\ 16,700 \\ 19,800 \\ 14,300 \\ 25,600 \\ 11,800 \\ 30,000 \\ 9,400 \\ 21,200 \\ 11,500 \\ 3,860 \end{array}$ | 3,160 8,040 5,000 4,920 6,800 7,280 6,340 4,210 3,340 1,960 1,530 1,550 | $\begin{array}{r} 27,180 \\ 17,000 \\ 8,661 \\ 8,403 \\ 9,635 \\ 11,910 \\ 9,148 \\ 10,040 \\ 5,772 \\ 5,520 \\ 5,391 \\ 2,452 \end{array}$ |  |  |  |
| The year.. | 175,000 | 1,530 | 10,110 |  |  |  |

Monthly discharge of Potomac River near Waohington, D. C.--Cont inued


Yeerly diecherge of Potomec River neer Weshington, D. C.

| Year | Yeer ending Sept. 30 |  |  |  | Calender year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discherge in million gellons per day per square mile | Diecherge in eecond-feet |  | Runoff 1n inches | Discherge in million gellons per dey per square mile |
|  | Mean | Per sque mile |  |  | Meen | Per squere m1le |  |  |
| 1931........... | 5,540 |  |  |  | 5,710 |  |  |  |
| 1932........... | 7,950 |  |  |  | 10,600 |  |  |  |
| 1933. | 15,300 |  |  |  | 13,100 |  |  |  |
| 1934. | 6,170 |  |  |  | 7,741 |  |  |  |
| 1935. | 12,360 |  |  |  | 11,450 |  |  |  |
| 1936. | 15,460 |  |  |  | 15,690 |  |  |  |
| 1937........... | 15,230 |  |  |  | 17,930 |  |  |  |
| 1938.......... | 10,110 |  |  |  | 6,867 |  |  |  |
| 1939. | 10,470 |  |  |  | 10,350 |  |  |  |
| 1940...... . . | 10,760 |  |  |  | 12,130 |  |  |  |
| 1941........... | 8,600 |  |  |  | 6,658 |  |  |  |
| 1942........... | 8,383 |  |  |  | 13,930 |  |  |  |
| 1943........... | 15,990 |  |  |  |  |  |  |  |
| R1gheet..... | 15,990 |  |  |  | 17,930 |  |  |  |
| Averege..... | 10,950 |  |  |  | 11,010 |  |  |  |
| Lowest...... | 5,540 |  |  |  | 5,710 |  |  |  |

Savage River et Bloomington, Md.
Location.- Water-stage recorder, lat. $39^{\circ} 29^{\prime 0} 00^{\prime \prime}$, long. $79^{\circ} 94^{\circ}{ }^{\circ} 24^{\prime \prime}$, at Bloomington, Garrett County, 2,200 feet upetream from mouth. Datum of gege 1s 978.76 feet above mean eea level (Corps of Fngineers, U. S. Army, bench merk). Prior to Sept. 7, 1929, chain or steff gases et various eites and datum planes as follows.

From May 3,1905 to July 15, 1906 chain gage on highwey bridge 800 feet upstreem from mouth, 1ndependent datum; from oct. 31, 1924 to Sapt. 30, 1927 staff gage 1, 400 feet upstream from mouth, independent datum; from Aug. 19, 1929 to Sept. 7, 1929 staff gage et present site and detum.
Drainage area. - 115 square miles.
Rocords evallable. - May 1905 to July 1906, October 1924 to September 1927, August 1929 to sept ember I943.
Extremes.- Maximum discharge, 14,800 second-feet Mar. 17, 1936 (gege height, 10.8 feet), by slope-aree determination; minimum 0.7 second-foot Sept. 21, 1932.

Maximum stege known, about 13 feet Mar. 29, 1924, present datum.
Remarks.- Records do not include weter diverted above station by Baltimore \& Ohio Railroad (quantity negilgible) and of Frostburg, Westermport, end Bloomington, Md., and Pledmont, W. Va., for municipel supply. Information regarding the quantity of weter diverted can be obtained from the orfice of Chief Engineer, Marylend State Depertment of Realth, Baltimore.

Monthly diecharge of Savege River et Bloomington, Md.

| Month | Diecharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per dey per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mex1mum | Minimum | Mean | Per square mile |  |  |
| 1905 |  |  |  |  |  |  |
| May 3-31. June. | 399 568 | 34 29 | $197.8$ |  |  |  |
| July.. | 466 | 12 | 85.0 |  |  |  |
| August. | 210 | 10 | 34.0 |  |  |  |
| September. | 535 | 8 | 56.0 |  |  |  |
| October.... 1905-6... |  |  |  |  |  |  |
| November. . . | 418 | 13 | 51.1 |  |  |  |
| December... | 924 | 21 | 220 |  |  |  |
| January. | 2,200 | 66 | 330 |  |  |  |
| Februery. | 103 | 24 | 43.8 |  |  |  |
| Merch. | 2,260 | 36 | 348 |  |  |  |
| Apri1. | 1,380 | 163 | 521 |  |  |  |
| May. . | 174 | 23 | 69.9 |  |  |  |
| June. | 884 | 28 | 138 |  |  |  |
| July 1-15 | 40 | 10 | 17.8 |  |  |  |

Monthly discharge of Savage River at Bloomington, Md.--Continued

| Month | Discharge in second-feet |  |  |  | RunoffIninches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
|  | 46 120 408 1,480 487 436 714 140 65 20 4.6 | $\begin{gathered} 7.0 \\ 13.5 \\ 12.5 \\ 30 \\ 158 \\ 52 \\ 38 \\ 9.2 \\ 6.5 \\ 2.8 \\ 2.4 \end{gathered}$ | 14.1 50.8 57.8 389 222 139 222 25.0 15.4 7.92 3.23 |  |  |  |
| 1925-26 <br> October <br> November. <br> December <br> January. <br> February <br> March. <br> April. <br> May. <br> June <br> July <br> August. <br> Soptember | $\begin{array}{r} 1,170 \\ 2,250 \\ 332 \\ 1,480 \\ 1,580 \\ 487 \\ 672 \\ 47 \\ 44 \\ 480 \\ 844 \\ 457 \end{array}$ | $2.7$ <br> 94 <br> - <br> - 49 <br> 49 18 <br> 13 <br> 11 <br> 10 32 | $\begin{aligned} & 190 \\ & 310 \\ & 126 \\ & 220 \\ & 346 \\ & 232 \\ & 230 \\ & 29.6 \\ & 24.4 \\ & 50.8 \\ & 151 \\ & 175 \end{aligned}$ |  |  |  |
| The year. | 2,250 | 2.7 | 172 |  |  |  |
| October. November.. Decomber. January. February March..... April. May. July Angust September. | $\begin{array}{r} 529 \\ 918 \\ 881 \\ 1,820 \\ 1,760 \\ 965 \\ 2,090 \\ 1,540 \\ 920 \\ 128 \\ 73 \\ 15 \end{array}$ | 42 80 48 - 175 166 198 166 40 12 10 4 | $\begin{aligned} & 183 \\ & 261 \\ & 286 \\ & 331 \\ & 523 \\ & 361 \\ & 481 \\ & 298 \\ & 193 \\ & 31.9 \\ & 25.9 \\ & 8.2 \end{aligned}$ |  |  |  |
| The jear. | 2,090 | 4 | 246 |  |  |  |
| August 19-31. <br> Sept omber.... | $\begin{array}{r} 22 \\ 179 \end{array}$ | $\begin{aligned} & 5 \\ & 3 \end{aligned}$ | $\begin{array}{r} 8.6 \\ 20.8 \end{array}$ |  |  |  |
| 1929-30 <br> October <br> November <br> December <br> January. <br> February <br> March <br> April <br> May. <br> June <br> July. <br> August <br> September. | 1,040 951 795 370 330 380 380 136 155 24 18 8.5 | 13 <br> 60 <br> 60 <br> 74 <br> 70 <br> 22 <br> 12 <br> 2.0 <br> 1.4 1.8 | $\begin{aligned} & 194 \\ & 218 \\ & 215 \\ & 120 \\ & 173 \\ & 203 \\ & 173 \\ & 56.4 \\ & 33.0 \\ & 7.59 \\ & 4.61 \\ & 3.17 \end{aligned}$ |  |  |  |
| The year. | 1,040 | 1.4 | 116 |  |  |  |
| October. <br> November <br> December <br> January. <br> February. <br> March. <br> April. <br> May. <br> June <br> July. <br> August. <br> September | $\begin{array}{r} 3.8 \\ 5.0 \\ 35 \\ 395 \\ 490 \\ 1,050 \\ 1,050 \\ 1,160 \\ 146 \\ 247 \\ 64 \\ 145 \end{array}$ | $\begin{gathered} 1.6 \\ 2.0 \\ - \\ 10 \\ 37 \\ 57 \\ 72 \\ 94 \\ 13 \\ 5.8 \\ 3.1 \\ 4.1 \end{gathered}$ | 2.24 3.56 11.6 65.6 143 250 383 365 47.6 33.6 17.5 22.9 |  |  |  |
|  | 1,160 | 1.6 | 112 |  |  |  |

Monthly discharge of Savage River at Bloomington, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1931-32 |  |  |  |  |  |  |
| October.. | 29 | 5 | 11.5 |  |  |  |
| November December | 12 | 5.5 | 77.40 |  |  |  |
| December January. | 515 | 6 | 109 |  |  |  |
|  | 591 | 55 | 185 |  |  |  |
| February | 1,280 | 60 | 251 |  |  |  |
| March. | 2,000 | 47 | 352 |  |  |  |
| April | 1,650 | 55 | 267 |  |  |  |
| May.. | 2,240 | 40 | 361 |  |  |  |
| June July | 57 | 12 | 26.7 |  |  |  |
| August... | 24 | $\begin{aligned} & 7 \\ & 2.2 \end{aligned}$ | 20.2 5.87 |  |  |  |
|  | 3.2 | . 7 | 1.42 |  |  |  |
| The jear | 2,240 | . 7 | 133 |  |  |  |
| October............ |  |  |  |  |  |  |
| November | 702 | 2.0 | 33.7 |  |  |  |
| December | 467 | 19 |  |  |  |  |
| January. February | 648 | 89 | 193 |  |  |  |
|  | 540 | 135 | 237 |  |  |  |
| March... | 3,700 | 102 | 592 |  |  |  |
| April. | 2,280 | 159 | 511 |  |  |  |
| May. | 1,060 | 87 | 398 |  |  |  |
| June <br> July | 115 | 14 | 44.4 |  |  |  |
|  | 70 | 7.5 | 21.2 |  |  |  |
| August. Sentember | 125 | 4.5 | 19.2 |  |  |  |
| Septemb | 106 | 13 | 31.5 |  |  |  |
| The year. | 3,700 | 2.0 | 196 |  |  |  |
| October. . . 1933 . 3 . 3 . | 18 | 6.3 |  |  |  |  |
| November | 66 | 7.2 | 27.5 |  |  |  |
| December. | 705 | 19 | 133 |  |  |  |
| January. | 2,670 | 69 | 343 |  |  |  |
| February | 130 | 25 | 56.6 |  |  |  |
| March. | 714 | 30 | 244 |  |  |  |
| April | 1,100 | 66 | 256 |  |  |  |
| May. | 77 | 37 | 54.7 |  |  |  |
| June <br> July | 628 | 13 | 61.2 |  |  |  |
| July. | 28 | 3.7 | 11.9 |  |  |  |
| August | 239 | 4.4 | 34.0 |  |  |  |
| Septem | 324 | 4.0 | 33.7 |  |  |  |
| The | 2,670 | 3.7 | 105 |  |  |  |
| October. . 1934-35 | 190 | 11 |  |  |  |  |
| November | 338 | 25 | 79.7 |  |  |  |
| December | 504 | 46 | 150 |  |  |  |
| January. | 1,600 | 89 | 321 |  |  |  |
| February | 1,320 | 71 | 311 |  |  |  |
| March.. | 504 | 132 | 280 |  |  |  |
| April. | 1,140 | 77 | 291 |  |  |  |
| May. | 1,270 | 62 | 319 |  |  |  |
|  | 141 | 28 | 57.2 |  |  |  |
| July | 139 | 13 | 37.2 |  |  |  |
| AugustSeptem | 634 | 12 | 115 |  |  |  |
|  | 1,163 | 16 | 151 |  |  |  |
| The year | 1,600 | 11 | 178 |  |  |  |
| October. 1935-36 |  |  |  |  |  |  |
| November. | 202 | 18 | 68.9 |  |  |  |
| December. | 574 | 26 | 136 |  |  |  |
| January. | 880 | 60 | 275 |  |  |  |
| February | 2,160 | 45 | 324 |  |  |  |
| March. | 7,170 | 320 | 1,243 |  |  |  |
| April. | 1,470 | 87 | 283 |  |  |  |
| May. | 155 | 30 | 78.0 |  |  |  |
| June. | 228 | 11 | 45.0 |  |  |  |
| July. | 337 | 2.5 | 33.2 |  |  |  |
| August. | 152 | 10 | 31.8 |  |  |  |
| September | 15 | 3.2 |  |  |  |  |
| The year.. | 7,170 | 2.5 | 213 |  |  |  |

Monthly discharge of Savege River et Bloomington, Md.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff in Inchee | Diecharge in million gallons per dey per aquere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per square mile |  |  |
| 1936-37 <br> October <br> November. $\qquad$ <br> December. <br> ...... . . <br> Jenuary. <br> February <br> Merch. <br> April. <br> May. <br> June <br> July. <br> August. <br> September. | 577 494 708 1,700 721 1,260 5,770 438 156 40 893 320 | $\begin{gathered} 4.7 \\ 20 \\ 12 \\ 223 \\ 126 \\ 108 \\ 98 \\ 69 \\ 26 \\ 5.5 \\ 2.1 \\ 10 \end{gathered}$ | $\begin{array}{r} 52.8 \\ 73.9 \\ 230 \\ 707 \\ 269 \\ 251 \\ 500 \\ 175 \\ 62.9 \\ 18.8 \\ 83.1 \\ 66.1 \end{array}$ |  |  |  |
| The yeer. | 5,770 | 2.1 | 207 |  |  |  |
| October........ November. <br> December. <br> Januery. <br> Februery. <br> March. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September. | $\begin{array}{r} 5,480 \\ 349 \\ 1,190 \\ 246 \\ 733 \\ 975 \\ 305 \\ 1,110 \\ 88 \\ 308 \\ 60 \\ 35 \end{array}$ | $\begin{gathered} 9.6 \\ 46 \\ 36 \\ 38 \\ 84 \\ 85 \\ 82 \\ 49 \\ 18 \\ 9.3 \\ 4.0 \\ 3.4 \end{gathered}$ | $\begin{aligned} & 402 \\ & 111 \\ & 182 \\ & 119 \\ & 199 \\ & 242 \\ & 182 \\ & 296 \\ & 44.7 \\ & 62.7 \\ & 20.1 \\ & 13.1 \end{aligned}$ |  |  |  |
| The year. | 5,480 | 3.4 | 156 |  |  |  |
| October <br> November. <br> December <br> Jenuery. <br> Febmiary <br> Merch. <br> April $\qquad$ <br> Mey <br> June $\qquad$ <br> July <br> August. <br> September | 8.0 48 122 772 1,560 1,180 2,370 282 610 605 54 50 | $\begin{array}{r} 2.9 \\ 3.8 \\ 12 \\ 17 \\ 137 \\ 81 \\ 128 \\ 34 \\ 20 \\ 24 \\ 7.6 \\ 4.2 \\ \hline \end{array}$ | $\begin{gathered} 4.98 \\ 11.9 \\ 45.6 \\ 120 \\ 532 \\ 328 \\ 425 \\ 101 \\ 100 \\ 106 \\ 21.7 \\ 13.3 \end{gathered}$ |  |  |  |
| The year. | 2,370 | 2.9 | 148 |  |  |  |
| October. <br> November <br> December. <br> Jenuary. <br> Februery <br> Merch. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September. | $\begin{array}{r} 89 \\ 71 \\ 88 \\ 52 \\ 912 \\ 1,320 \\ 2,130 \\ 1,380 \\ 845 \\ 920 \\ 481 \\ 362 \end{array}$ | $\begin{gathered} 5.5 \\ 13 \\ 17 \\ 13 \\ 14 \\ 82 \\ 124 \\ 66 \\ 63 \\ 15 \\ 8.7 \\ 14 \end{gathered}$ | $\begin{gathered} 16.3 \\ 29.2 \\ 45.2 \\ 21.8 \\ 201 \\ 418 \\ 591 \\ 194 \\ 208 \\ 103 \\ 79.1 \\ 92.4 \end{gathered}$ |  |  |  |
| The year... | 2,130 | 5.5 | 166 |  |  |  |
| October. <br> November. <br> December. <br> Januery. <br> February <br> March. <br> April. <br> Mey. <br> June. <br> July. <br> August. <br> September | $\begin{array}{r} 54 \\ 518 \\ 491 \\ 539 \\ 273 \\ 672 \\ 1,660 \\ 380 \\ 3,690 \\ 1,120 \\ 69 \\ 27 \end{array}$ | $\begin{array}{r} 13 \\ 52 \\ 112 \\ 54 \\ 61 \\ 75 \\ 55 \\ 39 \\ 45 \\ 28 \\ 9.5 \\ 4.1 \end{array}$ | 22.2 120 240 168 114 291 275 87.0 397 183 31.0 10.4 |  |  |  |
|  | 3,690 | 4.1 | 162 |  |  |  |

Monthly discharge of Savage River et Bloomington, Md.--Continued


Yearly discharge of Savage Rivar at Bloomington, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diacharge in second-feet |  | Runoff in inches | Discharce in million callons per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | D1 scharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Par equare mile |  |  |
| 1925.. | - |  |  |  |  |  |  |  |
| 1926. | 172 |  |  |  | 181 |  |  |  |
| 1927 | 246 |  |  |  | - |  |  |  |
| 1931.. | 116 |  |  |  | 65.2 |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1932. | 133 |  |  |  | 148 |  |  |  |
| 1933. | 196 |  |  |  | 185 |  |  |  |
| 1934. | 106 |  |  |  | 114 |  |  |  |
| 1935. | 178 |  |  |  | 175 |  |  |  |
| 1936. | 213 |  |  |  | 224 |  |  |  |
| 1937. | 207 |  |  |  | 236 |  |  |  |
| 1938. | 156 |  |  |  | 103 |  |  |  |
| 1939. | 148 |  |  |  | 150 |  |  |  |
| 1940. | 166 |  |  |  | 190 |  |  |  |
| 1941.. | 162 |  |  |  | 138 |  |  |  |
| 1942. | 146 |  |  |  | 216 |  |  |  |
| 1943. | 205 |  |  |  |  |  |  |  |

Georges Creek at Franklin, Md.
Location.- Water-stage recorder, lat. $39^{\circ} 299^{\prime \prime \prime}$, long. $79^{\circ} 02^{\prime \prime} 42^{\prime \prime}$, at Franklin, Allegany County, and l- mıles upstream from Westernport and mouth. Detum of gage is 958.96 feet above mean see level (West Viroinie Pulp \& Paper Company bench mark).
Drainace area.- 72.4 square miles.
Records avallable.- October 1929 to September 1943.
Fxtremes.- Maxlmum discharge, 8,500 second-feet Mar. 17, 1936 (gage height 9.6 feat, at site 95 feet downstream from present gage), by slopa-area determination; minimum,
Remarks - Pecords $10 c t .2,4-8,1930$.
aupply Records include part of sewage from city of Frostburg, which obtains its water aupply frcm R1c Piney Run (Monongahela R1ver Pasin) and Savage River. Records also include drainage from many active and abandoned coal minas. Records of pumpace from Chief Engineer, Maryland St of mine drainace can be obtained from the office of Chief Engineer, Maryland State Department of Health, Baltimore.

Monthly discharg3 of Georges Creek et Franklin, Md.

| Month | Diecherge in second-feet |  |  |  | Runoff in <br> inches | Discharge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mila |  |  |
|  |  |  |  |  |  |  |
|  | - | - | 54.5 |  |  |  |
|  | 413 | - | 87.4 |  |  |  |
|  | 294 | - | 90.2 |  |  |  |
|  | 113 | - | 53.2 |  |  |  |
|  | 110 | - | 50.5 |  |  |  |
|  | 113 | 37 | 72.2 |  |  |  |
|  | 120 | 34 | 68.3 |  |  |  |
|  | 60 | 16 | 31.0 |  |  |  |
|  | 108 | 6.4 | 16.2 |  |  |  |
|  | 14 | 1.9 | 5.19 |  |  |  |
|  | 10 | 1.8 | 3.97 2.80 |  |  |  |
|  | 11 | 1.6 | 2.80 |  |  |  |
|  | - | 1.6 | 45.4 |  |  |  |
| October. | 2.3 | 1.6 | 1.78 |  |  |  |
| Novamber. | 4.7 | 2.3 | 3.40 |  |  |  |
| Decamber. | 73 | - | 9.35 |  |  |  |
| Jernery. | 47 | - | 15.8 |  |  |  |
| February. | 70 | 9.3 | 28.6 |  |  |  |
| March. | 465 | 26 | 85.7 |  |  |  |
| April. | 494 | 43 | 161 |  |  |  |
| May.. | 1,220 | 49 | 244 |  |  |  |
| June. | 86 32 | 11.6 | 29.7 10.9 |  |  |  |
| Augy... | 33 | 4.6 3.2 | 10.86 |  |  |  |
| Saptember | 37 | 3.9 | 7.25 |  |  |  |
| The yee | 1,220 | 1.6 | 50.8 |  |  |  |
| Octobar.......... | 8 | 3.7 | 4.70 |  |  |  |
| Novamber. | 7 | 4.1 | 4.91 |  |  |  |
| December. | 80 | 4.5 | 20.6 |  |  |  |
| January. | 185 | 16 | 50.9 |  |  |  |
| February. | 569 | 24 | 96.8 |  |  |  |
| March. | 640 | 21 | 126 |  |  |  |
| April. | 572 | 32 | 136 |  |  |  |
| May.. | 1,430 | 29 | 207 |  |  |  |
| June. | 26 | 14.5 | 11.1 |  |  |  |
| August. | 11 | 2.8 | 4.53 |  |  |  |
| September | 4.5 | 2.1 | 2.65 |  |  |  |
| The yeer.................... | 1,430 | 2.1 | 57.6 |  |  |  |
| October........... | 124 | 2.7 | 18.3 |  |  |  |
| November: | 328 | 14 | 77.6 |  |  |  |
| December. | 114 | 15 | 39.2 |  |  |  |
| Januery. | 364 | 30 | 74.8 |  |  |  |
| February . | 155 | 47 | 85.5 |  |  |  |
| Merch. | 867 | 50 | 268 |  |  |  |
| Apr11 | 1,170 | 116 | 298 |  |  |  |
| Mey. . | 494 | 52 | 204 |  |  |  |
| June. | 44 | 13 | 23.5 |  |  |  |
| July. | 25 | 6 | 10.4 |  |  |  |
| August. | 44 | 4.1 | 8.56 |  |  |  |
| September | 44 | 5.7 | 13.0 |  |  |  |
| The yaar. | 1,170 | 2.7 | 93.3 |  |  |  |
| October . 1933 ...... | 11 | 4.6 | 5.92 |  |  |  |
| Novembar. | 16 | 5.5 | 8.26 |  |  |  |
| December. | 224 | 5.7 | 39.1 |  |  |  |
| Jenuary. . | 833 | 25 | 124 |  |  |  |
| Februery. | 45 | 12 | 20.2 |  |  |  |
| March... $\%$ | 212 | 12 | 75.6 |  |  |  |
| April. | 331 | 37 | 118 |  |  |  |
| May... | 49 | 17 | 27.7 |  |  |  |
| June. | 286 | 8.2 | 30.4 |  |  |  |
| July. | 28 | 4.8 | 10.9 |  |  |  |
| August. | 111 | 4.8 | 16.0 |  |  |  |
| Septembar. | 263 | 4.6 | 31.5 |  |  |  |
| The yeer. | 833 | 4.6 | 42.4 |  |  |  |

Monthly discharge of Georges Creek at Franklin, Md.-Continued


Monthly discharge of Georges Creek at Frenklin, Ma.--Continued

| Month | Discherge in sacond-foet |  |  |  | Runoff in inches | Discharge in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Meen | Per square mile |  |  |
|  | $\begin{array}{r} 26 \\ 27 \\ 26 \\ 33 \\ 209 \\ 476 \\ 1,030 \\ 563 \\ 354 \\ 232 \\ 165 \\ 135 \end{array}$ | $\begin{array}{r} 4.7 \\ 6.9 \\ 9.8 \\ 7.0 \\ 7.2 \\ 40 \\ 112 \\ 39 \\ 32 \\ 10.0 \\ 8.3 \\ 8.6 \end{array}$ | $\begin{gathered} 9.28 \\ 11.8 \\ 13.7 \\ 10.9 \\ 71.4 \\ 183 \\ 291 \\ 86.4 \\ 107 \\ 28.7 \\ 29.9 \\ 20.4 \end{gathered}$ |  |  |  |
| The your. | 1,030 | 4.7 | 72.3 |  |  |  |
| October <br> November <br> December <br> Jenuery. <br> February <br> March. <br> April. <br> May. <br> June <br> July <br> August. <br> September | $\begin{array}{r} 21 \\ 202 \\ 168 \\ 184 \\ 89 \\ 258 \\ 854 \\ 78 \\ 1,480 \\ 379 \\ 39 \\ 15 \end{array}$ | 9.5 28 47 38 30 28 35 16 20 23 10 6.8 | $\begin{gathered} 12.2 \\ 47.9 \\ 93.5 \\ 71.2 \\ 42.8 \\ 109 \\ 141 \\ 31.7 \\ 158 \\ 83.6 \\ 18.0 \\ 8.59 \end{gathered}$ |  |  |  |
| The yeer. | 1,480 | 6.8 | 68.1 |  |  |  |
| October..... <br> November. . <br> December.... <br> Januery. <br> Februery.... <br> March. <br> ....... <br> April <br> . . . . . . <br> Mey. <br> June. <br> July. <br> August. <br> September. | $\begin{array}{r} 10 \\ 40 \\ 135 \\ 68 \\ 182 \\ 460 \\ 625 \\ 894 \\ 92 \\ 32 \\ 45 \\ 79 \\ \hline \end{array}$ | $\begin{gathered} 6.5 \\ 7.4 \\ 7.1 \\ 11 \\ 18 \\ 24 \\ 39 \\ 34 \\ 20 \\ 8.0 \\ 7.1 \\ 8.9 \end{gathered}$ | $\begin{gathered} 7.48 \\ 11.0 \\ 19.3 \\ 24.0 \\ 55.4 \\ 139 \\ 155 \\ 224 \\ 43.9 \\ 15.0 \\ 19.4 \\ 17.7 \end{gathered}$ |  |  |  |
| The yeer.. | 894 | 6.5 | 61.0 |  |  |  |
| October. <br> November <br> Docember <br> January. <br> Fobruary <br> March. <br> April <br> May. <br> June. <br> July. <br> August. <br> September | 3,510 111 1,240 368 382 415 560 190 39 18 8.4 5.3 | $\begin{gathered} 11 \\ 32 \\ 30 \\ 68 \\ 91 \\ 49 \\ 41 \\ 39 \\ 8.8 \\ 5.0 \\ 4.0 \\ 3.1 \end{gathered}$ | $\begin{gathered} 270 \\ 50.0 \\ 173 \\ 159 \\ 167 \\ 137 \\ 128 \\ 71.6 \\ 17.7 \\ 9.06 \\ 5.21 \\ 3.62 \end{gathered}$ |  |  |  |
| The yoar...... | 3,510 | 3.1 | 99.2 |  |  |  |

Yeerly discharge of Georges Creek at Frenklin, Md

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in rillion gellons per day per square mile | Discherge in second-feet |  | Runoff in inches | Discharce In million mallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| $\begin{aligned} & 1930 . . \\ & 1931 . . \\ & 1932 . . \\ & 1933 \ldots \\ & 1934 . . \end{aligned}$ | $\begin{aligned} & 45.4 \\ & 50.8 \\ & 57.6 \\ & 03.3 \\ & 42.4 \end{aligned}$ |  |  |  | $\begin{aligned} & 26.3 \\ & 52.1 \\ & 66.2 \\ & 86.5 \\ & 48.7 \end{aligned}$ |  |  |  |



Georges Creek et Westernport, Md.
Locetion.- Chein gage, let. $39^{\circ} g^{\prime 2} 2^{\prime \prime \prime}$, long. $79^{\circ} 02^{133^{n}}$, et highwey bridge in Westernport, Allegany County, and 0.5 mile upstream from mouth.
Dreinage eree.- 72.7 squere miles (revised)
Records ovelleble.- Mey 1905 to July 1906.
Extremes.- Maximum deliy discharge, 1,300 second-feet Mer. 31, 1906; minimum dally, 6 e日cond-feot Aug. 24, 1905.
Remerks.- Mine dreinage from many ective end ebendoned mines.
Montlily discharge of Georges Creek at Weeternport, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discherge in million ellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | Per equare mile |  |  |
| 1905 |  |  |  |  |  |  |
| Mey 4-31. | 92 | 26 | 44.8 | 0.616 | 0.64 | 0.398 |
| June. . . | 154 | 15 | 45.7 | . 629 | . 70 | . 407 |
| July. | 1,090 | 13 | 127 | 1.75 | 2.02 | 1.13 |
| August | 68 | 6 | 15.1 | . 208 | . 24 | . 134 |
| September | 528 | 8 | 46.4 | . 638 | . 71 | . 412 |
| 1905-6 |  |  |  |  |  |  |
| October..... | 370 | 12 | 65.8 | . 905 | 1.04 | . 583 |
| December.. | 102 1,250 | 12 39 | 33.8 267 | .465 3.67 | .52 4.23 | 2.301 |
| Jenuary.. | 1,130 | 80 | 320 | 4.40 | $5.0 \%$ | 2.84 |
| February. | 145 | 39 | 71.2 | . 979 | 1.02 | .63. |
| Merch. | 1,300 | 42 | 260 | 3.58 | 4.13 | 2.31 |
| April. | 1,040 | 115 | 378 | 5.20 | ᄃ. 30 | 3.36 |
| Mey. | 315 | 21 | 83.0 | 1.14 | 1.31 | .73\% |
| June | 342 | 29 | 91.4 | 1.26 | 1.41 | . 814 |
| July 1-15. | 27 | 16 | 20.8 | . 286 | . 16 | . 185 |

## Nev Creek near Keyser, W. Ve.

Location.- Staff gage, let. $39^{\circ} 24^{\prime 2} 7^{\prime \prime \prime}$, long. $789^{\circ} 00^{\prime} 08^{\prime \prime}, 0.1 \mathrm{mlle}$ downstreer from Block Ran, 2.5 mlles southwest of Keyser, Minerel County, and 3.1 mlles upstreant from mouth.
Drginage aree.- 46.4 square miles.
Pecords evelleble.- April 1930 to Septomber 1931.
Extremes.- Mexlmum discharge, ebout 500 second-feet May 20, 1931 ( gaje height, 3.96 feet, from reting curve extended ebove 70 second-feet; minimum, 2.6 second-foot Nov. $30,1930$.

| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| 1930 | 54 | 25 | 33.9 | 0.838 | 0.37 | 0.542 |
| April 19-30. | 33 | 7.2 | 15.1 | . 325 | . 37 | .210 |
| May........ | 72 | 4.5 | 10.6 | . 228 | . 25 | . 147 |
| June.. | 5.4 | 1.0 | 2.37 | . 051 | . 06 | . 033 |
| July..... | 5.8 | 1.0 | 2.25 | . 048 | . 05 | . 031 |
| Sept ember. . . . . . . . . . . . . . . . . . . . $\square$ |  |  |  |  |  |  |
| $1930-31$ |  |  |  |  |  |  |
| October.... | 11 | 2.4 | 4.71 | . 102 | . 12 | . 066 |
| November. | 5.0 | . 6 | 2.17 | . 047 | . 05 | . 030 |
| December. | 32 | - | 5.65 10.4 | . 122 | . 14 | .079 .145 |
| January... | 57 | 7 7 | 10.4 | . 224 | . 26 | .145 |
| February.. | 47 | 1.7 | 13.7 | . 295 | 1.00 | . 1960 |
| March. | 172 | 15 | 40.2 | . 866 | 1.00 | 1.60 |
| April. | 222 | 40 | 115 | 2.48 | 2.77 | 1.60 |
| May...... | 452 | 40 | 162 | 3.49 | 4.62 | 2.26 |
| June. . . . | 39 | 4.5 | 14.2 | . 306 | . 34 | . 198 |
| July...... | 11 | 2.0 | 4.27 | . 092 | . 110 | . 060 |
| August.............. | $2 \epsilon$ 57 | .7 1.2 | 3.83 5.17 | . 083 | . 20 | .054 .072 |
| September <br> The year. $\qquad$ |  |  |  |  |  |  |
|  | 452 | . 6 | 32.0 | . 690 | 9.34 | .446 |

Wills Creek near Cumberland, Md.
Location. - Water-stage recorder, lat. $39^{\circ} 40^{\circ} 07^{\prime \prime}$, Iong. $78^{\circ} 47^{\prime \prime} 18^{\prime \prime}$, at Western Maryland Rallroad bridge, 2 miles upstream from Cumberland, Allegany county, and mouth.
Datum of gage is 640.89 feet above mean sea level (Corps of Engineers, U. S. Army, bench mark). Datum of gage prior to July 1906, not known. From October 1929 to March 1936, water-stage recorder 200 feet upstream; March 1936 to March 1937, nonrecording gage 200 feet upstroam, and prior to July 1906, chain a"e 200 feet upstream.
Drainage area.- 247 square miles.
Records avallable.- May 1905 to Juiy 1906, October 1929 to September 1943.
Extreme9:- Maximum discharge, 38,100 second-feet Mar. 17, 1936 (çage height, 20.2 feet, from floodmarks), by slope-area determination; minimum, 9 second-feet oct. 14, 1930 . Remarks.- Records include drainaee from many active and abandoned coal mines and part of exage from Frostburg. Information on mine drainage can be obtained from office of Chief Figineer, Maryland State Department of Health, Baltimore.

Monthly discharge of Wills Creek near Cumberland, Md.

| Month | Diecharge in second-feet |  |  |  |  | Dischare in million callons per da, per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1905 |  |  |  |  |  |  |
| May 6-31. | 1,360 | 104 | 272 | 0.895 1.10 | 1.23 | . 711 |
| June. | 1,900 | 96 | 353 | 1.43 | 1.65 | . 924 |
| Auguet | 1,040 | 36 | 174 | . 704 | . 81 | . 455 |
| September. | 647 | 34 | 128 | . 518 | .58 | . 335 |
| 1905-6 |  |  |  |  |  |  |
| October.... | 595 570 | 30 48 | 149 | . 6036 | . 52 | .301 |
| December | 2,410 | 63 | 529 | 2.14 | 2.47 | 1.38 |
| January. | 2,720 | 256 | 637 | 2.58 | 2.97 | 1.67 |
| February. | 256 | 88 | 122 | . 494 | . 51 | .319 |
| March.... | 3,640 | 88 | 626 | 2.53 | 2.92 | 2.64 |
| April. | 1,900 | 219 | 806 | 3.26 | 3.64 | 2.11 |
| May.... | 256 | 60 | 126 | . 510 | . 59 | . 330 |
| June. | 1,780 | 60 | 207 | . 838 | . 94 | . 542 |
| July 1-14.. | 66 | 32 | 44.6 | . 181 | . 09 | .117 |

Monthly discharge of W11ls Creek near Cumberland, Md. --Continued

| Month | Diacharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per square mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| October. | - | 46 | 280 | 1.17 | 1.35 | 0.756 |
| November. | 1,670 | 156 | 396 | 1.60 | 1.78 | $1.03$ |
| December. | 605 | - | 314 | 1.27 | 1.46 | 1.821 |
| Januery . | 479 | - | 207 | . 838 | . 97 | . 542 |
| Februery. | 585 | - | 283 | 1.15 | 1.20 | . 743 |
| Merch. | 645 | 177 | 396 | 1.60 | 1.84 | 1.03 |
| April. | 510 | 166 | 305 | 1.23 | 1.37 | 1.795 |
| May | 238 | 63 | 121 | . 490 | -. 56 | . 317 |
| June | 352 | 41 | 80.7 | . 327 | . 36 | . 211 |
| July. | 38 | 16 | 25.0 | . 101 | . 12 | . 065 |
| Angust... | 35 | 12 | 16.6 | . 067 | . 08 | . 043 |
| September. |  |  | 15.8 | . 064 | . 07 | . 041 |
| The year. | - | 11 | 204 | . 826 | 11.16 | .534 |
| 0ctober. . . . . . . . |  |  |  |  |  |  |
| November. | 18 | 10 | 11.9 | . 048 | $.06$ | . 031 |
| Decomber. | 63 | - | 31.6 | . 128 | $.07$ |  |
| Januery. | 205 | - | 71.9 | . 291 | .34 | . 188 |
| Fobruary. | 232 | 44 | 137 | . 555 | . 58 | . 359 |
| March | 1,600 | 100 | 337 | 1.36 | 1.57 | . 879 |
| April | 2,130 | 172 | 628 | 2.54 | 2.83 | 1.64 |
| May. | 3,040 | 222 | 918 | 3.72 | 4.29 | 2.40 |
| June. | 506 | 63 | 173 | . 700 | . 78 | . 452 |
| July.. | 763 330 | 51 | 188 | . 761 | . 88 | . 492 |
| Soptember | 330 197 | 32 27 | $\begin{aligned} & 118 \\ & 62.2 \end{aligned}$ | $\begin{aligned} & .478 \\ & .252 \end{aligned}$ | . 55 | $\begin{array}{r} .309 \\ .163 \end{array}$ |
| The year | 3,040 | 10 | 225 | . 911 | 12.38 | . 589 |
| October..... | 52 |  |  |  |  |  |
| November | 31 | 20 | 22.3 | . 098 | . 14 | . 076 |
| December. | 740 | 31 | 172 | . 696 | . 80 | . 450 |
| January. | 830 | 106 | 326 | 1. 32 | 1.52 | . 853 |
| February | 1,740 | 118 | 411 | 1.66 | 1.79 | 1.07 |
| Merch. | 3,240 | 100 | 600 | 2.43 | 2.80 | 1.57 |
| April | 3,140 | 145 | 578 | 2.34 | 2.61 | 1.51 |
| May. | 3,240 | 119 | -707 | 2.86 | 3.30 | 1.85 |
| June | 224 | 50 | 95.3 | . 386 | . 43 | -. 249 |
| July. | 79 | 28 | 41.6 | . 168 | . 19 | . 109 |
| August. | 44 | 15 | 24.6 | . 100 | . 12 | . 065 |
| September | 16 | 10 | 12.1 | . 049 | . 05 | . 032 |
| The year. | 3,240 | 10 | 252 | 1.02 | 13.85 | . 659 |
| October. | 362 | 12 | 82.4 | . 334 | . 39 |  |
| November. | 1,320 | 81 | 343 | 1.39 | 1.55 | . 898 |
| December | 1,480 | 45 | 166 | -. 672 | 1.77 | . 434 |
| Januery. | 1,120 | 131 | 317 | 1.28 | 1.48 | . 827 |
| Februery. | 500 | 150 | 330 | 1.34 | 1.40 | . 866 |
| March. | 5,800 | 200 | 1,160 | 4.70 | 5.42 | 3.04 |
| April. | 4,690 | 331 | 1,150 | 4.66 | 5.20 | 3.01 |
| May. | 4,430 | 236 | -888 | 3.60 | 4.15 | 2.33 |
| June | 209 | 52 | 109 | . 441 | . 49 | . 285 |
| July. ${ }^{\text {August }}$ | 122 | 32 | 52.4 | . 212 | . 24 | . 137 |
| August... | 318 | 22 | 46.8 | . 189 | . 22 | . 122 |
| September | 242 | 31 | 76.6 | . 310 | . 35 | . 200 |
| The yeer. | 5,800 | 12 | 394 | 1.60 | 21.66 | 1.03 |
| October.... |  |  |  |  |  |  |
| November. | 64 | 25 | 43.3 | .1775 | . 15 | . 082 |
| December. | 690 | 31 | 162 | . 656 | . 76 | . 424 |
| Januery. | 3,880 | 100 | 529 | 2.14 | 2.47 | 1.38 |
| February. | 150 | 40 | 76.1 | . 308 | . 32 | - 199 |
| March. | 770 | 50 | 284 | 1.25 | 1.33 | . 743 |
| April | 1,500 | 146 | 457 | 1.85 | 2.06 | 1.20 |
| May. | 141 | 69 | 101 | - 409 | . 47 | 1.264 |
| June | 641 | 36 | 86.4 | . 350 | . 39 | . 226 |
| July... | 103 | 22 | 41.3 | . 167 | . 19 | . 108 |
| Augrat. | 835 | 22 | 103 | . 417 | . 48 | . 270 |
| September. | 606 | 24 | 114 | . 462 | . 52 |  |
| The yeer. | 3,880 | 22 | 170 | . 688 | 9.34 | . 445 |

Monthly discharge of Wills Creek near Cumberland, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { Inches } \end{gathered}$ | Discharce <br> in million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October | 362 | 37 | 83.3 | 0.337 | 0.39 | 0.218 |
| November | 980 | 64 | 222 | . 899 | 1.00 | . 581 |
| December | 1,080 | 108 | 338 | 1.37 | 1.58 | . 885 |
| January. | 1,360 | 209 | 559 | 2.26 | 2.61 | 1.46 |
| February. | 1,910 | 171 | 607 | 2.46 | 2.56 | 1.59 |
| March... | 700 | 331 | 546 | 2.21 | 2.55 | 1.43 |
| April | 1,540 | 188 | 494 | 2.00 | 2.23 | 1.29 |
| May.. | 1,810 | 141 | 643 | 2.60 | 3.00 | 1.68 |
| June. | 242 | 79 | 121 | . 490 | . 55 | . 317 |
| July. | 141 | 46 | 71.8 | . 291 | . 34 | - 188 |
| August. | 283 | 42 | 102 | . 413 | . 48 | .267 |
| September | 613 | 42 | 137 | . 555 | - 62 | . 359 |
| The year. | 1,910 | 37 | 326 | 1.32 | 17.91 | . 853 |
| October.. | 108 | 40 | 49.1 | . 199 | . 23 | . 129 |
| November. | 379 | 44 | 115 | . 466 | . 52 | .301 |
| December. | 920 | 50 | 224 | . 907 | 1.05 | . 586 |
| January. | 1,080 | 110 | 407 | 1.65 | 1.90 | 1.07 |
| February. | 4,000 | 70 | 598 | 2.42 | 2.61 | 1.56 |
| March. | 14,800 | 600 | 2,410 | 9.76 | 11.25 | 6.31 |
| April | 3,900 | 198 | 770 | 3.12 | 3.48 | 2.02 |
| May. | 186 | 62 | 104 | . 421 | . 49 | . 272 |
| June | 760 | 46 | 122 | -494 | . 55 | . 319 |
| July | 290 | 21 | 52.9 | .214 | . 25 | .138 |
| August. | 290 | 28 | 59.5 | . 241 | . 28 | .156 |
| September. | 116 | 18 | 34.3 | .139 | . 16 | . 090 |
| The year. | 14,800 | 18 | 413 | 1.67 | 22.77 | 1.08 |
| October. | 2,390 | 22 | 191 | . 773 | . 88 | . 500 |
| November. | 2,530 | 46 | 249 | 1.01 | 1.13 | . 653 |
| December. | 1,430 | 42 | 505 | 2.04 | 2.35 | 1.32 |
| January. | 4,470 | 492 | 1,477 | 5.98 | 6.89 | 3.86 |
| February. | 1,240 | 210 | 441 | 1.79 | 1.86 | 1.16 |
| March. | 13,490 | 175 | 418 | 1.69 | 1.95 | 1.09 |
| April | 13,700 955 | 254 159 | 1,245 388 | 5.04 1.57 | 5.62 1.81 | 1.26 1.01 |
| May. | 955 147 | 159 | 388 94.2 | 1.57 | 1.81 | 1.01 |
| June. | 98 | 28 | 50.3 | . 204 | . 24 | . 132 |
| August. | 971 | 21 | 110 | . 445 | . 51 | . 288 |
| Septembe | 227 | 27 | 68.8 | .279 | .31 | . 180 |
| The jear. | 13,700 | 21 | 437 | 1.77 | 23.99 | 1.14 |
| October. | 6,070 | 26 | 557 | 2.26 | 2.61 | 1.46 |
| November. | 674 | 139 | 264 | 1.07 | 1.19 | . 692 |
| December. | 1, 460 | 77 | 300 | 1.21 | 1.40 | . 782 |
| January. | 1,360 | 97 | 284 | 1.15 | 1.33 | . 743 |
| February. | 880 | 205 | 374 | 1.51 | 1.57 | . 976 |
| March. | 2,560 | 191 | 584 | 2.36 | 2.72 | 1.53 |
| April | 607 | 193 | 367 | 1.49 | 1.66 | . 963 |
| May. | 1,580 | 99 | 367 | 1. 49 | 1.72 | . 963 |
| June | 267 | 69 | 126 | . 510 | . 57 | . 330 |
| July | 698 | 41 | 123 | . 498 | . 57 | . 322 |
| August, Septemb | 94 43 | 21 19 | 44.8 27.6 | . 181 | . 21 | .117 .072 |
| The year. | 6,070 | 19 | 285 | 1.15 | 15.67 | .743 |
| October............ | 26 | 19 | 21.5 | . 087 | .10 | . 056 |
| November. | 58 | 20 | 29.0 | . 117 | . 13 | .076 |
| December. | 131 | 30 | 56.6 | - 229 | . 26 | . 148 |
| January. | 1,530 | 32 | 193 | . 781 | . 90 | . 505 |
| February. | 2,770 | 293 | 1,014 | 4.11 | 4.28 | 2.66 |
| March.. | 2,530 | 225 | 761 | 3.08 | 3.55 | 1.98 |
| April | 2,580 | 343 | 779 | 3.15 | 3.51 | 2.04 |
| May .. | 1,120 | 94 | 293 | 1.19 | 1.37 | . 769 |
| June. | ] 435 | 74 | 214 | . 866 | . 97 | . 560 |
| July... | 1,640 | 66 | 211 | . 854 | . 98 | . 552 |
| August. | $216$ | 28 | 71.0 | . 287 | . 33 | . 185 |
| September. | 70 | 19 | 28.6 | . 116 | .13 | . 075 |
| The year.. | 2,770 | 19 | 301 | 1.22 | 16.51 | . 789 |


| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharce in million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| October.. | 172 | 24 | 49.6 | 0.201 | 0.23 | 0.130 |
| November. | 180 | 32 | 73.2 | . 296 | . 33 | . 191 |
| December. | 144 | 33 | 62.5 | . 253 | . 29 | . 164 |
| January. | 140 | 36 | 54.2 | . 219 | . 25 | . 142 |
| February | 1,100 | 39 | 291 | 1.18 | 1.27 | . 763 |
| March. | 3,640 | 180 | 886 | 3.59 | 4.14 | 2.32 |
| April. | 4,090 | 357 | 1,165 | 4.72 | 5.27 | 3.05 |
| May. | 1,210 | 137 | 325 | 1.32 | 1.52 | . 853 |
| Juna. | 1,070 | 112 | 318 | 1.29 | 1.44 | . 834 |
| July.. | 345 | 52 | 111 | . 449 | . 52 | . 290 |
| Auguat. | 984 | 34 | 154 | . 623 | . 72 | . 403 |
| September | 576 | 48 | 135 | .547 | . 61 | . 354 |
| The year. | 4,090 | 24 | 301 | 1.22 | 16.59 | . 789 |
| Oetober 1940-41 |  |  |  |  |  |  |
| October.. | 121 | 42 | 54.5 | .221 | .25 | .143 |
| November. | 632 | 105 | 181 | .733 | . 82 | . 474 |
| December. | 1,180 | 160 | 488 | 1.98 | 2.28 | 1.28 |
| January. | 609 | 119 | 273 | 1.11 | 1.28 | . 717 |
| February | 570 | 141 | 221 | . 895 | . 93 | . 578 |
| March. | 1,200 | 146 | 553 | 2.24 | 2.58 | 1.45 |
| April | 3,820 | 137 | 618 | 2.50 | 2.79 | 1.62 |
| May.. | 170 | 71 | 112 | . 453 | . 52 | . 293 |
| June. | 5,460 | 90 | 642 | 2.60 | 2.90 | 1.68 |
| July. | 420 | 50 | 122 | . 494 | . 57 | . 319 |
| August.. | 83 | 28 | 45.4 | . 184 | . 21 | . 119 |
| Septembar | 70 | 16 | 27.3 | . 111 | .12 | . 072 |
| The year. | 5,460 | 16 | 278 | 1.13 | 15.25 | . 730 |
| October. | 27 | 16 | 19.9 | . 081 | . 08 |  |
| November. | 88 | 20 | 35.9 | . 145 | . 16 | . 094 |
| December. | 839 | 21 | 110 | . 445 | . 51 | . 288 |
| January.. | 325 | 70 | 121 | . 490 | . 57 | . 317 |
| February. | 929 | 80 | 330 | 1.34 | 1.39 | . 866 |
| March. | 3,080 | 103 | 718 | 2.91 | 3.35 | 1.88 |
| April | 3,620 | 146 | 692 | 2.80 | 3.12 | 1.81 |
| May.. | 1,690 | 126 | 621 | 2.51 | 2.90 | 1.62 |
| June. | 401 | 85 | 182 | . 737 | . 82 | . 476 |
| July. | 249 | 40 | 82.9 | . 336 | . 39 | . 217 |
| August. | 353 | 55 | 137 | . 555 | . 64 | .359 |
| September. | 363 | 38 | 84.5 | .342 | . 38 | . 221 |
| Tha year. | 3,620 | 16 | 261 | 1.06 | 14.32 | .685 |
| October. . | 15,700 | 51 | 1,130 |  | 5.27 | 2.95 |
| November. | 402 | 146 | 1, 227 | . 919 | 1.03 | . 594 |
| December. | 6,370 | 120 | 751 | 3.04 | 3.51 | 1.96 |
| January. | 2,270 | 234 | 692 | 2.80 | 3.23 | 1.81 |
| February. | 2,090 | 357 | 815 | 3.30 | 3.44 | 2.13 |
| March. | 2,320 | 197 | 635 | 2.57 | 2.96 | 1.66 |
| April. | 4,370 | 167 | 763 | 3.09 | 3.45 | 2.00 |
| May. | 1,600 | 197 | 521 | 2.11 | 2.43 | 1.36 |
| June. | 870 | 55 | 180 | . 729 | . 81 | . 471 |
| July. | 255 | 33 | 61.8 | . 250 | . 29 | . 162 |
| August. | 36 | 18 | 23.7 | . 096 | .11 | . 062 |
| September. | 20 | 11 | 14.7 | .060 | . 07 | . 038 |
| The year...... | 15,700 | 11 | 484 | 1.96 | 26.60 | 1.27 |

Yearly discharge of Wills Creek near Cumberland, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Punoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runoff in <br> inches | Discharge <br> in million gallons per day per square mile |
|  | Mean | Per equare m11e |  |  | Mean | Per equare mile |  |  |
| 1930. | 204 | 0.826 | 11.16 | 0.534 | 125 | 0.506 | 6.85 | 0.327 |
| 1931. | 225 | . 911 | 12.38 | . 589 | 239 | . 968 | 13.14 | . 626 |
| 1932. | 252 | 1.02 | 13.85 | . 659 | 282 | 1.14 | 15.52 | . 737 |
| 1933. | 394 | 1.59 | 21.66 | 1.03 | 365 | 1.48 | 20.06 | .957 |
| 1934. | 170 | . 688 | 9.34 | . 445 | 204 | . 826 | 11.20 | . 534 |
| 1935. | 326 | 1.32 | 17.91 | . 853 | 304 | 1.23 | 16.74 | . 795 |
| 1936. | 413 | 1.67 | 22.77 | 1.08 | 460 | 1.86 | 25.34 | 1.20 |
| 1937. | 437 | 1.77 | 23.99 | 1.14 | 452 | 1.83 | 24.82 | 1.18 |
| 1938. | 285 | 1.15 | 15.67 | .743 | 200 | . 810 | 10.96 | . 524 |
| 1939. | 301 | 1.22 | 16.51 | . 789 | 307 | 1.24 | 16.87 | . 801 |
| 1940. | 301 | 1.22 | 16.59 | .789 | 346 | 1.40 | 19.09 | . 905 |
| 1941. | 278 | 1.13 | 15.25 | . 730 | 231 | . 935 | 12.66 | . 604 |
| 1942. | 261 | 1.06 | 14.32 | . 685 | 425 | 1.72 | 23.37 | 1.11 |
| 1943. | -484 | 1.96 | 26.60 | 1.27 | - | - | - | - |
| Hf ghest | 484 | 1.96 | 26.60 | 1.27 | 460 | 1.86 | 25.34 | 1.20 |
| Average | 309 | 1.25 | 17.00 | . 808 | 303 | 1.23 | 16.66 | . 795 |
| Lowest. | 170 | . 688 | 9.34 | . 445 | 125 | . 506 | 6.85 | . 327 |

Chesapeake \& Ohio Canal at Cumberland, Md.
Location.- Staff gage, 1at. $39^{\circ} 377^{\prime \prime} 4^{\prime \prime}$, long. $78^{\circ} 46^{\prime 1} 16^{\prime \prime}$, at otop lock, 1.3 miles downstream from head at Cumberland, Allegany County. Prior to June 4, 1932, chain gage 1.1 miles downstrearn.

Records available. - October 1929 to September 1934.
Extremes. - Marimum dally discharge, 104 second-feet May 16, 1930; no flow at timeo.
Remarks. Flow is diverted from North 8 ranch Potomac River at dam 1.3 miles above station and returns at various points below station on North Branch Potomac River near Cumberland. Part of canal flow is sewage from city of Cumberland, which recelves its water supply from Evitts Creek.

Monthly discharge of Chesapeake \& Ohio Canal at Cumberland, Md.

| Month | Diecharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inchee } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1 mum | Mear | Per equare mile |  |  |
| October 1929-31.... | 37 | 26 | 31.6 |  |  |  |
| November. . . . . . . | 46 | 22 | 30.6 |  |  |  |
| December... | 27 | 21 | 24.6 |  |  |  |
| January. . | 28 | 0 | 19.6 |  |  |  |
| February.. | 37 | 13 | 26.7 |  |  |  |
| March.. | 89 | 32 | 41.6 |  |  |  |
| Aprıl. ............... | 104 | 0 | 40.1 |  |  |  |
| June. | 46 | 21 | 28.9 |  |  |  |
| July. | 39 | 26 | 31.3 |  |  |  |
| August..... | 34 34 | 26 28 | $\begin{aligned} & 31.4 \\ & 30.7 \end{aligned}$ |  |  |  |
| 1930-31 |  |  |  |  |  |  |
| October..... | 31 29 | 28 22 | $\begin{aligned} & 29.3 \\ & 26.6 \end{aligned}$ |  |  |  |
| December. | 22 | 13 | 18.0 |  |  |  |
| January. | 22 | 9.0 | 12.5 |  |  |  |
| February. | 23 | 13 | 18.7 |  |  |  |
| March.. | 32 | 21 | 23.7 |  |  |  |
| April. | 33 50 | 19 | 23.2 34.5 |  |  |  |
| May... | 40 | 24 | 30.2 |  |  |  |
| July... | 45 | 18 | 23.0 |  |  |  |
| August..... | 28 | 16 | 22.0 23.2 |  |  |  |
| September........ | 36 | 9.2 | 23.2 |  |  |  |
| The year. | 50 | 0 | 23.8 |  |  |  |

Monthly discharge of Chesapeake \& Onio Canal at Cumberland, Md.--Continued


Evitts Creek near Badford Valley, Pa
Location. - Water-stage recorder, lat. $39^{\circ}{ }^{\circ} 7^{\prime \prime} 2^{\prime \prime}, ~ 20 n g$. $78^{\circ 0381} 48^{\prime \prime}$, 2 miles upstream from Thomas $W$. Koon Dam, 3 miles south of Pedford Velley post office, Bedford Count $y$, and 7 miles upstream from Rock Gully Creek. Datum of gage is $1,027.59$ feet above mean sea level (city of Cimberland bench mark).
Drainage ares.- 30.2 square miles.
Records avallable.- Septomber I932 to september 1943.
Eztremas.- Maximum discharge, 5,240 second-feet Mar. 17, 2936 (gage he1ght, 7.13 feet), by siope-area method; minimum, 1.2 second-feet July 27,1934 (gage helght, 0.96 foot)

Maxinum stage known, about 8 feet, fram floodmark, date unknown
Monthly discharge of Evitts Creek near Bedford Valley, Pa.


| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge In million cellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1933-34 |  |  |  |  |  |  |
| October. | 12.5 | 3.4 | 4.69 | 0.155 | 0.18 | 0.100 |
| November. | 12 | 3.6 | 4.69 | .255 | .17 | .200 |
| December. | 40 | 3.4 | 12.1 | . 401 | . 46 | . 259 |
| January. | 301 | 12 | 47.7 | 1.58 | 1.92 | 1.02 |
| February. | 12 | 5.0 | 7.88 | . 261 | . 27 | $\cdot 169$ |
| March. . . | 64 | 6.0 | 17.7 | . 586 | . 68 | . 379 |
| April. | 84 | 15 | 35.6 | 1.28 | 1.32 | - 763 |
| May. . | 16.5 | 6.9 | 11.2 | . 371 | . 43 | . 240 |
| June. | 55 | 3.1 1.5 | 7.17 | . 237 | . 26 | . 153 |
| July.... | 56 | 1.5 1.8 | 5.71 | . 289 | .22 | . 122 |
| August... | 71 | 1.8 | 9.09 | . 301 | .34 | . 195 |
| The year | 301 | 2.5 | 13.9 | .460 | 6.26 | . 297 |
| October........... | 15 | 3.8 | 6.35 | . 210 | .24 | .136 |
| November | 49 | 4.6 | 12.7 | . 421 | . 47 | . 272 |
| December | 73 | 12 | 25.3 | . 838 | . 97 | . 542 |
| January. | 130 | 16.5 | 45.9 | 1.52 | 1.75 | . 982 |
| February | 186 | 13 | 54.2 | 1.79 | 1.85 | 1.16 |
| March. | 73 | 37 | 53.7 | 1.78 | 2.05 | 1.15 |
| April | 134 | 22 | 52.6 | 1.74 | 1.94 | 1.12 |
| May. | 189 | 15 | 61.0 | 2.02 | 2.33 | 1.31 |
| June | 25 | 7.2 | 12.4 | . 411 | . 46 | . 266 |
| July | 38 | 3.6 | 8.54 | . 283 | . 33 | . 183 |
| August. | 74 | 4.6 | 15.5 | . 513 | . 59 | . 332 |
| September | 84 | 4.8 | 12.0 | . 397 | . 44 | .257 |
| The year | 189 | 3.6 | 29.9 | . 990 | 13.43 | .640 |
|  |  |  |  |  |  |  |
| October.. | 11 | 4.0 | 5.04 | . 167 | . 19 | . 108 |
| November | 95 | $4 \cdot 4$ | 11.7 | - 387 | . 40 | -250 |
| December. | 64 | 6.1 | 18.3 | . 606 | . 75 | -392 |
| January.. | 71 | 12 | 30.1 | . 99 | 1.15 | . 644 |
| February. | 540 | 6 | 68.2 | 2.26 | 2.44 | 1.46 |
| March. | 1,990 | 69 | 291 | 9.64 | 11.11 | 6.23 |
| April..... | 346 | 22 | 68.0 | 2.25 | 2.51 | 1.45 |
| May.... | 21 | 9.2 4.8 | 16.0 8.56 | . 283 | . 32 | .183 |
| June. | 37 | 2.2 | 5.96 | . 197 | . 23 | . 227 |
| August | 10 | 2.6 | 4.18 | .138 | . 16 | . 089 |
| September. | 4.0 | 2.2 | 2.73 | . 090 | . 10 | . 058 |
| The yea | 1,990 | 2.2 | 44.2 | 1.46 | 19.95 | . 944 |
| October | 240 | 2.6 | 14.7 | . 487 | . 56 | . 325 |
| November | 90 | 5.7 | 14.5 | . 480 | . 54 | . 310 |
| December | 205 | 5.2 | 53.3 | 2.76 | 2.03 | 1.14 |
| January. | 305 | 49 | 119 | 3.94 | 4.54 | 2.55 |
| February | 168 | 32 | 54.5 | 1.80 | 1.87 | 1.15 |
| March.. | 64 | 24 | 33.8 | 1.12 | 1.29 | .724 |
| April. | 1,450 | 22 | 129 | 4.27 | 4.76 | 2.76 |
| Мау.. | 113 | 16 | 42.4 | 1.40 | 1.61 | . 905 |
| June | 19 | 6.8 | 11.6 | . 384 | . 43 | . 248 |
| July.. | 9.8 | 3.4 | 6.04 14.8 | . 200 | . 23 | . 129 |
| August. Septemb | 168 28 | 2.7 4.2 | 14.8 8.00 | . 490 | .56 .30 | .177 <br> .171 |
| The year. | 1,450 | 2.6 | 41.7 | 1.38 | 18.72 | . 892 |
| October. | 726 | 4.2 | 55.5 | 1.94 | 2.12 | 1.19 |
| November | 73 | 16 | 29.0 | . 960 | 1.07 | . 620 |
| December. | 117 | 10 | 24.7 | . 818 | . 94 | . 529 |
| January. | 326 | 13 | 34.1 | 1.13 | 1.30 | . 730 |
| February | 53 | 20 | 31.6 | 1.05 | 1.09 | . 679 |
| March. | 153 | 17 | 48.8 | 1.62 | 1.87 | 1.05 |
| April. | 47 | 19 | 29.6 | . 980 | 1.09 | . 633 |
| May. | 74 | 12 | 27.0 | . 894 | 1.03 | . 578 |
| June. | 36 | 7.4 | 14.2 | . 470 | . 52 | . 304 |
| July. | 95 | 4.2 | 16.9 | . 560 | . 65 | . 362 |
| Angust. | 16 | 3.2 | 7.04 | . 233 | . 27 | . 151 |
| September. | 8.2 | 2.9 | 4.70 | . 156 | .17 | . 102 |
| The year. | 726 | 2.9 | 27.0 | . 894 | 22.12 | . 578 |

Monthly discharge of Evitts Creek near Bediord Valley, Pa.--Continued

| Month | Diacharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million callons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1938-39 |  |  |  |  |  |  |
| October. | 6.8 | 3.2 | 3.69 | 0.122 | 0.14 | 0.079 |
| November. | 13 | 3.0 | 5.11 | . 169 | . 19 | . 109 |
| December. | 74 | 5.5 | 12.3 | . 407 | . 47 | . 263 |
| January. | 145 | 6.9 | 23.0 | . 762 | . 88 | . 492 |
| February. | 337 | 27 | 87.9 | 2.91 | 3.03 | 1.88 |
| March.. | 190 | 28 | 69.3 | 2.29 | 2.64 | 1.48 |
| April.. | 164 | 42 | 70.3 | 2.33 | 2.60 | 1.51 |
| May.. | 82 | 11 | 27.5 | . 911 | 1.05 | . 589 |
| June | 59 | 9.0 | 21.8 | . 722 | . 81 | . 467 |
| July. | 684 | 6.8 | 41.7 | 1.38 | 1.59 | . 892 |
| August. | 47 | 5.2 | 14.0 | . 464 | . 53 | . 300 |
| September | 15 | 3.2 | 5.23 | .173 | . 19 | . 112 |
| The year. | 684 | 3.0 | 31.4 | 1.04 | 14.12 | . 672 |
| October. | 39 | 4.0 |  |  |  |  |
| November. | 22 | 5.2 | 8.93 | . 296 | . 33 | .164 .191 |
| December | 17 | 5.2 | 7.14 | . 236 | . 27 | . 153 |
| January. | 75 | 5.5 | 10.5 | . 351 | . 40 | . 227 |
| February | 71 | 6.5 | 33.4 | 1.21 | 1.20 | . 717 |
| March. | 336 | 26 | 79.1 | 2.62 | 3.02 | 1.69 |
| April | 455 | 41 | 104 | 3.44 | 3.94 | 2.22 |
| May. | 58 | 17 | 26.3 | . 371 | 1.00 | . 563 |
| June | 101 | 12 | 32.5 | 2.08 | 1.20 | . 698 |
| July. | 21 | 4.6 | 8.45 | . 280 | . 32 | . 181 |
| August | 42 | 2.9 | 7.17 | . 237 | . 27 | . 153 |
| September | 29 | 3.8 | 6.57 | .218 | . 24 | . 141 |
| The year. | 455 | 2.9 | 27.5 | . 911 | 12.38 | .589 |
| October. | 10 | 3.2 | 4.33 |  |  |  |
| November. | 38 | 5.7 | 20.5 | .348 | .39 | .225 |
| December. | 100 | 9.0 | 32.0 | 1.06 | 1.22 | . 685 |
| January. | 45 | 14 | 21.2 | -. 702 | . 81 | . 454 |
| February. | 47 | 12 | 18.2 | . 603 | . 63 | .390 |
| March | 71 | 14 | 38.8 | 1.28 | 1.48 | . 827 |
| April | 231 | 14 | 42.9 | 1.42 | 1.58 | . 918 |
| May. | 14 | 5.7 | 10.4 | . 344 | . 40 | . 222 |
| June | 522 | 10 | 62.7 | 2.08 | 2.32 | 1.34 |
| July. | 61 | 5.7 | 12.3 | . 407 | . 47 | . 263 |
| August. | 6.5 | 3.0 | 4.51 | . 149 | .17 | . 096 |
| September | 11 | 2.0 | 3.18 | .105 | . 12 | . 068 |
| The yea | 522 | 2.0 | 21.7 | . 71.9 | 9.76 | . 465 |
| October... |  |  |  |  |  |  |
| November. | $12 \cdot$ | 2.7 | 4.13 | . 137 | . 15 | . 088 |
| December. | 109 | 3.2 | 10.7 | .354 | . 41 | . 229 |
| January. | 23 | 5.7 | 10.9 | . 361 | . 42 | . 233 |
| Eebruary. | 96 | 7.4 | 22.9 | . 758 | . 79 | . 490 |
| March. | 594 | 10 | 70.9 | 2.35 | 2.71 | 1.52 |
| April. | 297 | 19 | 64.6 | 2.14 | 2.39 | 1.38 |
| May. | 264 | 16 | 56.9 | 1.38 | 2.17 | 1.22 |
| June | 64 | 11 | 25.2 | . 834 | . 93 | -. 539 |
| July. | 62 | 5.2 | 12.6 | . 417 | . 48 | . 270 |
| August. | 43 | 7.4 | 17.4 | . 576 | . 67 | . 372 |
| September | 78 | 5.0 | 11.4 | . 377 | . 42 | . 244 |
| The year. | 594 | 2.0 | 25.9 | -858 | 11.64 | . 555 |
| October. | 1,330 | 10 | 116 |  |  |  |
| November. | 39 | 17 | 23.4 | . 775 | . 86 | . 501 |
| December. | 688 | 19 | 70.6 | 2.34 | 2.70 | 1.51 |
| January.. | 161 | 30 | 60.1 | 1.99 | 2.29 | 1.29 |
| February | 151 | 37 | 74.0 | 2.45 | 2.55 | 1.58 |
| March. | 216 | 26 | 60.0 | 1.99 | 2.29 | 1.29 |
| April. | 341 | 20 | 74.6 | 2.47 | 2.76 | 1.60 |
| May. | 133 | 25 | 50.5 | 1.67 | 1.93 | 1.08 |
| June | 51 | 6.8 | 15.4 | . 510 | . 57 | . 330 |
| July.. | 9.7 | 3.6 | 5.66 | . 187 | . 22 | . 121 |
| August.... | 4.5 | 2.4 | 2.98 | . 099 | . 11 | $.064$ |
| September. | 2.9 | 2.3 | 2.49 | . 082 | . 09 | $.053$ |
| The year........ | 1,330 | 2.3 | 46.3 | 1.53 | 20.79 | . 989 |

Yearly Discharge of Evitte Creek near Bedford Vallay, Pa.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in Inchas | D1scharge in million gallons per day per square mile | Discharge in second-feet |  | Runof: in <br> 1nchos | Discharge in million gallons per day per square mile |
|  | Mean | Per aquara m1le |  |  | Mean | $\begin{aligned} & \text { Per } \\ & \text { oquara } \\ & \text { mıle } \end{aligned}$ |  |  |
| 1933 | 36.3 | 1.20 | 16.27 | 0.776 | 33.9 | 1.12 | 15.18 | 0.724 |
| 1934 | 13.9 | . 460 | 6.26 | .297 | 15.8 | .523 | 7.13 | . 338 |
| 1936 | 29.9 | . 990 | 13.43 | . 640 | 25.6 | . 848 | 13.07 | . 548 |
| 1936 | 44.2 | 1.46 | 19.95 | .944 | 48.2 | 1.60 | 21.76 | 1.03 |
| 1937. | 41.7 | 1.38 | 18.72 | . 892 | 43.9 | 1.45 | 19.72 | . 937 |
| 1939. | 27.0 | . 894 | 12.12 | . 578 | 19.6 | . 649 | 8.79 | . 419 |
| 1939. | 31.4 | 1.04 | 14.12 | . 672 | 31.6 | 1.05 | 14.21 | .679 |
| 1940. | 27.5 | . 911 | 12.38 | . 589 | 29.5 | . 977 | 13.27 | .631 |
| 1941 | 21.7 | . 719 | 9.76 | . 465 | 19.2 | . 636 | 8.64 | . 411 |
| 1942. | 25.9 | . 858 | 11.64 | . 555 | 42.2 | 1.40 | 18.96 | . 905 |
| 1943. | 46.3 | 1.53 | 20.79 | . 989 | - | - | - |  |
| R1ghast | 46.3 | 1.53 | 20.79 | . 989 | 48.2 | 1.60 | 21.76 | 1.03 |
| Average | 31.4 | 1.04 | 14.13 6.26 | .672 .297 | 31.0 15.8 | 1.03 .523 | 14.07 7.13 | .666 .338 |
| Lowest. | 13.9 | . 460 |  |  |  |  |  |  |

Evitte Creak near Cumberland, Md.
Location. - Water-stage recorder, lat. $39^{\circ} 39^{150 \prime}$, long. $78^{\circ} 43^{\prime} 51^{\prime \prime}$, at Cumberland Country Club, 2.5 miles northeast of Cumberland, Allegany County, and 3.3 miles upstream from mouth. Datum of gage ie 626.15 feet above mean sea leval (city of cumbarland banch mark). Prior to october 18, 1929 chain gaga at eame site and datum.
Drainage area.- 89.0 square miles.
Records qvallable.- August 1929 to November 1932.
Extromes.- Maximum diecharge, 1,290 second-feet Oct. 22,1929 (gaga height, 6.26 feet); $m^{1} 1 \mathrm{~m} u m, 0.7$ second-foot July 15, 1932.
Remarke.- Flow affacted by storage and diversion at Koon Dam (drainage area 44.8 squara miles) and Gordon Dam (dralnaga area 52.4 square miles) of city of Cumbarland water supply. Storage and diversion figures can be obtained from office of Chief Fnginear, Maryland state Department of Health, Baltimore.

Monthly discharga of Evitts Creek near Cumberland, Md.


| Month | Diecharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Dlecharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1930-31 |  |  |  |  |  |  |
| October...... | 4.3 5.4 | 1.4 2.0 | 2.59 3.64 |  |  |  |
| December. | 39 | - | 5.63 |  |  |  |
| January. | 39 | - | 8.23 |  |  |  |
| February. | 26 | - | 7.15 |  |  |  |
| March... | 154 | 9.3 | 23.4 |  |  |  |
| April. | 186 | 28 | 89.2 |  |  |  |
| May. . | 608 | 33 | 192 |  |  |  |
| June. | 87 | 5.8 | 26.9 |  |  |  |
| July. | 470 | $7 \cdot 4$ | 76.7 |  |  |  |
| August. | 36 | 8.7 | 17.0 |  |  |  |
| September. | 69 | 7.0 | 16.0 |  |  |  |
| The year. | 608 | 1.4 | 39.3 |  |  |  |
| October. . . . . . . . | 14 | 7.2 | 10.3 |  |  |  |
| November. | 9.9 | 3.2 | 6.29 |  |  |  |
| December. | 50 | 3.5 | 15.8 |  |  |  |
| January. | 192 | 20 | 55.5 |  |  |  |
| February. | 465 | 29 | 98.7 |  |  |  |
| March. | 450 | 21 | 108 |  |  |  |
| April. | 350 | 17 | 82.1 |  |  |  |
| May... | 712 | 18 | 138 |  |  |  |
| June. | 76 | 7.6 | 19.5 |  |  |  |
| July.. | 16 | 3.4 | 8.29 |  |  |  |
| August. | 14 | 4.2 | 7.09 |  |  |  |
| September. | 11 | 3.6 | 7.37 |  |  |  |
| The year. | 712 | 3.2 | 46.4 |  |  |  |
| October. | 32 | 7.2 | 12.5 |  |  |  |
| November. . | 242 | 12 | 34.3 |  |  |  |

Pattereon Creek near Readeville, W. Va.
Location.- Wire-welght gage, lat. $39^{\circ}{ }^{\circ} 6^{\prime 3} 6^{\prime \prime}$, long. $78^{\circ} 50^{\prime \prime 11 ", ~ o n ~ h i g h w a y ~ b r i d g e, ~} 150$ feet downstream from Cabin Run and $3 \frac{1}{2}$ miles northeast of Headeville, Mineral County. Datum of gage is 631.04 feet above mean sea level (Corpe of Fingineers, U. S. Army, bench mark).
Drainage area.- 216 square miles.
Rocords available.- Auguet 1938 to September 1943.
Extremee.- MaxImum discharge, 15,300 second-feet Oct. 15, 1942 (gage helght, 13.00 feet); minimum observed, 4.7 eecond-feet Sept. 29, 30, 1941

Maximum discharge known, 16,000 second-feet Mar. 17, 1936 (gage height, 17.2 feet, from floodmarks) by elope-area determination

Monthly discharge of Patterson Creek near Headsville, W. Va

| Month | Diecharge in second-feet |  |  |  | Runoff <br> in <br> inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1938 |  |  |  |  |  |  |
| Sept ember. | 52 | 9.1 | 19.7 | 0.091 | 0.10 | 0.059 |
| 1833-39 |  |  |  |  |  |  |
| October.. | 21 | 10 | 12.9 | . 060 | .07 | . 039 |
| Nevember. | 42 | 12 | 20.6 | .095 | - 11 | . 061 |
| January | 1,720 | 28 | 216 | l. 387 1.00 | .45 1.15 | . 2546 |
| February | 3,720 | 96 | 690 | 3.19 | 3.33 | 2.06 |
| March. | 1,510 | 85 | 363 | 1.68 | 1.94 | 1.09 |
| Apr11 | 2,540 | 126 | 436 | 2.02 | 2.25 | 1.31 |
| May. | 291 | 34 | 101 | . 468 | . 54 | . 302 |
| June | 383 | 23 | 66.2 | . 306 | . 34 | . 188 |
| July. | 1,370 | 23 | 141 | . 653 | . 75 | . 422 |
| August. | 102 | 14 | 28.9 | . 134 | . 15 | . 087 |
| September | 61 | 8.4 | 18.4 | . 085 | . 09 | . 055 |
| The year. | 3,720 | 8.4 | 178 | .824 | 11.17 | . 533 |

Monthly discharze of Pattergon Creek near Headsville, W. Va.--Continued


Yearly discharge of Patterson Creek near Headaville, W. Va

| Year | Year ending sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diacharge in second-feat |  | Runorf <br> in <br> inchas | $\begin{aligned} & \text { D1scharge } \\ & \text { 1n m1111on } \\ & \text { Eallons per } \\ & \text { day par } \\ & \text { square m1le } \end{aligned}$ | Diacharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile |
|  | Mean | Par square mile |  |  | Mean | Par squara mile |  |  |
| 19.39. | 178 | 0.824 | 11.17 | 0.533 | 175 | 0.810 | 11.00 | 0.524 |
| 1940. | 173 | . 801 | 10.90 | . 518 | 191 | . 884 | 12.06 | . 571 |
| 1941. | 121 | . 560 | 7.61 | . 362 | 101 | . 468 | 6.32 | . 302 |
| 1942. | 126 | .58* | 7.91 | . 377 | 235 | 1.09 | 14.73 | . 704 |
| 1943. | 242 | 1.12 | 15.18 | .724 | - | - | - |  |

Patterson Creok at Alaska, W. Va.
Location. - Chain gage, lat. $39^{\circ} 30136^{\prime \prime}$, long. $78^{\circ} 45^{\prime} 2^{\prime \prime}$, at highway bridge a quarter of a mile north of Alaska, Mineral County, and l.2 miles upstream from Turnerg Run Drainace area.- 249 square miles
Records avallable. - June 1930 to September 1931
Fxtremes:- Maximum discharge, 3,850 second-feet May 13, 1931 (gage he1ght, 8.20 feet), from rating curve extended above 200 second-feet; minimum observed, 0.4 second-foot Aug. 2-5, 1930 .

Monthly discharge of Patterson Creek at Alaska, W Va

| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge in million eallons per day per aquare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mam | Mean | Per <br> square <br> mile |  |  |
| 1930 |  |  |  |  |  |  |
| June 3-30.... ................. | 76 | 6.8 | 20.2 | 0.081 | 0.08 | 0.052 |
| July.............................. | 10 | 1.9 | 5.48 | . 022 | .03 | . 014 |
| August.... | 8.4 | . 4 | 3.58 | . 014 | . 02 | . 009 |
| Sept ember.. | 62 | 2.1 | 8.71 | .035 | .04 | .023 |
|  |  |  |  |  |  |  |
| October........................ | 8.6 | 3.3 | 4.69 | . 019 | . 02 | . 012 |
| November. . | 9.6 | 4.8 | 7.55 | . 030 | . 03 | . 019 |
| December. . . . . . . . . . . . . . . . . . . | 40 | 2.3 | 13.8 | . 055 | . 05 | .036 |
| January. . . . . . . . . . . . . . . . . . . . . . . | 340 | - | 48.4 | . 194 | . 22 | . 125 |
| Februsry.......................... | 490 | - | 79.2 | . 318 | .33 | . 206 |
| March. | 1,810 | 44 | 209 | . 539 | .97 | . 542 |
| Apr11. . . . . . . . . . . . . . . . . . . . . . | 1,690 | 46 | 431 | 1.73 | 1.93 | 1.12 |
| May. . . . . . . . . . . . . . . . . . . . . . . . . | 2,930 | 56 | 630 | 2.53 | 2.92 | 1.64 |
| June . . . . . . . . . . . . . . . . . . . . . . . . . | 440 | 15 | 68.0 | . 273 | . 30 | . 176 |
| July . . . . . . . . . . . . . . . . . . . . . . . . . . | 335 | 13 | 41.2 | . 165 | . 19 | .107 |
| August. . . . . . . . . . . . . . . . . . . . . . | 73 | 8.0 | 24.2 | . 097 | .11 | .063 |
| September....................... | 52 | 11 | 21.3 | . 086 | . 10 | . 056 |
| The year. . . . . . . . . . . . . . . . . | 2,930 | 2.3 | 132 | . 530 | 7.18 | .343 |

Soutin Branch Potomac River at Pranklin, W. Va.
Location. - Water-stage recorder, lat. $38^{0} 38^{\prime \prime} 14^{\prime \prime}$, long. $79^{0} 200^{4} 14^{\prime \prime}$, half a mple southwest of Franklin, Pendleton County, and 2 miles upstream from Friends Run. Datum of gage $151,692.5$ feet above mean sea level (Corps of figineers, U. S. Army, bench mark). Drainage area. - 182 square miles.
Records avallable.-April 1940 to September 1943.
Extremes - Maximum discharge, 10,100 second-feet May 16, 1942 (gafe he1ght, 8.69 feet); minimum, 23 second-feet Oct. $9,10,26,1941$ (gage height, 1.48 feet).

Maximum stage lanown, about 13 reet Mareh 1936.


Monthly discharge of South Branch Potomac River at Frankiln, W. Va.--Continuad


Yearly discharge of South Branch Potomac River at Franklin, W. Va

| Year | Yaar anding Sapt. 30 |  |  |  | Calandar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharga in sacond-feat |  | Runoff in inches | Di scharge in million callons per day per square mile | Discharga in sacond-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { inchas } \\ & \text { inche } \end{aligned}$ | Discharge in million gallons per day per square mile |
|  | Man | Par squara mila |  |  | Maan | Par squara mile |  |  |
| $\begin{aligned} & 1941 . . . \\ & 1942 \ldots . \\ & 1943 . . \end{aligned}$ | $\begin{gathered} 88.8 \\ 168 \\ 234 \end{gathered}$ | $\begin{aligned} & 0.488 \\ & 1.923 \end{aligned}$ | $\begin{array}{r} 6.63 \\ 12.51 \\ 17.43 \end{array}$ | $\begin{array}{r} 0.315 \\ .597 \\ .834 \end{array}$ | 81.5 213 - | $\begin{aligned} & 0.448 \\ & 1.17 \end{aligned}$ | 6.07 15.95 $-\quad$ | $\begin{array}{r} 0.290 \\ .756 \end{array}$ |

South Branch Potomac River near Petersburg, W. Va.
Locat10n- - Water-stage recorder, 18t. $38^{\circ} 50134^{n}$, Iong. $79^{\circ} 10126^{\prime \prime}$, $1.2 \cdot \mathrm{miles}$ downstream from North Fork of South Branch Potomac River and 2 亩 miles west of Petersburg, Grant County. Datum of gage is 962.00 feet above mean sea level, adjustment of 1912. Prior to Dec. 4, 1929 staff gage 100 feet downstream on left bank, present datum.
Drainage area.- 642 square miles.
Records avallable.- Juna 1928 to September 1943.
Extremes.- Maximum discharge, 63,400 second-feet Mar. 17, 1936 (gace height, 20.3 feet),
by siope-area determination; minimum, 43 second-feet Oct. 2, 1930.
Maximum stage known, 21.2 feet, sometime in 1877, from floodmarks (discharge,
about 70,000 sacond-feet).
Remarks.- Regulation by power plant 800 feet above gage.

Monthly discharge of South Branch Potomac River near Petersburg. W. Va.


Monthly discharge of South Branch Potomac River near Petersburg, W. Va.--Cortinued

| Month | Discharge in second-feet |  |  |  | Run of $f$ in Inches | Discharce In million Eallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1932-33 |  |  |  |  |  |  |
| October | 1,870 | 57 | 307 | 0.478 | 0.55 | 0.309 |
| November. | 2,790 | 23.3 | 788 | 1.23 | 1.37 | . 795 |
| December. | 1,470 | 171 | 447 | . 696 | . 80 | . 450 |
| January. | 1,600 | 321 | 708 | 1.10 | 1.27 | . 711 |
| Fobruary. | 1,780 | 694 | 1,110 | 1.73 | 1.80 | 1.12 |
| March.... | 5,080 | 582 | 1,560 | 2.43 | 2.80 | 1.57 |
| Apr11 | 6,920 | 841 | 2,060 | 3.21 | 3.58 | 2.07 |
| May.. | 4,000 | 694 | 1,620 | 2.52 | 2.90 | 1.63 |
| June | 582 | 141 | 272 | . 424 | . 47 | . 274 |
| July. | 1,900 | 119 | 316 | . 492 | . 57 | . 318 |
| August. | 6,350 | 152 | 624 | . 972 | 1.12 | . 628 |
| September | 942 | 166 | 375 | . 584 | . 66 | .377 |
| The yoar. | 6,920 | 57 | 847 | 1.32 | 17.23 | . 853 |
| October. | 154 | 102 | 122 | . 290 | . 22 | . 123 |
| November | 424 | 102 | 188 | . 293 | .33 | . 189 |
| Decomber. | 1,080 | 160 | 400 | . 623 | . 72 | . 403 |
| January. | 2,010 | 210 | 629 | . 980 | 1.23 | . 633 |
| February. | 300 | 130 | 212 | .330 | . 34 | .213 |
| March.... | 4,630 | 180 | 1,590 | 2.48 | 2.86 | 1.60 |
| Apr11. | 1,390 | 312 | 746 370 | 1.16 | 1.29 | .750 .772 |
| Мау. . | 757 | 226 | 370 | .576 | $\begin{array}{r}.66 \\ \hline 35\end{array}$ | . 372 |
| June. | 452 | 120 | 199 | .310 | . 35 | . 200 |
| July. | 207 | 59 | 101 | -157 | - 18 | . 101 |
| August.. Septembe | 154 1,040 | 62 55 | 89.1 176 | $\begin{aligned} & .139 \\ & .274 \end{aligned}$ | . 161 | .090 .177 |
| The jear. | 4,630 | 55 | 405 | .631 | 8.55 | . 408 |
| Dctober. | 645 | 86 | 166 | . 259 | .30 | .167 |
| November | 2,100 | 98 | 346 | . 539 | . 60 | - 348 |
| December. | 4,000 | 250 | 829 | 1.29 | 1.49 | . 834 |
| January. | 7,430 | 388 | 1,350 | 2.10 | 2.42 | 1.36 |
| February | 3,570 | 504 | 1,504 | 2.34 | 2.44 | 1.51 |
| March. | 4,520 | 620 | 1,506 | 2.35 | 2.71 | 1.52 |
| April | 4,900 | 541 | 1,936 | 3.02 | 3.37 | 1.95 |
| May. | 2,570 | 450 | 982 | 1.53 | 1.76 | . 989 |
| June | -546 | 180 | 368 | . 573 | . 64 | . 370 |
| July. | 1,230 | 200 | 408 | . 636 | . 73 | . 411 |
| August. | 1,430 | 177 | 675 | 1.05 | 1.21 | . 679 |
| September | 4,900 | 148 | 733 | 1.14 | 1.27 | .737 |
| The year. | 7,430 | 86 | 896 | 1.40 | 18.94 | .905 |
| October. | 256 | 109 | 143 | . 223 | . 26 | .144 |
| November. | 1,610 | 125 | 438 | . 682 | . 76 | . 441 |
| December. | 1,620 | 300 | 606 | .944 | 1.09 | . 610 |
| January. | 3,240 | 380 | 1,421 | 2.21 | 2.55 | 1.43 |
| February | 7,950 | 360 | 1,818 | 2.83 | 3.05 | 1.93 |
| March... | 36,400 | 1,010 | 4,703 | 7.33 | 8.45 | 4.74 |
| Apr11. | 5,120 | , 440 | 1,454 | 2.26 | 2.52 | 1. 46 |
| May.. | 542 | 261 | 381 | . 593 | . 68 | . 383 |
| June. | 536 | $\begin{aligned} & 145 \\ & 749 \end{aligned}$ | $262$ | $.408$ | . 46 | . 264 |
| July..... | 1, 720 | $\begin{array}{r} 142 \\ 98 \end{array}$ | $\begin{aligned} & 342 \\ & 138 \end{aligned}$ | $\begin{aligned} & .533 \\ & .215 \end{aligned}$ | . 61 | .344 .139 |
| August.... Soptember. | 257 102 | 98 69 | $\begin{gathered} 138 \\ 80.8 \end{gathered}$ | $\begin{aligned} & .215 \\ & .126 \end{aligned}$ | $\begin{array}{r} .25 \\ .14 \end{array}$ | . 1314 |
| The year.. | 36,400 | 69 | 982 | 1.53 | 20.82 | . 889 |
| 1936-37 |  |  |  |  |  |  |
| October... | 3,500 | 84 | 375 | . 584 | . 67 | . 377 |
| November. | . 494 | 136 | 226 | . 352 | . 39 | . 228 |
| Decembor. | 2,390 | 121 | 886 | 1.38 | 1.59 | . 892 |
| January. | 9,620 | 997 | 2,498 | 3.89 | 4.48 | 2.51 |
| February. | 2,180 | 692 | 2,118 | 1.74 | 1.81 | 1.12 |
| March.. | 3,020 | 496 | . 895 | 1.39 | 1.60 | . 898 |
| April | 13,500 | 373 | 1,503 | 2.34 | 2.61 | 1.51 |
| May. | 1,770 | 505 | 788 | 1.23 | 1.42 | . 795 |
| June | 520 | 194 | 307 | . 478 | . 53 | . 309 |
| July. | 344 | 98 | 155 | .241 | . 28 | . 156 |
| August. | 1,520 | 78 | 244 | . 380 | . 44 | . 246 |
| Septomber......... | 2,110 | 118 | 399 | . 621 | . 69 | .401 |
| The year... | 13,500 | 78 | 782 | 1.22 | 16.51 | .789 |


| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Marimum | Minimum | Mean | Per square mile |  |  |
| 1937-38 |  |  |  |  |  |  |
| October.. | 17,600 | 112 | 1,825 | 2.84 | 3.27 | 1.84 |
| November. | 1,660 | 246 | 530 | . 826 | . 92 | . 534 |
| December. | 1,070 | 250 | 512 | . 798 | . 92 | . 516 |
| January. | 2,790 | 274 | 664 | 1.03 | 1.19 | . 666 |
| February. | 2,110 | 431 | 826 | 1.29 | 1.34 | . 834 |
| March.. | 1,320 | 470 | 868 | 1.35 | 1.56 | . 873 |
| April. | 1,150 | 396 | 590 | . 919 | 1.03 | . 594 |
| May. | 5,110 | 258 | 1,115 | 1.74 | 2.01 | 1.12 |
| June. | 1,930 | 234 | 676 | 1.05 | 1.17 | . 679 |
| July. | 1,540 | 136 | 405 | . 632 | . 73 | . 408 |
| August. | 1,040 | 96 | 333 | . 519 | . 60 | . 335 |
| September. | 330 | 90 | 146 | .227 | . 25 | . 147 |
| The year | 17,600 | 90 | 709 | 1.10 | 14.99 | . 711 |
| Octobe |  |  |  |  |  |  |
| November. | 130 354 | 76 96 | ${ }_{173}^{92.9}$ | . 2695 | $\begin{array}{r} 17 \\ .30 \end{array}$ | .094 .174 |
| December | 929 | 182 | 372 | . 579 | . 67 | .374 |
| January. | 10,900 | 200 | 1,210 | 1.88 | 2.17 | 1.22 |
| February | 11,600 | 781 | 2,880 | 4.49 | 4.67 | 2.90 |
| March. | 3,860 | 420 | 1,495 | 2.33 | 2.69 | 1.51 |
| April. | 7,450 | 360 | 1,324 | 2.06 | 2.30 | 1.33 |
| May.. | 925 | 390 | 556 | . 866 | 1.00 | . 560 |
| June | 1,060 | 184 | 375 | . 584 | . 65 | .377 |
| July. | 4,900 | 113 | 1,085 | 1.69 | 1.95 | 1.09 |
| August. | 1,420 | 176 | 411 | . 640 | . 74 | . 414 |
| Septembe | 190 | 86 | 123 | . 192 | . 21 | .124 |
| The year. | 11,600 | 76 | 829 | 1.29 | 17.52 | . 834 |
| 1039-40 |  |  |  |  |  |  |
| October.. | 534 | 92 | 156 | . 243 | - 28 | . 157 |
| November. | 194 | 110 | 140 | .218 | . 24 | . 141 |
| December. | 429 | 106 | 179 | .279 | . 32 | .180 |
| January. | 3 450 | 96 | 183 | . 285 | . 33 | . 184 |
| Februsry | 3,190 | 130 | 694 | 1.08 | 1.16 | . 698 |
| March. | 4,210 | 432 | 1,010 | 1.57 | 1.81 | 1.01 |
| April | 6,100 | 736 | 1,923 | 3.00 | 3.34 | 1.94 |
| May. | 16,400 | 280 | 1,388 | 2.16 | 2.49 | 1.40 |
| June | 5,660 | 376 | 1,794 | 2.79 | 3.12 | 1.80 |
| July. | 1,000 | 151 | 303 | . 472 | . 54 | .305 |
| August. | 1,550 | 117 | 380 | . 592 | . 68 | . 383 |
| September | 1,410 | 122 | 301 | . 469 | . 52 | .303 |
| The year. | 16,400 | 92 | 701 | 1.09 | 14.83 | . 704 |
| October. | 184 | 118 | 149 | . 232 | . 27 |  |
| November. | 731 | 184 | 311 | . 484 | . 54 | . 313 |
| December. | 849 | 252 | 436 | . 679 | . 78 | . 439 |
| January. | 773 | 296 | 503 | . 783 | . 90 | . 506 |
| February. | 425 | 170 | 266 | . 414 | . 43 | . 268 |
| March. | 1,380 | 170 | 708 | 1.10 | 1.27 | . 711 |
| April | 4,220 | 278 | 1,061 | 1.65 | 1.84 | 1.07 |
| May. | 636 | 152 | 242 | . 377 | . 43 | . 244 |
| June | 1,480 | 136 | 362 | . 564 | . 63 | . 365 |
| July. | 1,170 | 106 68 | 330 | . 514 | . 59 | . 332 |
| August... | 870 246 | 68 | 213 | . 332 | . 38 | . 215 |
| September | 246 | 72 | 135 | . 210 | . 23 | .136 |
| The jear. | 4,220 | 68 | 393 | . 612 | 8.29 | .396 |
| October.. | 86 |  | 73.1 |  |  |  |
| November. | 226 | 82 | 117 | . 182 | . 20 | . 118 |
| December. | 1,250 | 105 | 277 | . 431 | . 50 | . 279 |
| January. | 575 | 183 | 290 | . 452 | . 52 | . 292 |
| February. | 1,240 | 270 | 550 | . 857 | . 89 | . 554 |
| March. | 3,750 | 210 | 991 | 1.54 | 1.78 | . 995 |
| Apr11. | 1,330 | 280 | 627 | . 677 | 1.09 | . 631 |
| May.. | 15,700 | 218 | 2,086 | 3.25 | 3.75 | 2.10 |
| June. | 1,460 | 187 | 497 | . 774 | . 86 | . 500 |
| July. | 208 | 94 | 144 | . 224 | . 26 | . 145 |
| August. | 3,400 | 112 | 960 | 1.50 | 1.72 | . 969 |
| Soptember......... | 650 | 130 | 246 | . 383 | . 43 | . 248 |
| The year.. | 15,700 | 66 | 574 | . 894 | 12.13 | .578 |

Monthly discharge of South Branch Potomac River near Petersburg, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | Discharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. | 4,870 | 154 | 773 | 1.20 | 1.39 | 0.776 |
| November. | 1,440 | 291 | 582 | . 907 | 1.01 | . 586 |
| December. | 9,740 | 300 | 1,459 | 2.27 | 2.62 | 1.47 |
| January. | 3,130 | 539 | 1,292 | 2.01 | 2.32 | 1.30 |
| Fobruary | 5,180 | 642 | 1,687 | 2.63 | 2.74 | 1.70 |
| March... | 4,420 | 419 | 1,726 | 2.69 | 3.10 | 1.74 |
| April. | 6,000 | 488 | 1,231 | 1.92 | 2.14 | 1.24 |
| May... | 1,960 | 414 | 859 | 1.34 | 1.54 | . 866 |
| June | 748 | 174 | 371 | . 578 | . 65 | . 374 |
| July.. | 4,250 | 183 | 780 | 1.21 | 1.40 | . 782 |
| August | 404 | 100 | 160 | .249 | . 29 | .161 |
| Septembor | 171 | 74 | 92.7 | .144 | .16 | . 093 |
| The year. | 9,740 | 74 | 915 | 1.43 | 19.36 | . 924 |

Yearly discharge of South Branch Potomac River near Petersburg, W. Va


South Branch Potomac River near Springfield, W. Va.
Location.- Water-stage recorder, lat. $39^{\circ} 26^{\prime} 4^{\prime \prime}$, long. $78^{\circ} 39^{\prime \prime} 16^{\prime \prime}$, at highway bridge 2 miles east of Sprinefleld, Hamphire County, and 13 miles upstream from confluence with North pranch. Datum of arge is 562.00 faet above mean sea level, adjustnent of 1512. From August 1903 to July 1906, chaln gage at same site. From June 1899 to January 1902, wire raze at highway bridge 10 miles upstream. Prior to February 1896, wire age at raltimare \& ohio Railroad bridge il miles upstraam.
Drainage area.- 1,471 square miles; 1,457 square miles at site 10 miles upstream; 1,451 square miles at site 11 miles upstream.
Records avallable: - June 1894 to Fobruary 7896, June 1899 to January 1902, August 1903 to July look, August 1928 to September 1943.
Extremes.- Maximum discharee, 143,000 second-feet Mar. 18, 1936 (cage height, 34.2 feet), slope-area determination; minimum, 50 second-feet Aue. 5, 1930
Maximum stare known prior to 1936, about 34 feet, from floodmarks, in November 1877 (discharge, 140,000 second-feet).


Monthly discharge of South Branch Potomac River near Springfield, W. Va.--Continued

| Month | Discharge in second-reet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in rillion gallons per day per square milo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1903-4 |  |  |  |  |  |  |
| October. | 432 | 163 | 271 | 0.184 | 0.21 | 0.119 |
| November. | 261 | 163 | 206 | . 140 | . 16 | . 090 |
| December. | 463 | 163 | 286 | . 194 | . 22 | . 125 |
| January. | 12,200 | 432 | 1,009 | . 686 | . 79 | . 443 |
| February. | 5,540 | 432 | 1,004 | . 683 | .74 | . 441 |
| Merch.... | 4,030 | 740 | 1,451 | . 986 | 1.14 | . 637 |
| April. | 10,900 | 495 | 1,660 | 1.13 | 1.26 | . 730 |
| May. | 9,500 | 702 | 2,143 | 1.46 | 1.68 | . 944 |
| June. | 4,120 | 402 | 1,121 | -.762 | . 85 | . 492 |
| July. | 2,300 | 315 | 568 | . 386 | . 44 | . 249 |
| August. | 561 | 96 | 238 | . 162 | . 19 | . 105 |
| Seftember | 210 | 78 | 123 | . 084 | . 09 | . 054 |
| The year | 12,200 | 78 | 840 | . 571 | 7.77 | . 369 |
| October. | 96 | 78 | 80.9 | . 055 | . 06 | . 036 |
| November. | 96 | 78 | 79.9 | . 054 | . 06 | . 035 |
| December. | 1,560 | 79 | 296 | . 201 | . 23 | .130 |
| January | 4,840 | 210 | 821 | . 558 | . 64 | . 361 |
| February. | 1,790 | 630 | 831 | . 565 | . 59 | . 365 |
| March. | 18,300 | 1,040 | 4,793 | 3.26 | 3.76 | 2.11 |
| Apr11 | 2,580 | 432 | 1,015 | . 690 | . 77 | . 448 |
| May. | 8,240 | 432 | 1,744 | 1.19 | 1.37 | . 769 |
| June | 12,600 | 210 | 1,948 | 1.32 | 1.47 | . 860 |
| July | 4,650 | 702 | 1,673 | 1.14 | 1.31 | . 737 |
| August. | 4,120 | 372 | 854 | . 581 | . 67 | . 376 |
| September | 495 | 78 | 228 | . 155 | .17 | . 100 |
| The year. | 18,300 | 78 | 1,204 | . 818 | 11.10 | . 529 |
| October | 904 | 125 | 229 | . 156 | . 18 |  |
| November. | 315 | 163 | 190 | . 129 | . 14 | . 083 |
| December | 13,400 | 261 | 2,298 | 1.58 | 1.80 | $1.01$ |
| Januery.. | 13,500 | 1,240 | 3,321 | 2.26 | 2.61 | $1.46$ |
| February. | 1,730 | 315 | , 664 | . 451 | . 47 | . 291 |
| March. | 25,600 | 432 | 5,076 | 3.45 | 3.98 | 2.23 |
| April | 14,600 | 1,240 | 4,538 | 3.08 | 3.44 | 2.00 |
| May. | 2,800 | 372 | 1,085 | .738 | . 85 | . 474 |
| June | 1,910 | 315 | 770 | . 523 | . 58 | .338 |
| July 1-14 | 819 | 163 | 449 | . 3.05 | . 16 | . 197 |
| Aumust 8-31. |  |  |  |  |  |  |
| Sopt ember... | 2,020 | 279 | $\begin{aligned} & 953 \\ & 515 \end{aligned}$ | $.648$ | $.58$ | $\begin{array}{r} .419 \\ .226 \end{array}$ |
|  |  |  |  |  |  |  |
| October. | 366 | 205 | 258 | . 175 | . 20 | . 113 |
| November | 540 | 232 | 326 | . 222 | . 25 | .143 |
| December. | 3,210 | 439 | 866 | . 589 | . 68 | .381 |
| January. | 2,360 | - | - 984 | . 669 | . 77 | . 432 |
| February. | 9,680 | - | 1,130 | . 768 | . 80 | .496 |
| March... | 13,100 | 980 | 3,380 | 2.30 | 2.65 | 1.49 |
| April | 16,700 | 847 | 3,510 | 2.39 | 2.67 | 1.54 |
| May. | 7,560 | 913 | 2,550 | 1.73 | 1.98 | 1.12 |
| June | 3,540 | 557 | 1,050 | . 714 | . 80 | . 461 |
| July. | 573 | 171 | 311 | . 211 | . 24 | .136 |
| August. | 180 | 117 | 144 | . 098 | . 11 | . 063 |
| September. | 130 | 100 | 129 | . 088 | . 10 | . 057 |
| The year. | 16,700 | 100 | 1,220 | . 829 | 11.26 | . 536 |
| October | 9,390 | 131 |  |  |  |  |
| November. | 12,200 | - | 2,120 | 1.44 | 1.61 | . 931 |
| December | 2,520 | - | 1,050 | . 714 | . 82 | . 461 |
| January. | 1,750 | - | . 788 | . 536 | . 62 | . 346 |
| February | 2,050 | 420 | , 958 | . 651 | . 68 | - 421 |
| March. | 3,650 | 692 | 1,450 | . 986 | 1.14 | . 637 |
| April | 2,570 | 524 | 1,090 | . 741 | . 83 | . 479 |
| May. | . 581 | 205 | 374 | . 254 | . 29 | . 164 |
| June | 1,300 | 161 | 320 | . 218 | . 24 | . 141 |
| July... | 161 | 62 | 105 | . 071 | . 08 | . 046 |
| August.. | 95 | 56 | 73.5 | . 050 | $.05$ | $.032$ |
| September. | 106 | 62 | 76.6 | . 052 | . 06 | .034 |
| The year.. | 12,200 | 56 | 832 | . 566 | 7.69 | .366 |

Monthly ilscharge of South Branch Potomac River near Springfield, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | Runofe in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1930-31 |  |  |  |  |  |  |
| October. | 96 | 62 | 79.4 | 0.054 | 0.06 | 0.035 |
| November. | 132 | 74 | 114 | . 077 | . 03 | . 050 |
| December. | 346 | 83 | 157 | .107 | .12 | . 069 |
| Jenuary | 1,330 | 158 | 463 | .315 | . 36 | . 204 |
| February | 1,350 | 266 | 625 | . 425 | . 44 | . 275 |
| March... | 3,980 | 488 | 1,020 | . 693 | . 80 | . 448 |
| April | 6,970 | 765 | 2,760 | 1.98 | 2.10 | 7.22 |
| Mey. | 5,080 | 693 | 2,050 | 1.39 | 1.60 | . 898 |
| June | 4,290 | 398 | 1,120 | . 761 | . 85 | . 492 |
| July. | 984 | 227 | 466 | . 317 | . 37 | .205 |
| August | 4,220 | 163 | 845 | . 574 | . 66 | .371 |
| Septembar | 616 | 158 | 264 | .179 | .20 | .116 |
| The yeer. | 6,970 | 62 | 830 | . 564 | 7.65 | . 365 |
| October | 306 | 91 | 139 | . 094 | . 11 | . 061 |
| November. | 122 | 104 | 114 | . 077 | . 09 | . 050 |
| Dacember. | 756 | 122 | 370 | . 252 | . 29 | . 163 |
| January. | 2,780 | 382 | 990 | . 673 | . 78 | . 435 |
| February. | 24,400 | 485 | 2,450 | 1.67 | 1.80 | 1.08 |
| March. . | 12,000 | 433 | 3,080 | 2.09 | 2.41 | 1.35 |
| April | 7,870 | 669 | 1,760 | 1.20 | 1.34 | . 7776 |
| Mey. | 19,700 | 555 | 3,570 | 2.43 | 2.80 | 1.57 |
| June | 1,090 | 289 | 485 | . 330 | . 37 | . 213 |
| July. | 2, 410 | 142 | 573 | . 390 | . 45 | . 252 |
| August. | 202 115 | $\begin{aligned} & 82 \\ & 64 \end{aligned}$ | $\begin{aligned} & 138 \\ & 78.8 \end{aligned}$ | $\begin{aligned} & .094 \\ & .054 \end{aligned}$ | . 11 | $.061$ |
| The year | 24,400 | 64 | 1,140 | . 775 | 10.51 | . 501 |
| October | 3, 660 | 75 | 642 | . 436 | . 50 | . 282 |
| November | 6,440 | 425 | 1,670 | 1.14 | 1.27 | . 737 |
| December | 3,550 | 280 | , 866 | . 589 | . 68 | . 381 |
| Jenuery. | 4,000 | 535 | 1,310 | . 891 | 1.03 | . 576 |
| February | 2,850 | 1,120 | 1,850 | 1.26 | 1.31 | . 814 |
| Merch. | 11,000 | , 938 | 2,910 | 1.98 | 2.28 | 1.28 |
| Apr11 | 12,000 | 1,600 | 3,920 | 2.66 | 2.97 | 1.72 |
| May. | 9,550 | 1,370 | 3,350 | 2.23 | 2.63 | 1.47 |
| June. | 1,270 | 207 | 518 | . 352 | . 39 | .228 |
| July | 3,000 | 160 | , 541 | . 368 | . 42 | .238 |
| August. | 14,900 | 146 | 1,410 | -959 | 1.11 | .620 |
| September. | 2,290 | 321 | 884 | .601 | . 67 | . 388 |
| The year. | 14,300 | 75 | 1,650 | 1.12 | 15.26 | .724 |
| October. | 296 | 176 | 209 | . 142 | .16 | . 092 |
| November. | 518 | 181 | 270 | . 184 | .21 | . 119 |
| December. | 7, 270 | 230 | 501 | . 311 | . 39 | .220 |
| January. | 3,660 | 400 | 1,080 | . 734 | . 85 | . 474 |
| February. | 7, 4220 | 260 310 | 362 2,440 | . 2.246 | .26 1.91 | .159 1.07 |
| Merch | 7,220 | 310 | 2,440 | 1.66 | 1.91 | 1.07 |
| April | 2,650 | 545 | 1,310 | .891 | . 99 | .576 |
| Mey. | 1,160 | 380 | 598 | . 407 | -47 | . 263 |
| June. | 642 | 168 | 361 | . 245 | . 27 | . 158 |
| July. | 242 | 88 | 148 | . 101 | . 12 | . 065 |
| August.. | 412 | 91 | 153 | -104 | . 12 | .067 |
| September | 1,660 | 86 | 293 | . 199 | . 22 | .129 |
| The jeer. | 7,220 | 86 | 647 | . 440 | $5 \cdot 97$ | .234 |
| October. | 991 | 144 | 294 | . 200 | . 23 | . 129 |
| November. | 2,780 | 164 | 444 | . 302 | . 34 | . 155 |
| December. | 7,350 | 400 | 1,413 | . 961 | 1.11 | . 621 |
| Jemuary. | 13,200 | 568 | 2,308 | 1.57 | 1.81 | 1.01 |
| February | 8,140 | 1,100 | 3,146 | 2.14 | 2.23 | 1.38 |
| Merch. | 6,960 | 1,000 | 2,430 | 1.65 | 1.90 | 1.07 |
| April. | 10.900 | 842 | 4,130 | 2.81 | 3.14 | 1.82 |
| Mey.. | 5,960 | 809 | 1,835 | 1.25 | 1.44 | . 908 |
| June. | 937 | 293 | 618 | . 420 | . 47 | .271 |
| July ..... | 1,420 | 277 | 543 | . 369 | . 43 | . 238 |
| August... | 2,620 10,300 | 257 228 | 916 1,247 | . 623 | .72 .95 | .403 .548 |
|  |  |  |  |  |  |  |
| The yeer..... | 13,200 | 144 | 1,598 | 1.09 | 14.77 | .704 |

Monthly discharge of South Brench Potomec River near Springfield, w. Va.--Continued

| Month | Discherge in second-feet |  |  |  | Runoff in inches | Discharge In million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | M1nimum | Meen | $\begin{array}{\|c\|} \text { Per } \\ \text { square } \\ \text { mile } \end{array}$ |  |  |
| 1935-36 |  |  |  |  |  |  |
| October. | 315 | 175 | 210 | 0.143 | 0.16 | 0.092 |
| Novamber. | 3,810 | 211 | 849 | . 577 | . 64 | . 373 |
| December. | 2,950 | 487 | 1,026 | . 697 | . 30 | .450 |
| Jenuery. | 9,000 | 700 | 3,007 | 2.04 | 2.35 | 1.32 |
| Fabruary. | 18,000 | 800 | 4,273 | 2.90 | 3.13 | 1.87 |
| Merch. | 110,000 | 2,160 | 10,490 | 7.13 | 8.22 | 4.61 |
| April. | 9,760 | 750 | 2,812 | 1.91 | 2.13 | 1.23 |
| Mey . . | 774 | 432 | 604 | .411 | . 47 | .266 |
| June | 854 | 256 | 435 | . 296 | . 33 | . 191 |
| July. | 1,750 | 238 | 499 | .339 | . 39 | . 219 |
| August. | 316 | 137 | 209 | . 142 | . 16 | . 092 |
| September | 154 | 95 | 119 | .081 | . 09 | . 052 |
| Tha year. | 110,000 | 95 | 2,043 | 1.39 | 18.37 | . 898 |
| Octobar............ | 5,760 | 134 | 621 | . 422 | . 49 | .273 |
| Novembar. | , 638 | 224 | 332 | . 226 | . 25 | . 146 |
| December. | 3,830 | 211 | 1,472 | 1.00 | 1. 35 | . 646 |
| Januery. | 16,000 | 1,850 | 4,595 | 3.12 | 3.60 | 2.02 |
| February. | 6,570 | 1,240 | 2,626 | 1.78 | 1.85 | 1.15 |
| Merch.. | 4,510 | 830 | 1,582 | 1.08 | 1.24 | . 698 |
| April | 33,400 | 596 | 3,694 | 2.51 | 2.80 | 1.62 |
| May. | 3,830 | 823 | 1,401 | . 958 | 1.10 | . 615 |
| June | 855 | 382 | 596 | . 405 | . 45 | . 262 |
| July | 656 | 160 | 303 | . 206 | . 24 | . 133 |
| August |  | 137 | 1,290 | .877 | 1.01 | . 567 |
| Septambar. | 3,830 | 223 | 933 |  |  |  |
| The yeer | 33,400 | 134 | 1,615 | 1.10 | 14.89 | .711 |
| October....... | 32,500 | 214 | 3,747 | 2.55 | 2.94 | 1.65 |
| Novemba | 3,850 | 534 | 1,143 | . 7777 | . 87 | . 502 |
| Decamber | 1,660 | 450 | 843 | . 573 | . 66 | . 370 |
| Januery. | 5,480 | 490 | 1,151 | . 782 | . 90 | . 505 |
| Fabruary. | 2,500 | 694 | 1,210 | - 223 | . 86 | . 532 |
| Merch. | 2,400 | 766 | 1,337 | . 909 | 1.05 | . 583 |
| April | 2,000 | 680 | 1,006 | . 684 | . 76 | . 442 |
| May. | 8,280 | 462 | 1,648 | 1.12 | 1.29 | . 724 |
| June | 2,730 | 403 | 1,102 | . 749 | . 34 | . 484 |
| July | 2,760 | 238 | 719 | . 489 | . 56 | .316 |
| August. | 2,100 | 158 | 610 | . 415 | -48 | . 268 |
| September | 414 | 137 | 219 | . 149 | . 17 | . 05.6 |
| The yeer. | 32,500 | 137 | 1,232 | . 838 | 11.38 | . 542 |
| Octobar...... | 191 | 128 | 156 | . 106 | . 12 |  |
| Novamber. | 462 | 164 | 264 | . 179 | . 20 | .116 |
| Dacember. | 2,640 | 365 | 752 | . 511 | . 59 | . 330 |
| Jenuary. | 18,100 | 382 | 1,612 | 1.10 | 1.27 | .711 |
| February. | 31,400 | 1,300 | 5,137 | 3.49 | 3.63 | 2.26 |
| March. | 7,280 | 839 | 2,628 | 1.79 | 2.06 | 1.16 |
| April. | 15,700 | 690 | 2,274 | 1.55 | 1.73 | 1.00 |
| Mey. | 1,550 | 660 | 942 | . 640 | -74 | . 414 |
| June | 1,400 | 323 | 573 | . 390 | . 44 | . 252 |
| July. | 8,690 | 220 | 1,585 | 1.08 | 1.24 | . 698 |
| August... | 2,910 323 | 283 144 | 681 196 | .463 .133 | .53 .15 | .299 .086 |
| The yeer | 31,400 | 128 | 1,376 | . 935 | 12.70 | . 604 |
| October........... | 1,010 | 157 | 280 | .190 | . 22 | . 123 |
| November. | 415 | 211 | 272 | .185 | .21 | . 120 |
| December. | 529 | 190 | 275 | . 187 | . 22 | . 121 |
| January.. | 750 | 210 | 323 | . 220 | . 25 | -142 |
| February. | 5,900 | 240 | 1,624 | 1.10 | 1.19 | . 7111 |
| Merch.... | 6,750 | + 703 | 1,640 | 1.11 | 1.28 | - ${ }^{17}$ |
| April. | 14,000 | 1,370 512 | 3,796 | 2.58 1.23 | 2.88 1.42 | 1.67 |
| May. . . | 17,400 | 512 690 | 1,803 | 1.23 2.30 | 1.42 2.57 | 1.795 |
| July. | 1,400 | 250 | 501 | . 341 | . 39 | . 220 |
| August. | 3,170 | 190 | 695 | . 472 | . 54 | . 305 |
| Saptamber. | 1,980 | 206 | 557 | . 379 | . 42 | . 245 |
| The year... | 17,900 | 157 | 1,252 | . 851 | 11.59 | . 550 |

Monthly discharge of South Brench Potomac River near Springfield, W. Ve.--Continued


Yeaッ1 discharge of South Branch Potomac River near Soringfield, W. Va.

| Yeer | Yeer ending Sept. 30 |  |  |  | Calender yeer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in socond-feet |  | Runoff in inches | Discharge in million gellons per dey per squere mile | Discherge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge in million gellons per dey per square milo |
|  | Mean | Per square mile |  |  | Moan | Per squere mile |  |  |
| 1900. | 1,166 | 0.800 | 10.86 | 0.517 | 1,252 | 0.859 | 11.59 | 0.555 |
| 1901 | 1,734 | 1.19 | 16.13 | . 769 | 1,792 | 1.23 | 16.75 | . 795 |
| 1904 | 840 | . 571 | 7.77 | . 369 | 814 | . 553 | 7.53 | . 357 |
| 1905 | 1,204 | . 818 | 11.10 | . 529 | 1,385 | . 942 | 12.87 | . 609 |
| 1929. | 1,220 | . 828 | 11.26 | . 536 | 1,497 | 1.02 | 13.82 | . 659 |
| 1.30. | 832 | . 566 | 7.69 | . 366 | - 462 | . 314 | 4.27 | . 203 |
| 1931 | 830 | . 564 | 7.65 | . 365 | 853 | . 580 | 7.87 | . 375 |
| 1932 | 1,140 | .775 | 10.61 | . 501 | 1,356 | . 922 | 12.57 | . 596 |
| 1933 | 1,650 | 1.12 | 15.26 | . 724 | 1,470 | . 999 | 13.57 | . 646 |
| 1934. | 647 | . 440 | 5.97 | . 284 | 746 | . 507 | 6.89 | . 328 |
| 193 | 2,598 | 1.09 | 14.77 | . 704 | 1,591 | 1.08 | 14.69 | . 698 |
| 193 | 2,043 | 1.39 | 18.87 | - 898 | 2,073 | 1.41 | 19.16 | . 911 |
| 1937 | 1,615 | 1.10 | 14.89 | . 711 | 1,894 | 1.29 | 17.47 | . 834 |
| 1938. | 1,232 | . 838 | 11.38 | . 542 | 847 | . 576 | 7.82 | .372 |

Yearly discharge of South Branch Potomac River near Springfield, W. Va.--Continued

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diacharge in second-feet |  | Runoff in inches | Diecharge in million gallone per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inchoes } \end{aligned}$ | Diecharge in million gallone per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Por equare m110 |  |  |
| 1939 | 1,376 | 0.935 | 12.70 | 0.604 | 1,346 | 0.915 | 12.44 | 0.591 |
| 1940. | 1,252 | . 851 | 11.59 | . 550 | 1,327 | . 902 | 12.27 | . 583 |
| 1941. | 757 | . 515 | 6.99 | . 333 | 668 | . 454 | 6.16 | . 293 |
| 1942. | 991 | . 674 | 9.13 | . 436 | 1,459 | . 992 | 13.46 | . 641 |
| 1943. | 1,791 | 1.22 | 16.52 | . 789 |  |  |  |  |
| 1929-43 |  |  |  |  |  | 1.41 | 19.16 | . 911 |
| H1ghest | 2,043 | 1.39 | 18.87 | . 556 | 1,256 | 1.85 | 11.60 | . 552 |
| Average | 1,647 | . 440 | 5.97 | . 284 | 462 | . 314 | 4.27 | . 203 |

North Fork of South Branch Potomac River at Cabins, W. Va
Location. $=$ Water-stage recorder, lat. $38^{\circ} 59^{\prime} 05^{n \prime}$, long. $79^{\circ} 9^{\prime \prime} 4^{\prime \prime \prime}$, 380 feet upstream from highway bridge at Cabins, Grant County, and $13 / 4$ miles downstram from Jordan Fun. Datum of gage is 1,050.13 feet above mean sea level (Corps of Engineers, U. S. Army, bench mark).

Drainage area.- 314 square milee.
Records avaIIable.- February 1940 to September 1943.
Extremes.- Maximur discharge, 14,300 eecond-feet May 31, 1940 (gage height, 11.10 feet); minimum, 9.2 eecond-feet Sept. 20, 1943

Maximum stage known, 12.8 feet Mar. 17, 1936 , from information by local residents (discharge, 20,600 second-feet, from rating curve extended above 10,000 second-feet by logarithmic plotting).

Monthly diecharge of North Fork of South Branch Potomac River at Cabins, W. Va.

| Month | Diecharge in eecond-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1 mum | Mean | Per square mile |  |  |
| 1940 |  |  |  |  |  |  |
| March. | 3,000 | 220 | 624 | 1.99 | 2.29 | 1.29 |
| April. | 3,450 | 38.5 | 1,109 | 3.53 | 3.94 | 2.28 |
| May. | 7,970 | 133 | 741 | 2.36 | 2.72 | 1.53 |
| June | 2,710 | 128 | 691 | 2.20 | 2.46 | 1.42 |
| July. | 546 | 55 | 130 | . 414 | . 48 | . 268 |
| August | 1,060 | 25 | 197 | . 627 | . 72 | .405 |
| September | 755 | 35 | 132 | . 480 | . 47 | . 271 |
| October....... | 104 | 40 | 61.5 | .196 | . 23 | . 127 |
| November. | 500 | 93 | 182 | . 580 | . 65 | .375 |
| December. | 658 | 155 | 275 | . 876 | 1.01 | . 566 |
| January. | 495 | 147 | 300 | .955 | 1.10 | -617 |
| February. | 243 | 88 | 142 | . 452 | . 47 | . 292 |
| March. | 994 | 85 | 467 | 1.49 | 1.72 | . 963 |
| April | 2,920 | 125 | 659 | 2.10 | 2.34 | 1.36 |
| May. | , 505 | 73 | 134 | . 427 | . 49 | . 276 |
| June | 1,130 | 62 | 229 | . 729 | . 81 | . 471 |
| JuIy. | 949 | 41 | 203 | . 646 | .75 | . 418 |
| August. | 750 | 15 | 131 | . 417 | . 48 | . 270 |
| September | 181 | 18 | 63.6 | . 203 | . 23 | .131 |
| The year. | 2,920 | 15 | 238 | . 758 | 10.28 | . 490 |
| October. | 30 | 16 |  |  |  |  |
| November. | 120 | 26 | 50.9 | . 162 | . 18 | . .105 |
| December. | 781 | 40 | 163 | . 519 | . 60 | .335 |
| January. | 398 | 88 | 167 | . 532 | . 61 | . 344 |
| February. | 949 | 137 | 360 | 1.15 | 1.19 | . 743 |
| March. | 2,700 | 108 | 660 | 2.10 | 2.42 | 1.36 |
| April | 978 | 135 | 387 | 1.23 | 1.37 | . 795 |
| May. | 7,820 | 106 | 1,101 | 3.51 | 4.04 | 2.27 |
| June | 574 | 65 | 187 | . 596 | . 67 | . 385 |
| July. | 108 | 23 | 55.4 | . 176 | . 20 | . 114 |
| August... | 2,380 | 42 | 586 | 1.87 | 2.15 | $1.21$ |
| September | 317 | 44 | 110 | . 350 | . 39 | $.226$ |
| The year. | 7,820 | 16 | 322 | 1.03 | 13.89 | . 666 |

Monthly discharge of North Fork of South Branch Potomac River at Cabins, W. Va.-Continued

| Month | Diecharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square m1le |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. | 2,330 | 68 | 400 | 1.27 | 1.47 | 0.821 |
| November. | 978 | 147 | 358 | 1.14 | 1.27 | .737 |
| December. | 5,500 | 214 | 957 | 3.05 | 3.51 | 1.97 |
| January. | 1,650 | 230 | 695 | 2.21 | 2.55 | 1.43 |
| Fobruary. | 2,990 | 320 | 904 | 2.88 | 3.00 | 1.86 |
| March.... | 2,640 | 200 | 967 | 3.08 | 3.55 | 1.99 |
| Apr11. . . . . . . . . . . . . . . . . . . | 3,820 | 212 | 688 | 2.19 | 2.45 | 1.42 |
| May . . . . . . . . . . . . . . . . . . . . . . . . | 1,230 | 172 | 449 | 1.43 | 1.65 | . 924 |
| June. . . . . . . . . . . . . . . . . . . . . . | - 325 | 47 | 129 | . 411 | . 46 | . 266 |
| July.. | 1,930 | 54 | 315 | 1.00 | 1.16 | . 646 |
| August. | 209 | 22 | $58 \cdot 7$ | . 187 | . 22 | .121 |
| September. . . . . . . . . . . . . . | 48 | 9.8 | 16.8 | . 054 | . 06 | . 035 |
| The year................... | 5,500 | 9.8 | 494 | 1.57 | 21.35 | 1.01 |

Yaarly discharge of North Fork of South Branch Potomac River at Cabins, W. Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff 1 n Inches | Discharge in million gallons per day per equare mile | Diecharge in second-feet |  | Runoff in <br> inchee | Diecharge In million gallons per day per equare mile |
|  | Maan | Per square mile |  |  | Mean | Per equare m118 |  |  |
| 1941. | 238 | 0.758 | 10.28 | 0.490 | 214 | 0.682 | 9.24 | 0.441 |
| 1942. | 322 | 1.03 | 13.89 | . 666 | 447 | 1.42 | 19.29 | . 918 |
| 1943. | 494 | 1.57 | 21.35 | 1.01 |  | - | - | - |

South Fork of South Branch Potomac River near Moorefield, W. Va
Location.- Water-stage recordor, lat. $39^{\circ} 00^{144^{\prime \prime}}$, long. $78^{\circ} 57^{\prime \prime 2} 3^{\prime \prime}, 0.2$ mile downotream from Stony Creek and $3 \frac{3}{2}$ miles south of Moorefield, Rardy County. Datum of gage is 861.51 feet above mean sea level (Corps of Engineers, 0. S. Army, bench mark). From June 24, 1928 to Sept. 30, 1935 and from Aug. 23, 1938 to Mar. 11, 1940 chaln gage and wire weight gage, respectively, at bridge 2 miles upstream from present site. Datum 892.79 feet abova mean sea level.
Drainage area.- 283 equare miles. Prior to Mar. 12, 1940, 271 square milee.
Fecorde available.- June 1928 to September 1935, August 1938 to Septamber 1943
Fxtremes:- Maximum discharge, 23,100 second-reet May 22,1942 (gage he1ght, 11.07 feet), from rating curve extended above 4,000 second-feet on besis of slope-area determina-
tion at gage height 13.8 feet; minimum observed, 8.0 second-feet Aug-12, 13,1930 .

Maximum stage know, 13.8 feet, present site and datum, Mar. 17, 1936, from floodmarks (discharge, about 43,000 eecond-feet, by slope-area determination).

Monthly discharge of South Fork of South Branch Potomac River near Moorefield, W . Va.

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runof } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minlmum | Mean | Per equare mile |  |  |
| 1928 |  |  |  |  |  |  |
| June 24-30. | 700 | 284 | 416 | 1.54 | 0.40 | 0.995 |
| July.. | 248 | 28 | 94.7 | . 349 | . 40 | . 226 |
| August. | 910 | 28 | 240 | . 886 | 1.02 | . 573 |
| September. | 796 | 36 | 137 | . 506 | . 56 | .327 |
| 1928-29 |  |  |  |  |  |  |
| October. | 80 | 27 | 42.0 | . 155 | . 18 | .100 |
| November. | 44 | 31 | 36.1 | . 133 | . 15 | . 086 |
| December. | 198 | - | 101 | . 373 | . 43 | . 241 |
| January. | 279 | - | 130 | . 480 | . 55 | . 310 |
| February | 3,060 | - | 283 | 1.04 | 1.08 | . 672 |
| March. | 3,340 | 141 | 605 | 2.23 | 2.57 | 1.44 |
| April. | 3,320 | 122 | 657 | 2.42 | 2.70 | 1.56 |
| May... | 2,270 | 132 | 416 | 1.54 | 1.78 | . 995 |
| June | 279 | 97 | 160 | . 590 | . 66 | . 381 |
| July | 100 | 28 | 59.0 | . 218 | . 25 | . 141 |
| August. | 46 | 14 | 22.8 | . 084 | . 10 | . 054 |
| September. | 30 | 10 | 19.6 | . 072 | . 08 | .046 |
| The year. | 3,340 | 10 | 210 | . 775 | 10.53 | .501 |

Monthly discharge of South Fork of South Branch Potomac River near Moorefleld, W. Va.-Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { Inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Per squaro mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| October. | 3,840 | 26 | 449 | 1.66 | 1.91 | 1.07 |
| November. | 4,500 | 121 | 547 | 2.02 | 2.25 | 1.31 |
| December. | 475 | - | 140 | . 517 | . 60 | . 334 |
| January. | 309 | - | 132 | . 487 | . 56 | . 315 |
| February | 510 | 70 | 185 | . 683 | . 71 | . 441 |
| March. | 1,220 | 105 | 269 | . 993 | 1.14 | . 642 |
| April. | 284 | 76 | 142 | . 524 | . 58 | . 339 |
| May.. | 74 | 31 | 51.2 | . 189 | . 22 | . 122 |
| June | 201 | 23 | 56.1 | . 207 | .23 | . 134 |
| July. | 26 | 9.8 | 16.0 | . 059 | . 07 | .038 |
| August. | 16 | 8.4 | 11.1 | . 041 | . 05 | . 026 |
| September. . <br> The year | 16 | 9.8 | 12.1 | . 045 | . 05 | . 022 |
|  | 4,500 | 8.4 | 167 | . 616 | 8.37 | .398 |
| October | 18 | 10 | 13.8 | . 051 | . 06 | .033 |
| Novembe | 22 | 16 | 20.1 | . 074 | . 08 | . 048 |
| December. | 49 | 19 | 27.3 | . 101 | . 12 | . 065 |
| January.. | 251 | 35 | 68.8 | . 258 | . 30 | . 167 |
| February. | 138 | 35 | 74.4 | . 275 | . 29 | . 178 |
| March. .. | + 825 | 82 | 197 | . 727 | . 84 | . 470 |
| Apr11. | 1,390 618 | 124 | 529 276 | 1.95 | 2.18 1.18 | 1.26 . |
| May......June.July....August... | 618 309 | 113 | 276 128 | 1.02 <br> .472 | 1.18 | . 659 |
|  | 697 | 38 | 127 | . 469 | . 54 | . 303 |
|  | 825 | 34 | 183 | . 675 | . 78 | . 436 |
|  | 116 | 25 | 43.4 | . 160 | . 18 | .103 |
| The y | 1,390 | 10 | 141. | . 520 | 7.08 | . 336 |
| October. | 27 | 16 | 19.9 | . 073 | . 08 | . 047 |
| November. | 18 | 16 | 17.1 | . 063 | . 07 | . 041 |
| Decembor. | 28 | 17 | 22.8 | . 084 | . 10 | . 054 |
| Januery | 167 | 32 | 80.2 | . 296 | . 34 | . 191 |
| Februery | 2,890 | 59 | 329 | 1.21 | 1.30 | . 782 |
| March. | 2,940 | 59 | 586 | 2.16 | 2.49 | 1.40 |
| Apri1 | 738 | 99 | 202 | . 745 | . 83 | . 488 |
| May. | 3,730 | 90 | 652 | 2.41 | 2.78 | 1.56 |
| June | 228 | 44 | 77.2 | .285 | . 32 | . 184 |
| July. | 212 | 20 | 61.4 | . 227 | . 26 | . 147 |
| August. | 28 | 9.5 | 15.4 | . 057 | . 07 | . 037 |
| September | 27 | 8.5 | 12.2 | . 045 | . 05 | . 029 |
| The yes | 3,730 | 8.5 | 173 | . 638 | 8.69 | . 412 |
| October | 2,240 | 10 | 190 | . 701 | . 81 | . 453 |
| November | 2,660 | 96 | 354 | 1.31 | 1.46 | . 847 |
| December | . 910 | 50 | 164 | . 605 | . 70 | . 391 |
| January. | 1,730 | 109 | 329 | 1.21 | 1.40 | . 782 |
| February. | 640 | 147 | 305 | 1.13 | 1.18 | . 730 |
| March.. | 2,240 | 130 | 385 | 1.42 | 1. 64 | . 818 |
| Apr11 | 3,920 | 169 | 942 | 3.48 | 3.88 | 2.25 |
| May. | 1,490 | 169 | 452 | 1.67 | 1.92 | 1.08 |
| June. | 207 | 40 | 87.5 | . 323 | . 36 | $\text { . } 209$ |
| July . .... | 600 7.920 | 34 41 | ${ }_{446} 9.2$ | . 1.651 | .40 1.90 | .227 1.07 |
| August.... | $\begin{array}{r}7 \\ \hline\end{array}$ | 41 | 446 103 | 1.65 .380 | $\begin{array}{r}1.90 \\ .42 \\ \hline\end{array}$ | 1.07 .246 |
| The year. | 7,920 | 10 | 321 | 1.18 | 16.07 | . 763 |
| October........... | 35 | 20 | 25.4 | . 094 | . 11 | . 061 |
| November. | 26 | 18 | 21.0 | . 077 | . 09 | . 050 |
| December. | 69 | 19 | 29.4 | . 108 | .12 | . 070 |
| January.. | 142 | 25 | 61.2 | . 226 | . 26 | . 146 |
| February. | 35 | 15 | 25.2 | . 093 | . 10 | . 060 |
| Narch.. | 2,490 | 25 | 412 | 1.52 | 1.75 | . 982 |
| April. | 430 | 84 | 183 | . 675 | . 75 | . 436 |
| May. . | 162 | 58 | 104 | . 384 | . 44 | . 248 |
| June. | 180 | 26 | 68.2 | . 252 | . 28 | . 163 |
| July.. | 69 | 10 | 24.9 | . 092 | . 11 | . 060 |
| August.... | 54 199 | 15 | 28.1 | .104 .752 | . 12 | . 067 |
| September. | 199 | 11. | 41.1 | . 152 | .17 | . 098 |
| The year...... | - 2,490 | 10 | 85.9 | .317 | 4.30 | . 205 |

Monthly discharge of South Fork of South Branch Potomac R1ver near Moorefield, W. Va.-Continued


Monthly discharge of South Fork of South Branch Fotomac River near Moorefield, W. Va. - Continued

| Month | Discharge in second-feet |  |  |  | Runoff in 1nches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| 1941-42 |  |  |  |  |  |  |
| October....... | 20 | 14 | 16.0 | 0.057 | 0.07 | 0.037 |
| November. | 28 | 22 | 24.9 | . 088 | . 10 | .057 |
| December. | 143 | 22 | 45.4 | . 160 | .18 | . 103 |
| January.. | 97 | 33 | 49.4 | .175 | . 20 | .113 |
| February... | 207 | 45 | 89.0 | . 314 | . 33 | . 203 |
| March.... | 1,520 | 49 | 336 | 1.19 | 1.37 | . 769 |
| April........................... | - 480 | 65 | 179 | . 633 | . 71 | . 409 |
| May | 11,300 | 54 | 977 | 3.45 | 3.98 | 2.23 |
| $\operatorname{Jun}$ 。 | 582 | 65 | 202 | . 714 | . 80 | . 461 |
| July. | 80 | 23 | 39.6 | .140 | .16 | . 090 |
| August. | 438 | 29 | 194 | . 686 | . 79 | . 443 |
| September........... | 125 | 32 | 61.1 | . 216 | . 24 | .140 |
| The year. | 11,300 | 14 | 186 | .657 | 8.93 | . 425 |
| October..... | 10,400 | 46 | 873 | 3.08 | 3.55 | 1.99 |
| November........................... | 10,285 | 83 | 149 | . 523 | . 58 | . 338 |
| December....................... | 4,000 | 69 | 393 | 1.39 | 1.60 | . 898 |
| January.. | 1,070 | 130 | 344 | 1.22 | 1.40 | . 789 |
| February......................... | 2,080 | 11.7 | 576 | 2.04 | 2.12 | 1.32 |
| March. . . . . . . . . . . . . . . . . . . . . . | 1,800 | 89 | 556 | 1.96 | 2.26 | 1.27 |
|  | 3,190 | 139 | 464 | 1.64 | 1.83 | 1.06 |
| May. . . . . . . . . . . . . . . . . . . . . . . . . | 1,010 | 121 | 337 | 1.19 | 1.37 | .769 |
| June. . . . . . . . . . . . . . . . . . . . . . . . . . | 503 | 72 | 193 | . 682 | . 76 | . 441 |
| July............................ | 735 | 51 | 176 | . 622 | .72 | . 402 |
| August........................... | 49 | 22 | 30.2 | . 107 | .12 | . 069 |
| September. . . . . . . . . . . . . . . . . . . | 39 | 16 | $22 \cdot 1$ | .078 | .09 | .050 |
| The year............................... | 10,400 | 16 | 342 | 1.21 | 16.40 | .782 |

Yearly discharge of South Fork of South Branch Potomac River near Moorefield, W. Va.

| Year | Yoar onding Sept. 30 |  |  |  | Calondar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Diecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | D1scharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean |  |  |  |
| 1029.... . . . . . | 210 | 0.775 | 10.53 | 0.501 | 290 | 1.07 | 14.53 | 0.692 |
| 1930........ | 167 | . 616 | 8.37 | . 398 | 77.4 | . 286 | 3.87 | .185 |
| 1931.......... | 141 | . 520 | 7.08 | .336 | 141 | . 520 | 7.07 | .336 |
| 1932. | 173 | . 638 | 8.69 | . 412 | 227 | . 838 | 11.41 | . 542 |
| 1933......... | 321 | 1.18 | 16.07 | .763 | 268 | .989 | 13.42 | .639 |
| 1934......... | 85.9 | . 317 | 4.30 | .205 | 116 | . 428 | 5.79 | .277 |
| 1935......... | 297 | 1.10 | 14.87 | . 711 |  |  |  |  |
| 1939......... | 225 | . 830 | 11.31 | . 536 | 225 | .830 | 11.29 | . 536 |
| 1940......... | 220 | . 777 | 10.61 | . 502 | 228 | . 806 | 11.00 | . 521 |
| 1341.......... | 124 | . 438 | 5.95 | .283 | 107 | .378 | 5.16 | .244 |
| 1942. | 186 | . 657 | 8.93 | . 425 | 298 | 1.05 | 14.31 | .679 |
| 1943.......... | 342 | 1.21 | 16.40 | .782 | - |  | - | - |

## Town Creek near Oldtown, Md.

Location - Chain gage, lat. $39^{\circ} 3^{\prime \prime} 14^{\prime \prime}$, long. 78033'20", on highway bridge 2 miles upstream from Sawpit Run and 3 mlles northeast of Oldtown, Allegany County.
Drainage area. - 148 square miles.
Recoras available.-July 1928 to September 1935.
Fxtmemes. - Max ${ }^{\text {mimm }}$ discharte observed, about 8,500 gecond-feet oct. 23, 1929 (gage height, 13.4 feet); minimum, 0.9 second-foot Aug. 2, 3, 7-14, 1s30 (gage holght, 1.41 feet).

Monthly discharge of Town Creek near Oldtown, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { m\&le } \end{gathered}$ |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| November. | 96 | 3 | 26.2 | . 177 | . 18 | $\cdot 103$ |
| December. . . . . . . . . . . . . . . . . . | 142 | - | 48.0 | . 324 | . 37 | . 209 |
| January. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | - | - | 17.4 | . 118 | . 14 | . 076 |
|  | 2,310 | - | 180 | 1.22 | 1.27 | . 789 |
| March. ........................... | 1,860 | 81 | 366 | 2.47 | 2.85 | 1.60 |
| Apr11.... . . . . . . . . | 3,510 | 54 | 575 | 3.89 | 4.34 | 2.51 |
|  | 1,250 | 67 | 226 | 1.53 | 1.76 | . 989 |
|  | 191 | 12 | 63.8 | .431 | . 48 | . 279 |
| June <br> July | 99 | 3 | 20.2 | .136 | . 16 | . 088 |
| August...September | 16 | 2 | 7.7 | . 052 | . 06 | . 034 |
|  | 38 | 2 | 10.2 | . 069 | . 08 | . 045 |
| The jer | 3,510 | 2 | 129 | . 872 | 11.89 | . 564 |
| October. . . 1929-3. . . | 3,480 | 5.7 | 270 | 1.82 | 2.10 |  |
| November <br> December | 995 | $\rightarrow$ | 198 | 1.34 | 1.50 | . .186 |
| December | 349 | - | 99.9 | -. 675 | -.78 | . 436 |
| January. | 175 | - | 65.3 | . 441 | . 51 | . 285 |
| Februaxy. | 835 | 7 | 126 | . 851 | . 89 | . 550 |
| $\begin{aligned} & \text { March... } \\ & \text { April. } \end{aligned}$ | 298 | 71 | 134 | .905 | 1.04 | . 585 |
| $\begin{aligned} & \text { April } \\ & \text { May.. } \end{aligned}$ | 397 | 63 | 128 | . 865 | .97 | . 559 |
| June. July. | 136 | 17 | 52.3 | . 353 | . 41 | . 228 |
|  | 70 | 5.2 | 16.2 | . 109 | . 12 | . 070 |
| July.. August | 6.0 | 1.2 | 2.59 | . 017 | . 02 | . 012 |
| Septemb | 4.2 4.7 | . 9 | 2.06 | . 014 | . 02 | . 009 |
|  | 4.7 | 1.6 | 3.07 | . 021 | . 02 | . 014 |
| The Jeer | 3,480 | .9 | 91.2 | . 616 | 8.38 | .398 |
| October............. |  |  |  |  |  |  |
| November | 6.3 | 3.3 | 2.97 | . 020 | . 02 | . 013 |
| December | 81 | 3.3 | 12.3 | . 083 | . 70 | . 019 |
| January. | 160 | 13. | 28.6 | . 193 | . 10 | . 054 |
| February | 191 | 6.3 | 48.0 | .324 | . 34 | . 2209 |
|  | 1. 510 | 50 | 165 | 1.11 | .34 1.28 | . 209 |
| March. Apr11. | . 850 | 44 | 235 | 1.59 | 1.28 1.77 | 1.03 |
|  | 1,660 | 67 | 361 | 2.44 | 2.81 | 1.58 |
| June | 110 | 8.8 | 37.0 | -. 250 | 2.81 | 1.58 |
|  | 2,410 | 9.4 | 306 | 2.07 | 2.39 | 1.34 |
| July. | 88 | 14 | 41.6 | . 281 | . 32 | +.182 |
| Soptember. ...................... | 101 | 12 | 31.3 | . 211 | .24 |  |
| The year | 2,410 | 2.0 | 107 | . 723 | 9.80 | . 467 |
| October............ | 25 | 7.5 |  | . 085 |  |  |
| October. November | 12 | 7 | 9.27 | . 063 | .07 | $.041$ |
| December. | 236 | 7.5 | 53.4 | . 361 | . 42 | . 233 |
| Jenuary. | 513 | 34 | 170 | 1.15 | 1.33 | . 743 |
| February | 1,060 | 56 | 189 | 1.28 | 1.38 | .827 |
| March. | 1,710 | 46 | 323 | 2.18 | 2.51 | 1.41 |
| April | 1,370 | 63 | 302 | 2.04 | 2.28 | 1.32 |
| May. | 2,670 | 49 | 413 | 2.79 | 3.22 | 1.80 |
| June | 73 | 16 | 34.1 | . 230 | . 26 | . 1.149 |
| JuIy | 36 | 5.5 | 13.1 | . 089 | . 10 | . 058 |
| August...September | 11 | 1.7 | 4.85 | . 033 | . 04 | $.021$ |
|  | 2.6 | 1.1 | 1.77 | . 012 | .01 | $.0078$ |
| The jea | 2,670 | 1.1 | 127 | . 858 | 11.72 | . 555 |



Yearly discharge of Town Creek near oldtown, Md

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | Diecharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per equare mile |  |  |
| 1929. | 129 | 0.872 | 11.89 | 0.564 | 169 | 1.14 | 15.52 | 0.737 |
| 1930 | 91.2 | . 616 | 8.38 | . 398 | 45.2 | .305 | 4.15 | . 197 |
| 1931. | 107 | . 723 | 9.80 | . 467 | 111 | . 750 | 10.24 | .485 |
| 1932 | 127 | . 858 | 11.72 | . 555 | 145 | . 980 | 13.30 | -633 |
| 1933. | 186 | 1.26 | 17.04 | .814 | 170 | 1.15 | 15.55 | . 743 |
| 1934. | 74.5 | . 503 | 6.85 | . 325 | 89.4 | . 604 | 8.21 | .390 |
| 1935. | 142 | . 959 | 12.98 | . 620 |  |  |  | - |

Cacapon River at Yellow Spring, W. Va
Location. - Wire-weight gage, Lat. $39^{\circ}$ Io $0^{\prime \prime} 56^{\prime \prime}$, Iong. $78^{\circ} 30^{\prime} 25^{\prime \prime}$, at bridge on State Highway 23 at Yellow Spring, Hampshire County, and $2 \frac{1}{E}$ miles downstream from Capon Springs Run. Datum of gage is 858.51 feet above mean sea level (Corps of Engineers, U. S. Army, bench mark).
Drainage area. - 306 square miles
Records avallable. November 1939 to September 1943.
Extremes.-Maximum discharge, 36,700 second-feet Oct. 15, 1942 (gage he1ght, 22.22 feet); minimum observed, 12 second-feet Jan. 7, 1942 .

Maximum stage know, prior to November 1939, 20.2 feet March 1936 (discharge,
28,000 second-feet)
Monthly discharge of Cacapon River at Yellow Spring, w. Va.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gailons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| November.. | 292 | 44 | 94.1 | 0.308 | 0.34 | 0.199 |
| December. | 358 | 49 | 86.0 | . 281 | . 32 | . 182 |
| January. | 746 | 45 | 111 | . 363 | . 42 | . 235 |
| February. | 1,010 | 61 | 343 | 1.12 | 2.21 | - 724 |
| March. | 1,040 | 130 | 333 | 1.09 | 1.26 | . 704 |
| April | 3,600 | 270 | 976 | 3.18 | 3.56 | 2.06 |
| May. | 1,740 | 111 | 284 | . 928 | 1.07 | . 600 |
| June. | 1,490 | 67 | 390 | 1.27 | 1.42 | . 821 |
| July. | 281 | 35 | 71.1 | . 232 | . 27 | . 150 |
| August. | 732 | 31 | 121 | . 395 | . 46 | . 255 |
| September | 679 | 41 | 119 | . 389 | . 43 | . 251 |
|  |  |  |  |  |  |  |
| October... |  | 46 | 62.2 | . 203 | . 23 | .131 |
| Novemberer.. | 1,180 | 51 97 | 228 | . 745 | . 83 | . 482 |
| January. | 406 | 135 | 248 | . 897 | . .93 | . 578 |
| February. | 232 | 72 | 134 | . 438 | . 46 | . 283 |
| March. | 1,160 | 72 | 321 | 1.05 | 1.21 | . 679 |
| April | 2,160 | 119 | 412 | 1.35 | 1.50 | . 873 |
| May. | 111 | 46 | 80.7 | . 264 | . 30 | . 171 |
| June | 457 | 51 | 112 | .366 | . 41 | . 237 |
| July. | 1,800 | 54 | 319 | 1.04 | 1.20 | . 672 |
| August. | 160 | 29 | 67.9 | . 222 | . 26 | . 143 |
| September | 111 | 24 | 42.3 | .138 | . 15 | . 089 |
| The year | 2,160 | 24 | 192 | .627 | 8.49 | . 405 |
| October. | 30 |  |  |  |  |  |
| November. | 56 | 26 | 32.8 | .107 | . 12 | $.055$ |
| December. | 336 | 31 | 68.0 | . 222 | . 26 | . 143 |
| January. | 135 | 21 | 60.7 | .198 | .23 | . 128 |
| Fobruary. | +382 | 46 | 114 | . 373 | . 39 | .247 |
| March. | 2,170 | 52 | 389 | 1.27 | 1.47 | . 881 |
|  | 5 765 | 91 | 282 | . 922 | 1.03 | . 596 |
|  | 5,340 | 81 | 630 | 2.06 | 2.37 | 1.33 |
| July. | 36 86 | 63 26 | 141.7 | . 461 | . 51 | - 298 |
| August | 2,960 | 38 | 374 | 1.22 | 1.41 | . 789 |
| September | 176 | 39 | 73.5 | - 240 | . 27 |  |
| The year. | 5,340 | 21 | 187 | . 611 | 8.32 | .395 |
| October. | 18,500 | 39 |  |  |  |  |
| November. | 18,555 | 135 | 1, 236 | $\begin{aligned} & 4.81 \\ & .771 \end{aligned}$ | 5.55 | 3.11 |
| December. | 4,320 | 110 | 522 | 1.71 | 1.97 | $1.11$ |
| January.. | 1,200 | 175 | 395 | 1.29 |  | 1.834 |
| February. | 2,300 | 184 | 702 | 2.28 | 2.39 | 1.48 |
| March. | 1,640 | 135 | 608 | 1.99 | 2.29 | 1.29 |
| April. | 3,170 | 159 | 558 | 1.82 | 2.03 | 1.18 |
| May.. | 835 | 184 | 336 | 1.10 | 1.27 | . 711 |
| June. | 288 | 52 | 124 | . 405 | . 45 | . 262 |
| Auly... | 228 | 40 | 71.4 | . 233 | . 27 | . 151 |
| September | 47 32 | 28 | 33.1 | . 108 | . 12 | . 070 |
|  |  |  |  |  |  |  |
| The year. | 18,500 | 24 | 424 | 1.39 | 18.79 | . 898 |

Yearly discharge of Cacapon River at Yellow Spring, W. Va.


Cacapon River at Capon Bridge, W. Va
Location.- Chain gage, lat. $39^{\circ} 97152^{\prime \prime}$, Iong. $78^{\circ} 26^{\prime} 05^{\prime \prime}$, at highwey bridge at Capon Eridge, Hampshire County, and 12 miles upstream from North River
Drainage area.- 367 square miles
Pecords available. - May 1930 to September 1932.
 Fxtromes.- Maxirum frocharged rating curve extended above 5,500 second-feet; minimum, l7 second-feet Sept. 18 , 19, 22, 1932 (cage helght, 0.75 foot).

Flood of 1924 reached a stage of 19.0 feet, from floodmarks
Monthly discharge of Cacapon RIver at Capon Bridge, W. Va.


Location. - Water-stage recorder, lat. $39^{\circ} 3^{\prime} 43^{n}$, long. $78^{\circ} 18134^{\pi}$, at Rock Ford, 3 mlles southwest of Great Cacapon, Morgan County, and $6 \frac{1}{8}$ miles upstream from mouth. Datum of gage is 456.78 feet above mean sea level (Corps of Fngineere, U. S. Army, bench mark). Prior to Nov. 10, 1933, staff zage at same elte and datum.
Drainage area.- 677 square milee
Records avallable.- December 1922 to September 1943
Fxtremes.- Maximum discharge, 87,600 second-feet Mar. 18, 1936 (gage height, 30.1 feet) minlmum, 35 second-feet Sept. 21, 22, 1932 (gage height, 0.35 foot)

Maximum stage known prior to 1923, 24.7 feet in May 1889, from floodmarke
(discharge, about 57,000 second-feet).

| Month | Diecharge in aecond-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallone per day per square m1le |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max 1mum | Minimum | Mean | Per <br> square mile |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| November | 204 | 52 | 103 | . 152 | .17 | . 098 |
| December | . 478 | 102 | 215 | .318 | .37 | . 206 |
| January. | 3,740 | 397 | 888 | 1.31 | 1.51 | . 847 |
| February | 704 | - | 311 | . 459 | . 50 | . 297 |
| March. | 11,100 | - | 2,880 | 4.25 | 4.90 | 2.75 |
| April. | 3,260 | 437 | 1,200 | 1.77 | 1.98 | 1.14 |
| May. | 25,600 | 307 | 3,560 | 5.26 | 6.06 | 3.40 |
| June | 1,140 | 245 | 594 | . 877 | . 98 | . 567 |
| July. | 704 | 95 | 221 | .326 | . 38 | . 211 |
| August... | 13. 104 | 66 | 84.3 | .125 | . 14 | . 081 |
| September | 13,000 |  | 514 | . 760 | . 85 | .491 |
| The year..................... | 25,600 | 44 | 892 | 1.32 | 17.93 | .853 |
| October. | 2,330 | 64 | 221 | . 326 | 38 |  |
| November. | , 609 | 79 | 168 | . 248 | . 28 | . 1611 |
| December. | 275 | 99 | 170 | .251 | . 29 | . 162 |
| january. | - | 113 | 315 | . 465 | . 54 | .301 |
| Febmary. | 8,150 | 437 | 1,720 | 2.54 | 2.64 | 1.64 |
| March. | 4,610 | 245 | 647 | . 956 | 1.10 | . 618 |
| Appll | 2,720 4,610 | 191 | 454 | . 671 | 1.75 | . 434 |
| May. | 4,610 | 204 | 887 | 1.31 | 1.51 | . 847 |
| June. | 378 | 95 | 136 | . 201 | . 22 | .130 |
| July. | 291 | 68 | 128 | . 189 | . 22 | . 122 |
| Aucust. | 167 | 44 | 72.2 | .206 | . 12 | . 068 |
| September. | 217 | 39 | 65.6 | .097 | . 11 | .063 |
| The year................... | 8,150 | 39 | 407 | . 601 | 8.16 | .388 |
| 1925-26 |  |  |  |  |  |  |
| October. | 155 | 41. | 77.3 | .114 | .13 | . 074 |
| November. | 1,210 | 79 | 195 | . 288 | . 32 | . 186 |
| Jacamber. | 1,210 | 85 | 317 | . 468 | . 54 | .302 |
| Fabruary | 4,480 | 520 | 1,850 | 2.694 | .80 2.84 | . 449 |
| March. | 1,280 | 245 | 1,457 | 2. .675 | 2.84 .78 | 1.736 |
| Apr11 | 2,330 | 231 | 734 | 1.08 | 1.20 | . 698 |
| May. | 1,350 | 144 | 321 | . 474 | . 55 | .306 |
| June | 167 | 79 | 120 | . 177 | . 20 | . 114 |
| July.. | 499 | 51 | 117 | . 173 | . 20 | . 112 |
| August... | 2,820 | 48 | 530 | . 783 | . 90 | . 506 |
| September | 1,420 | 106 | 325 | . 480 | . 54 | . 310 |
| The year. . . . . . . . . . . . . . . . | 4,480 | 41 | 450 | . 665 | 9.00 | . 430 |
| 1926-27 |  |  |  |  |  |  |
| November. | 960 | 131 | - 289 | . 427 | . 49 | .276 |
| December. | 4,350 | 155 | 1,320 | 1.95 | 2.18 | 1.26 |
| January. | +960 | 291 | 457 | 1.20 .675 | 1.38 .78 | . 776 |
| February | 4,870 | 457 | 1,510 | 2.23 | 2.32 | 1.44 |
| March... | 1,890 | 478 | 942 | 1.39 | 1.60 | . .898 |
| April. | 3,740 | 542 | 1,770 | 2.61 | 2.91 | 1.69 |
| May. | 4,220 | 341 | 897 | 1.32 | 1.52 | . 853 |
| June | 1,080 | 155 | 408 | . 603 | . 67 | . 390 |
| July.. | 155 | 79 | 113 | . 167 | . 18 | . 108 |
| August. | 179 | 78 | 107 | . 158 | .18 | . 102 |
| September. | 123 | 51 | 70.6 | .104 | .12 | . 067 |
| The year. | - | 51 | 716 | 1.06 | 14.34 | . 685 |

Monthly diecharge of Cacapon River near Oreat Cacapon, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff in Inches | Diecharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por equare mile |  |  |
| 1927-28 |  |  |  |  |  |  |
| October | 6,480 | 40 | 783 | 1.16 | 1.34 | 0.750 |
| November. | 594 | 102 | 217 | . 321 | . 36 | . 207 |
| December. | 1,410 | - | 484 | . 715 | . 82 | . 462 |
| January. | 342 | - | 193 | . 285 | +33 | . 184 |
| February. | 1,130 | - | 386 | .570 | . 61 | . 368 |
| March.... | 4,610 | 204 | 882 | 1.30 | 1.50 | . 840 |
| April. | 12,000 | 397 | 1,540 | 2.27 | 2.53 | 1.47 |
| May. . | 27,100 | 217 | 1,880 | 2.78 | 3.20 | 1.80 |
| June. | 3,740 | 230 | 1,080 | 1.60 | 1.78 | 1.03 |
| July. | -725 | 117 | 273 308 | .403 | . 46 | . 260 |
| August... | 1,130 2,240 | 87 108 | 308 419 | . 455 | . 52 | $\begin{array}{r} .294 \\ .400 \end{array}$ |
| September | 2,240 |  |  |  |  |  |
| The jear. | 27,100 | 40 | 703 | 1.04 | 14.14 | .672 |
| October.. | 378 | 107 | 158 | . 233 | . 27 | . 151 |
| Novembor. | 162 | 107 | 125 | . 185 | . 21 | . 120 |
| December. | 594 | 123 | 246 | .363 | . 42 | . 235 |
| January.. | 618 | - | 247 | . 365 | $\cdot 42$ | $\begin{array}{r} .236 \\ 586 \end{array}$ |
| February... | 8,330 | 324 | 1,830 | 2.70 | 3.11 | 1.75 |
| April. | 24,600 | 276 | 2,410 | 3.56 | 3.97 | 2.30 |
| May. | 2,330 | 342 | 818 | 1.21 | 1.40 | . 782 |
| June | 670 | 124 | 240 | . 355 | . 40 | . 229 |
| July.. | 308 | 74 55 | 226 | .186 | . 21 | . 120 |
| August. | 89 118 | 60 | 71.8 74.9 | . 1111 | .12 .12 | $\begin{aligned} & .068 \\ & .072 \end{aligned}$ |
| The year. | 24,600 | 55 | 578 | .854 | 11.59 | . 552 |
| October | 8,330 | 72 | 1,050 | 1.55 | 1.79 | 1.00 |
| November. | 6,320 | 260 | 982 | 1.45 | 1.62 | . 937 |
| December. | 1,570 | - | 413 | . 610 | . 70 | . 394 |
| January. | 2,240 | - | 379 | . 560 | . 65 | . 362 |
| February. | 1,970 | 260 | 504 | - 744 | . 77 | - 481 |
| March. | 2,060 | 260 | 605 | . 894 | 1.03 | . 578 |
| April | 1,130 | 246 | 434 | . 641 | . 72 | . 414 |
| May . | 276 | 777 | 160 | .236 | . 27 | . 153 |
| June. | 194 | 77 38 | 116 56.4 | . 1717 | .19 .10 | . 111 |
| July . | 62 | 38 37 | 56.4 45.6 | . 067 | . 108 | . 0434 |
| September | 80 | 42 | 54.5 | . 081 | . 09 | . 052 |
| The year | 8,330 | 37 | 399 | . 589 | 8.01 | . 381 |
| October. | 35 | 40 | 44.8 | . 066 | . 08 | . 043 |
| November. | 77 | 47 | 59.6 | -. 088 | .10 | . 057 |
| December. | 152 | - | 81.7 | . 121 | . 14 | . 078 |
| January. | 291 | 82 | 115 | . 170 | . 20 | - 110 |
| February. | 162 | 72 | 111 | . 164 | .17 | . 106 |
| March. | 1,410 | 121 | 270 | . 399 | . 46 | . 258 |
| April | 2,820 | 206 | 975 | 1. 44 | 1.61 | .931 |
| May. | 3,040 | 206 | 951 304 | 1. 40 | 1.61 | . 905 |
| June | 1,725 | 81 | 274 | . 405 | . 47 | . 262 |
| August. | 1,570 | 68 | 284 | . 419 | . 48 | . 271 |
| September. | 162 | 52 | 88.1 | .130 | .14 | . 084 |
| The year. | 3,040 | 40 | 297 | . 439 | 5.96 | .284 |
| October........... | 73 | 40 | 53.2 | . 079 | . 09 | . 051 |
| November. | 63 | 47 | 54.1 | . 080 | . 09 | . 052 |
| December. | 397 | 49 | 103 | . 152 | - 18 | . 098 |
| Jamuary . | 569 | 100 | 244 | . 360 | . 42 | - 233 |
| February. | 10,200 | 125 | 799 | 1.18 | 1.27 | . 763 |
| March... | 5,570 | 134 | 1,340 | 1.98 | 2.28 | 1.28 |
| Apr11.... | 3,260 | 232 | - 902 | 1.33 | 1. 48 | . 860 |
| May....... | 26,000 | 219 | 2,300 | 3. 40 .281 | 1.92 .31 | 2.20 |
| June. | 359 | 51 | 108 | . 160 | . 18 | . 103 |
| August. | 57 | 40 | 48.8 | . 072 | . 08 | . 046 |
| September | 47 | 35 | 39.4 | . 058 | . 06 | . 038 |
| The yoar. | 26,000 | 35 | 515 | . 761 | 10.36 | . 492 |

Monthly discharge of Cacapon River nas Great Cacapon, W. Va.--Continued

| Month | Discharze in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1932-33 |  |  |  |  |  |  |
| October. | 1,890 | 38 | 294 | 0.434 | 0.50 | 0.281 |
| November | 3,740 | 134 | 895 | 1.32 | 1.47 | . 853 |
| December | 2,240 | 130 | 394 | . 582 | . 67 | . 376 |
| January | 6,320 | 194 | 975 | 1.44 | 1.66 | . 931 |
| February | 1,270 | 397 | 680 | 1.00 | 1.04 | . 646 |
| March. | 5,870 | 308 | 1,230 | 1.82 | 2.10 | 2.18 |
| April | 13,100 | 644 | 2,460 | 3.63 | 4.05 | 2.35 |
| May. | 3,380 | 523 | 1,370 | 2.02 | 2.33 | 1.31 |
| June | . 780 | 102 | 277 | . 409 | . 46 | . 264 |
| July. | 1,490 | 73 | 196 | . 290 | . 33 | . 187 |
| August. | 8,510 | 69 | 881 | 1.30 | 1.50 | . 840 |
| September | 2,620 | 152 | 523 | . 773 | . 86 | . 500 |
| The year. | 13,100 | 38 | $64^{7}$ | 1.25 | 16.97 | . 808 |
| October. | 188 | 92 | 119 |  |  |  |
| November. | 115 | 80 | 92.6 | .137 | $\begin{aligned} & .20 \\ & .15 \end{aligned}$ | $\begin{aligned} & .114 \\ & .088 \end{aligned}$ |
| December | 141 | 60 | 100 | . 148 | . 17 | . 096 |
| January | 980 | 90 | 281 | . 415 | . 48 | . 268 |
| February. | 120 | 70 | 89.1 | : 132 | . 14 | . 085 |
| March. | 2,470 | 80 | 579 | . 855 | . 99 | . 553 |
| April. | 1,840 | 211 | 645 | . 953 | 1.06 | . 616 |
| May.. | 780 | 179 | 334 | . 493 | . 57 | . 319 |
| June | 288 | 59 | 123 | . 182 | . 20 | . 118 |
| July. | 458 | 40 | 87.7 | . 130 | . 15 | . 084 |
| August | 551 | 53 | 120 | .177 | . 20 | . 114 |
| Septembe | 1,150 | 46 | 207 | . 306 | . 34 | . 198 |
| The year. | 2,470 | 40 | 232 | .343 | 4.65 | . 222 |
| October........... | 546 | 57 | 110 | . 162 |  |  |
| November. | 282 | 61 | 89.6 | .132 | . 15 | . 085 |
| Decomber. | 6,720 | 150 | 695 | 1.03 | 1.19 | . 666 |
| January. | 5,150 | 141 | 719 | 1.06 | 1.22 | . 685 |
| February. | 4,100 | 550 | 1,466 | 2.17 | 2.26 | 1.40 |
| March. | 2,820 | 389 | . 875 | 1.29 | 1.49 | . 834 |
| April | 6,640 | 356 | 1,883 | 2.78 | 3.10 | 1.80 |
| May. | 2,820 | 252 | 731 | 1.08 | 1.24 | . 698 |
| June | 445 | 111 | 222 | . 328 | . 37 | . 212 |
| July. | . 784 | 73 | 167 | . 247 | . 28 | . 160 |
| August. | 1,040 | 64 | 174 | .257 | . 30 | . 166 |
| September | 2,850 | 62 | 361 | . 533 | . 59 | .344 |
| The jear | 6,720 | 57 | 617 | . 911 | 12.38 | . 589 |
| October. | 212 | 63 | 75.2 |  |  |  |
| November. | 2,130 | 91 | 450 | . 665 | . 74 | . 430 |
| December. | 1,130 | 156 | 361 | . 533 | . 61 | .344 |
| January. | 4,480 | 260 | 1,4!9 | 2.21 | 2.55 | 1.43 |
| February | 10,200 | 350 | 1,516 | 2.24 | 2.42 | 1.45 |
| March. | 58,500 | 1,300 | 5,405 | 7.98 | 9.20 | 5.16 |
| April | 3,500 | 425 | 1,332 | 1.97 | 2.20 | 1.27 |
| May.. | 703 | 194 | 361 | . 533 | . 61 | -. 344 |
| June. | 720 | 139 | 218 | . 322 | .36 | . 208 |
| July.... | 197 | 66 | 121 | .179 | .21 | . 116 |
| August... | 109 | 56 | 72.3 | .107 | . 12 | . 069 |
| September | 63 | 49 | 53.1 | .078 | . 09 | . 050 |
| The year. | 58,500 | 49 | 957 | 1.41 | 19.24 | . 911 |
| November. | -124 | 68 | 84.6 | . 125 | . .14 | . 1651 |
| December. | 960 | 70 | 450 | . 665 | . 77 | . 430 |
| Januery.. | 6,120 | 524 | 1,576 | 2.33 | 2.69 | 1.51 |
| February. | 5,800 | 516 | 1,521 | 2.25 | 2.34 | 1.45 |
| March. | 2,160 | 392 | 742 | 1.10 | 1.27 | . 711 |
| April | 31,100 | 218 | 2,605 | 3.25 | 4.30 | 2.49 |
| May. | 2,070 | 269 | 607 | . 897 | 1.03 | . 580 |
| June | 590 | 116 | 200 | . 295 | . 33 | . 191 |
| July. | -448 | 71 | 161 | . 238 | . 27 | . 154 |
| August. | 6,600 | 62 | 684 | 1.01 | 1.16 | . 653 |
| September. | 1,420 | 97 | 318 | . 470 | - 52 | . 304 |
| The year. | 31,100 | 58 | 754 | 1.11 | 15.12 | . 717 |

Monthly discharge of Cacapon River near Oreat Cacapon, W. Va.--Continued

| Month | Diacharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1937-38 |  |  |  |  |  |  |
| October | 16,200 | 103 | 1,801 | 2.66 | 3.07 | 1.72 |
| November. | 1,880 | 292 | 672 | . 993 | 1.11 | . 642 |
| December. | 375 | 190 | 261 | . 386 | . 44 | . 249 |
| January. | 480 | 150 | 238 | . 352 | . 41 | . 228 |
| February. | 368 | 216 | 288 | - 425 | -44 | . 275 |
| March.... | 1,110 | 228 | 481 | . 710 | . 82 | . 459 |
| April. | . 602 | 278 | 415 | . 613 | . 68 | . 396 |
| May. | 1,950 | 216 | 575 | . 849 | -98 | . 549 |
| June. | $\begin{array}{r}448 \\ 292 \\ \hline\end{array}$ | 123 | 234 119 | .346 .176 | . 39 | . 224 |
| Auly . ${ }^{\text {Aust. }}$ | 211 | 40 | 119.4 | . 134 | . 15 | . 087 |
| September <br> The yo | 81 | 46 | 61.8 | . 091 | . 10 | . 059 |
|  | 16,200 | 40 | 439 | . 648 | 8.79 | . 419 |
| October. | 77 | 48 | 57.0 | . 084 | .10 | . 054 |
| November | 105 | 69 | 83.6 | . 123 | . 14 | . 080 |
| December | 3,860 | 98 | 476 | -703 | . 81 | . 454 |
| January. | 6,040 | 142 | 469 | . 693 | - 80 | . 448 |
| February | 10,900 | 484 | 1,683 | 2.49 | 2.59 | 1.61 |
| March. | 3,340 | 326 | 911 | 1.35 | 1.56 | . 873 |
| Apri1 | 3,730 | 289 | 865 | 1.28 | 1.43 | . 827 |
| May. | 1,070 | 246 | 449 | -663 | -76 | -429 |
| Јune | 92 | 104 | 195 | . 288 | - 62 | $\cdot 186$ |
| July. | 1,920 | 92 | 315 | . 465 | . 54 | .301 |
| September <br> The ye | 293 | 56 | 90.5 | . 134 | . 15 | . 087 |
|  | 10,900 | 48 | 489 | .722 | 9.82 | . 467 |
| October. | 843 | 67 | 140 | . 207 | . 24 | . 134 |
| November | 980 | 136 | 272 | . 402 | . 45 | . 260 |
| December | 855 | 104 | 206 | . 304 | . 35 | . 196 |
| January. | 370 | 130 | 177 | . 261 | . 30 | . 169 |
| February | 2,700 | 135 | 892 | 1.32 | 1.42 | . 853 |
| March. | 2,340 | 323 | 769 | 1.14 | 1.31 | . 737 |
| April | 8,030 | 668 | 2,000 | 2.95 | 3.29 | 1.91 |
| May. | 1,030 | 225 | 516 | . 762 | . 88 | . 492 |
| June. | 4,150 | 162 | 876 | 1.29 | 1.44 | . 834 |
| Ju1】.. | 510 | 76 | 155 | . 229 | . 26 | . 148 |
| Aligust. | 992 | 60 | 162 | . 239 | . 28 | . 154 |
| September. . . . . . . . . . . . . . . . . . | 900 | 69 | 221 | . 326 | . 36 | . 211 |
| The y | 8,030 | 60 | 527 | . 778 | 10.58 | . 503 |
| October | 249 | 88 | 122 | . 180 | . 21 | . 116 |
| November | 2,170 | 125 | 492 | . 727 | . 81 | . 470 |
| December | 2,340 | 230 | 636 | . 939 | 1.08 | . 607 |
| January. | 905 | 266 | 543 | . 802 | . 92 | . 514 |
| February | 560 | 138 | 305 | . 451 | . 47 | . 291 |
| March. | 2,710 | 148 | 771 | I. 14 | 1.31 | . 737 |
| April | 5,460 | 249 | 843 | 1.25 | 1.39 | . 808 |
| May. | - 236 | 97 | 168 | . 248 | . 29 | . 160 |
| June | 1,510 | 98 | 271 | . 400 | - 45 | . 259 |
| July. | 3,070 | 90 | 565 | . 835 | . 96 | . 540 |
| August. | 298 | 58 | 126 | . 186 | . 21 | . 120 |
| September | 122 | 46 | 74.8 | .110 | . 12 | .071 |
| The y | 5,460 | 46 | 410 | . 606 | 8.22 | . 392 |
| October. ........... | 53 | 44 | 48.3 | . 071 |  |  |
| November. | 81 | 53 | 62.2 | . 092 | . 10 | . 060 |
| December. | 450 | 60 | 116 | . 171 | . 20 | . 111 |
| January. | 287 | 70 | 127 | . 188 | . 22 | . 122 |
| February. | 780 | 100 | 230 | . 340 | . 35 | . 220 |
| March. | 3,940 | 115 | 816 | 1.21 | 1.39 | . 782 |
| April. | 2,310 | 179 | - 722 | 1.07 | 1.19 | . 692 |
| May. . | 9,540 | 153 | 1,174 | 1.73 | 2.00 | 1.12 |
| June. | 486 | 139 | 262 | . 387 | . 43 | .250 |
| July. | 156 | 49 | 81.8 | . 121 | . 14 | . 078 |
| August... | 3,930 | 87 | 653 | . 965 | 1.11 | . 624 |
| September. . . | 402 | 71 | 135 | . 198 | . 22 | . 129 |
| The year. | 9,540 | 44 | 371 | . 548 | 7.43 | . 354 |

Monthly discharge of Cacapon River nea. Great Cacapon, W. Va.--Continued

| Month | Diecharge in eecond-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MaxImum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { m11e } \end{gathered}$ |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. | 41,700 | 73 | 2,976 | 4.40 | 5.07 | 2.84 |
| November. | 912 | 247 | 475 | . 702 | . 78 | . 454 |
| December. | 7,780 | 220 | 1,170 | 1.73 | 1.99 | 1.12 |
| January. | 3,360 | 395 | . 950 | 1.40 | 1.62 | . 905 |
| February. | 5,250 | 438 | 1,620 | 2.39 | 2.49 | 1.54 |
| March. | 3,180 | 304 | 1,270 | 1.88 | 2.16 | 1.22 |
| April. | 5,400 | 353 | 1,115 | 1.65 | 1.84 | 1.07 |
| May. | 1,190 | 360 | - 574 | . 848 | . ¢ 8 | . 548 |
| June. | 498 | 90 | 208 | . 307 | . 34 | . 198 |
| July. . | 239 | 75 | 107 | . 158 | . 18 | . 102 |
| August... | 88 | 52 | 65. 4 | . 097 | . 11 | . 063 |
| September. | 62 | 48 | 52.9 | . 078 | . 09 | . 050 |
| The year. | 41,700 | 48 | 880 | 1.30 | 17.65 | . 840 |

Yearly discharge of Cacapon Riva: near Great Cacapon, W. Va.

| Year | - Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in sscond-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { Inches } \end{array}\right.$ | Dlschirge in mil:ion gallon:: per day jer square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | D1scharge in million gallons per day per square mlle |
|  | Mean | Per square m1le |  |  | Moun | Per square mile |  |  |
| 1923. | - | - | - | - | 256 | 0.378 | 5.11 | 0.244 |
| 1924. | 892 | 1.32 | 17.93 | 0.853 | 908 | I. 34 | 18.25 | . 866 |
| 1925. | 407 | . 601 | 8.16 | . 388 | 409 | . 604 | 8.20 | . 390 |
| 1926 | 450 | . 665 | 9.00 | 430 | 602 | - 829 | 12.06 | . 575 |
| 1927. | -716 | 1.06 | 14.34 | . 685 | 639 | . 944 | 12.81 | . 610 |
| 1928. | 703 | 1.04 | 14.14 | 672 | 624 | . 922 | 12.52 | . 596 |
| 1929. | 578 | . 854 | 11.59 | 552 | 739 | 1.09 | 14.80 | . 704 |
| 1930. | 399 | . 589 | 8.01 | 381 | 210 | . 310 | 4.22 | . 200 |
| 1931. | 297 | . 439 | 5.96 | 284 | 299 | . 442 | 6.00 | . 286 |
| 1932. | 515 | . 761 | 10.36 | 492 | 629 | . 929 | 12.64 | . 600 |
| 1933. | 847 | 1.25 | 16.97 | 808 | 741 | 1.09 | 14.85 | . 704 |
| 1934. | 232 | . 343 | 4.65 | 222 | 282 | . 417 | 5.66 | . 270 |
| 1935. |  | . 911 | 12.38 | 589 | 616 | . 910 | 12.33 | . 588 |
| 1936. | 957 754 | 1.41 | 39.24 | 911 | 943 | 1.39 | 18.97 | . 898 |
| 193 | 754 | 2. 11 | 15.12 | 717 | 924 | 1.36 | 18.53 | .879 |
| 1938. | 439 | . 648 | 8.79 | 419 | 260 | . 384 | 5.22 | . 248 |
| 1939. | 489 | . 722 | 9.82 | 467 | 488 | . 721 | 9.81 | . 466 |
| 1940 | 527 | . 778 | 10.58 | 503 | 580 | . 857 | 11.64 | . 554 |
| 1941 | 410 | . 606 | 8.22 | 392 | 325 | . 480 | 6.50 | . 310 |
| 1942. | 371 | . 548 | 7.43 | 354 | 743 | 1.10 | 14.89 | . 711 |
| 1943. | 880 | 2.30 | 17.65 | 840 | - | - | - | - |
| Hf ghest | 957 | 2.41 | 19.24 | 911 | 943 | 1.39 | 18.97 |  |
| Average. | 574 | . 848 | 11.52 | 548 | 561 | . 829 | 11.25 | . 536 |
| Lowest.. | 232 | . 343 | 4.65 | 222 | 210 | .310 | 4.22 | . 200 |

Licking Creek nea Sylvan, Pa
 of Pennsylvania-Maryland State line, and 3 ulles southwest of Sylvan, Frankiln County. Datum of gage is 434.16 feet above mean sea level, adjustment of 1907.
Drainage area.- I58 square miles.
Records available- June 1930 to January 1942.
Extremes:- Max1mum discharge, 20,700 eecond-fe it Mar. 18, 1936 (vare he1ght, 17.4 feet, from floodmark), by contracted-opening methud; minimum observed, 3.0 second-feet Aug. 8, 1930 (eage height, 0.64 foot).

Monthly discharge of Micking Creek near Sylvan, Pa.


| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Funoff } \\ & \text { in } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1 nimum | Mean | Per square mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 462 | 30 | 78.9 | 0.499 | 0.58 | 0.323 |
| November | 600 | 25 | 71.4 | . 452 | . 50 | . 292 |
| December. | 3,800 | 87 | 383 | 2.42 | 2.79 | 1.56 |
| Januery | 430 | 103 | 204 | 1.29 | 1.49 | . 834 |
| February | 1,230 | 117 | 357 | 2.26 | 2.35 | 1.46 |
| Merch. | 564 | 170 | 295 | 1.87 | 2.16 | 1.21 |
| April | 960 | 90 | 278 | 1.76 | 1.96 | 1.14 |
| Mey. | 600 | 54 | 222 | 1.41 | 1.63 | . 911 |
| June. | 102 | 26 | 43.3 | .274 | . 31 | . 177 |
| July. | 69 | 16 | 29.2 | . 185 | . 21 | . 120 |
| August. | 42 | 11 | 21.0 | . 133 | . 15 | . 086 |
| September | 564 | 12 | 50.0 | . 316 | .35 | . 204 |
| The jeer | 3,800 | 11 | 168 | 1.06 | 14.48 | . 685 |
| October | 249 | 12 | 31.0 | . 196 | . 23 | . 127 |
| November. | 373 | 24 | 73.2 | . 463 | . 52 | . 299 |
| December. | 529 | 23 | 112 | . 709 | . 82 | . 458 |
| Jenuery. | 675 | 52 | 193 | 1.22 | 1.41 | . 789 |
| Febmiary. | 2,130 | 80 | 272 | 1.72 | 1.86 | 1.11 |
| Merch. | 9,570 | 318 | 1,508 | 9.54 | 11.00 | 6.17 |
| April | 2,130 | 94 | - 427 | 2.70 | 3.01 | 1.75 |
| May. . | 218 | 33 | 64.0 | . 405 | . 47 | . 262 |
| June. | 61 | 17 | 27.5 | .174 | . 19 | . 112 |
| July. | 63 | 7.4 | 16.4 | . 104 | . 12 | . 067 |
| August. | 87 | 7.4 | 15.1 | . 096 | . 11 | . 062 |
| Soptember | 19 | 5.1 | 7.53 | . 048 | . 05 | .031 |
| The yeer | 9,570 | 5.1 | 230 | 1.46 | 19.79 | . 944 |
| October............ | 211 | 7.5 | 32.3 | . 204 | . 24 | . 132 |
| November. | 519 | 12 | 58.3 | . 369 | . 41 | . 238 |
| December. | 466 | 9 | 182 | 1.15 | 1.33 | . 743 |
| January. | 2,010 | 214 | 604 | 3.82 | 4.40 | 2.47 |
| February. | 2,860 | 157 | 431 | 2.73 | 2.84 | 1.76 |
| March. | 292 | 106 | 164 | 1.04 | 1.20 | . 672 |
| April | 8,850 | 94 | 880 | 5.57 | 6.21 | 3.60 |
| May. | 1,100 | 77 | 287 | 1.82 | 2.10 | 1.18 |
| June | 304 | 37 | 75.9 | . 480 | . 54 | . 310 |
| July. | 262 | 18 | 46.0 | . 291 | .34 | . 188 |
| August. | 639 | 13 | 70.1 | . 444 | . 51 | . 287 |
| Septembe | 175 | 16 | 37.3 | . 236 | . 26 | . 153 |
| The yeer | 8,850 | 7.5 | 237 | 1.50 | 20.38 | .969 |
| October. | 3,730 | 18 | 384 | 2.43 | 2.80 | 1.57 |
| November. | 522 | 74 | 175 | 1.11 | 1.24 | . 717 |
| December. | 470 | 35 | 110 | . 696 | . 80 | . 450 |
| Jenuery... | 235 | 60 | 117 | . 741 | . 85 | . 479 |
| Februery. | . 194 | 72 | 120 | . 759 | . 79 | . 491 |
| Merch. | 1,000 | 61 | 237 | 1.50 | 1.73 | . 969 |
| April | 157 | 58 | 94.4 | . 597 | . 67 | . 386 |
| Mey. | 658 | 38 | 160 | 1.01 | 1.16 | . 653 |
| June. | 140 | 29 | 56.3 | . 356 | . 40 | . 230 |
| July.. | 788 | 12 | 109 | . 690 | . 80 | . 446 |
| August... | 234 | 9.9 | 42.6 | . 270 | . 31 | . 175 |
| September. | 146 | 12 | 33.0 | . 209 | . 23 | .135 |
| The year. | 3,730 | 9.9 | 137 | . 867 | 11.78 | . 560 |
| October. . . . . | 29 | 12 | 18.0 | . 114 | . 13 |  |
| November | 116 | 14 | 30.9 | . 196 | . 22 | . 127 |
| December. | 2,200 | 46 | 230 | 1.46 | 1.68 | . 944 |
| Jenuary. | 1,060 | 50 | 124 | . 785 | . 90 | . 507 |
| Februery | 2,430 | 124 | 479 | 3.03 | 3.16 | 1.96 |
| March... | 1,660 | 124 | 355 | 2.25 | 2.59 | 1.45 |
| Apri1. | 965 | 194 | 348 | 2.20 | 2.46 | 1.42 |
| Mey. . | 214 | 37 | 91.8 | . 581 | . 67 | . 376 |
| June. | 1,160 | 28 | 126 | . 797 | . 89 | . 515 |
| July. | 345 | 22 | 94.0 | . 595 | . 69 | . 385 |
| August | 105 | 10 | 27.7 | . 175 | . 20 | .113 |
| September. | 466 | 7.5 | 37.1 | . 235 | . 26 | . 152 |
| The joer.. | 2,430 | 7.5 | 161 | 1.02 | 13.85 | . 659 |

Monthly discharga of Licking Creek near sylvan, Pa..-Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharee in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| October. | 1,480 | 28 | 133 | 0.842 | 0.97 | 0.544 |
| Novamber. | 499 | 40 | 145 | . 918 | 1.02 | . 593 |
| Dacember. | 93 | 27 | 38.4 | .243 | . 28 | . 157 |
| January. | 500 | 27 | 67.8 | . 429 | . 49 | . 277 |
| February. | 800 | 27 | 231 | 1.46 | 1.58 | . 944 |
| March.... | 1,490 | 140 | 373 | 2.36 | 2.72 | 1.53 |
| April. | 2,280 | 165 | 642 | 4.06 | 4.54 | 2.62 |
| May. | 246 | 60 | 116 | . 734 | . 84 | . 474 |
| Juna | 920 | 85 | 254 | 1.61 | 1.79 | 1.04 |
| Juy | 193 | 32 | 67.5 | . 427 | . 49 | . 276 |
| August. | 395 | 20 | 67.3 | . 426 | . 49 | . 275 |
| Seftember | 874 | 24 | 90.7 | . 574 | . 64 | . 371 |
| The year. | 2,280 | 20 | 184 | 1.16 | 15.85 | . 750 |
| October........ | 50 | 20 | 27.4 | . 173 | .20 | . 112 |
| Novambar. | 728 | 48 | 151 | . 956 | 1.07 | . 618 |
| Decambar | 830 | 90 | 262 | 1.66 | 1.91 | 1.07 |
| January. | 390 | 60 | 125 | . 791 | . 91 | . 511 |
| February | 228 | 60 | 98.7 | . 625 | . 65 | . 404 |
| March. | 585 | 66 | 215 | 1.36 | 1.57 | . 879 |
| April. | 1,260 | 66 | 237 | 1.50 | 1.67 | . 969 |
| May. |  | 22 | 44.5 | . 282 | . 32 | . 182 |
| June | 1,650 | 55 | 280 | 1.77 | 1.98 | 1.14 |
| July . . . . | 939 | 30 | 180 | 1.14 | 1.31 | . 737 |
| August... | 71 | 18 | 31.4 | .199 | . 23 | . 129 |
| September. | 85 | 9.5 | 18.2 | .115 | .13 | .074 |
| The year. | 1,650 | 9.5 | 139 | . 880 | 11.95 | . 569 |
|  |  |  |  |  |  |  |
| October...... | 12 40 | 8.9 8.9 | 10.1 | . 064 | . 07 | . 041 |
| Dacembar. | 713 | 12 | 90.2 | . 571 | . 61 | . 369 |
| January. . . . . . . . . . | 239 | 29 | 76.1 | . 482 | . 56 | . 312 |

Yearly discharge of Licking Creek near Sylvan, Pa

| Year | Yoar onding Sept. 30 |  |  |  | Calendar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-fat |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per squara mila | Discharge in second- faet |  | Runoff in <br> inchas | Discharea <br> In million <br> gallons per <br> day per <br> square mila |
|  | Mean | Por square mila |  |  | Mean | Per square m1l $\theta$ |  |  |
| 1931. | 114 | 0.722 | 9.75 | 0.467 | 116 | 0.734 | 10.00 |  |
| 1932. | 119 | . 753 | 10.26 | . 487 | 165 | 1.04 | 14.20 | $\begin{array}{r} .474 \\ .672 \end{array}$ |
| 1933 | 240 | 1.52 | 20.60 | . 982 | 201 | 1.27 | 17.20 | . 821 |
| 1934 | 94.8 | . 600 | 8.13 | . 388 | 129 | . 816 | 11.04 | . 527 |
| 1935 | 168 | 1.06 | 14.48 | . 685 | 142 | . 899 | 12.18 | . 581 |
| 1936. | 230 | 1.46 | 19.79 | . 944 | 234 | 1.48 | 20.20 | . 957 |
| 1937 | 237 | 1.50 | 20.38 | . 969 | 271 | 1.72 | 23.24 | 1.11 |
| 1938. | 137 | . 867 | 11.78 | . 560 | 104 | . 658 | 8.97 | . 425 |
| 1939 | 161 | 1.02 | 13.85 | . 659 | 164 | 1.04 | 14.09 | . 672 |
| 1940. | 184 | 1.16 | 15.85 | . 750 | 195 | 1.23 | 16.76 | . 795 |
| 1941. | 139 | . 880 | 11.95 | . 569 | 112 | . 709 | 9.61 | . 458 |
| Hp chest. | 240 | 1.52 | 20.60 | . 982 | 271 |  |  |  |
| Avarage. | 166 | 1.05 | 14.26 | -679 | 167 | 1.06 | 14.32 | 1.11 |
| Lowest.. | 94.8 | . 600 | 8.13 | . 388 | 104 | . 658 | 8.97 | . 425 |

Back Creek near Jones Springs, W. Va.
Locat1on. - Wire-weight gage, lat. 39030'43", long. $78^{\circ} 02^{\prime \prime} 15^{\prime \prime}$, on highway bridge 3.5 miles northeast of Jones Springs, Berkeley County, and 9 miles upstream from Tilhance Creek. Datum of gage $1 s 416.42$ feet above mean sea level (Corps of Engineers, U. S. Army, bench mark)
Drainage area.- 243 square miles.
Records avallable. - August 1938 to September 1943.
Extremes. - Maximum discharge, 22,400 second-seet oct. 15, 1942 (gage height, 25.17 feet, from floodmarks); minimum observed, 0.9 second-foot Aus. 6, 1930.

Maximum stage known, prior to August 1938, 25.0 feet in March 1936, from floodmarks (discharge, 22,000 second-feet).


Monthly discharge of Back Creek near Jones Springs, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{aligned} & \text { Por } \\ & \text { square } \\ & \text { m1le } \end{aligned}$ |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. | 14,800 | 20 | 1,218 | 5.01 | 5.78 | 3.24 |
| November. | 408 | 78 | 181 | . 745 | . 83 | . 482 |
| Decomber. | 4,830 | 66 | 494 | 2.03 | 2.34 | 1.31 |
| January. | 910 | 126 | 277 | 1.14 | 1.32 | . 737 |
| February | 2,400 | 140 | 591 | 2.43 | 2.53 | 1.57 |
| March. | 1,420 | 87 | 463 | 1.91 | 2.20 | 1.23 |
| April. | 3,290 | 79 | 363 | 1.49 | 1.66 | . 963 |
| May. | 1,330 | 79 | 185 | . 761 | . 88 | . 492 |
| June | 94 | 18 | 42.3 | .174 | . 19 | . 112 |
| July. | 58 | 11 | 18.7 | . 077 | . 09 | . 050 |
| August. | 48 | 8.0 | 13.3 | . 055 | . 06 | . 036 |
| September. | 51 | 6.4 | 11.1 | . 046 | . 05 | . 030 |
| The year.................... | 14,800 | 6.4 | 321 | 1.32 | 17.93 | . 853 |


| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in second-feet |  | Runoff in Inches | Discharge in million gallons per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharee in million gallons per day per square mile |
|  | Mean | Per squaro mile |  |  | Mean | $\begin{aligned} & \text { Per } \\ & \text { equare } \\ & \text { milo } \end{aligned}$ |  |  |
| 1939..... | 156 | 0.642 | 8.73 | 0.415 | 176 | 0.724 | 9.83 | 0.468 |
| 1940...... | 201 | . 827 | 11.24 | . 535 | 238 | . 979 | 13.36 | . 633 |
| 1941. | 170 | .700 | 9.51 | . 452 | 110 | . 453 | 6.11 | . 293 |
| 1942.. | 158 | .650 | 8.84 | . 420 | 309 | 1.27 | 17.26 | . 821 |
| 1943.. | 321 | 1.32 | 17.93 | . 853 |  | 1.2 | 17.26 | . 821 |

Back Creek near Redgesville, W. Va.
Location,- Staff and chain gage, lat. $39^{\circ} 33^{\prime} 2^{\prime \prime \prime}$, long. $78^{\circ} 01^{\prime} 00^{\prime \prime}$, at highway bridge 1.3 miles weet of Hedgeoville, Berkeley County, and 4.5 miles upstream from Tilnance Creek.
Drainage area.- 252 equare miles.
Recorde avallable. - July 1928 to September 1931.
Extremes:- Maximin alscharge, about 13,000 second-feet Oct. 23, 1929 (gage height, 16.9 feet, from floodmarks), from rating curve extended above 4,000 second-feet; minimum, 0.9 second-foot Aug. 6, 1930 (gage hoight, 0.99 foot).

> Monthly discharge of Back Creek near Hedgesville, W. Va.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mile |  |  |
| 1928 |  |  |  |  |  |  |
| July 2-31. | 292 | 36 | 90.7 | 0.360 | 0.40 | 0.233 |
| August... | 430 | 45 | 134 | .532 | . 61 | . 344 |
| September | 718 | 28 | 143 | . 567 | . 63 | . 366 |
| 1928-29 |  |  |  |  |  |  |
| October. | 120 | 26 | 45.3 | . 180 | . 21 | . 116 |
| December. | 336 | 23 | 76.3 | $\cdot 127$ | . 14 | . 082 |
| January. | 430 | - | 104 | . 413 | . 48 | . 267 |
| February | 2,730 | - | 300 | 1.19 | 1.24 | . 769 |
| March.... | 3,680 | 60 | 558 | 2.21 | 2.55 | 1.43 |
| Apr11 | 6,760 | 53 | 712 | 2.83 | 3.16 | 1.83 |
| May. . | 530 | 62 | 172 | . 683 | . 79 | . 441 |
| June | 56 | 21 | 32.3 | . 128 | . 14 | . 083 |
| July. | 26 | 12 | 17.1 | . 068 | . 08 | . 044 |
| August. | 18 | 10 | 13.4 | . 053 | . 06 | . 034 |
| September | 16 | 9 | 11.9 | . 047 | . 05 | . 030 |
| The year. | 6,760 | 9 | 172 | . 683 | 9.25 | . 441 |


| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| October. | 6,830 | 11 | 525 | 2.08 | 2.40 | 1.34 |
| November. | 3,180 | 90 | 401 | 1.59 | 1.77 | 1.03 |
| December. | 980 | - | 153 | . 607 | . 70 | . 392 |
| January. | 382 | - | 112 | . 444 | . 51 | . 287 |
| February | 1,620 | - | 264 | 1.05 | 1.09 | . 679 |
| March. | 2,870 | 65 | 265 | 1.05 | 1.21 | . 679 |
| April. | 800 | 74 | 163 | . 647 | . 72 | . 418 |
| May . . . . . . . . . . . . . . . . . . . . . . . | 78 | 13 | 38.8 | . 154 | . 18 | . 100 |
| June. | 69 | 9.6 | 23.1 | . 092 | . 10 | . 060 |
| July. | 18 | 3.2 | 6.27 | . 025 | . 03 | . 016 |
| August. | 7.0 | 1.1 | 3.22 | . 013 | . 01 | . 008 |
| September | 27 | 1.8 | 5.25 | . 021 | . 02 | . 014 |
| The year | 6,830 | 1.1 | 163 | . 647 | 8.75 | .418 |
| Octaber. | 11 | 1.9 | 5.87 | . 023 | . 03 |  |
| November. | 23 | 5.5 | 10.6 | . 042 | . 05 | .027 |
| December. | 96 | 5.7 | 19.0 | . 075 | . 09 | . 048 |
| January... . . . . . . . . . . . . . . . . | 193 | 13 | 30.9 | . 123 | . 14 | . 080 |
| February. . . . . . . . . . . . . . . . . . . | 62 | 8.4 | 33.9 | . 135 | . 14 | . 087 |
| March. | 1,200 | 42 | 156 | . 619 | . 71 | . 400 |
| April. | 2,030 | 47 | 327 | 1.30 | 1.45 | . 840 |
| May | 2,590 | 44 | 396 | 1.57 | 1.81 | 1.01 |
| June | 800 | 9.9 | 109 | . 433 | . 48 | . 280 |
| July. . . . . . . . . . . . . . . . . . . . . . | 480 | 8.2 | 84.8 | . 337 | . 39 | . 218 |
| August.. | 27 | 7.3 | 13.3 | . 053 | . 06 | . 034 |
| September. | 32 | 2.8 | 7.43 | . 029 | . 03 | . 019 |
| The year.................... | 2,590 | 1.9 | 99.9 | . 396 | 5.38 | .256 |

Conococheague Creek at Fairview, Md.
Location.- Water-stare recorder, lat. $39^{\circ} 42^{\prime} 57^{\prime \prime}$, long. $77^{\circ} 49^{\prime} 28^{\prime \prime}, 0.7 \mathrm{mlle}$ upstream Irom highway bridge at Falrview, Washington County, and 2 miles upstream from Rockdale Run. Datum of gage is 391.77 feet above mean sea level, adjustment of 1912. From Dec. 6, 1932 to Oct. 7, 1933, staff gage 200 feet below highway bridge, datum, 386.93 feet above mean sea level, adjustment of 1912. Prior to Dec. 5 , 1932, chain gase at hichway bridqe, datum, 388.92 feet above mean sea level, adjustment of 1912 .
Drainage area.- 494 square miles, prior to Oct. 7, 1933, 495 square miles.
हैecords avallable.- June 1928 to September 1943.
Fxtremes.- Maximum discharge, 16,300 second-feet Dec. 1, 1934 (gage height, 14.8 feet); minimum, 22 socond-foet Dec. 16, 1930; minimum dally, 25 second-feet Nov, 28, 1930 .

Maximum stage known, about 16.5 feet in 1889, from statements of local residents (discharge, about 22,000 second-fect).
Remarks.- Regulation at low flows by small power plants near Mercersburg, Pa. Records include a small amount of sewate from Alto Sanatorium, Pa., which obtains its water supply from Antietam Creek.

Monthly discharge of Conococheague Creek at Fairview, Ma.



Monthly discharge of Conococheogue Creek at Fairview, Md.--Continued

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inchee } \end{aligned}$ | Discherge in million gallons per day per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minlmum | Mean | Per squere mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 2,650 | 207 | 499 | 1.01 | 1.16 | 0.653 |
| November. | 2,770 | 177 | 390 | . 789 | . 88 | $.510$ |
| December. | 12,600 | 424 | 1.551 | 3.14 | 3.62 | 2.03 |
| Jenuery. | 1,130 | 364 | 594 | 1.20 | 1.38 | . 776 |
| Februery. | 2,490 | 405 | 972 | 1.97 | 2.05 | 1.27 |
| Merch. | 1,620 | 595 | 897 | 1.82 | 2.10 | 1.18 |
| April | 2,100 | 444 | 853 | 1.73 | 1.93 | 1.12 |
| Mey.. | 1,060 | 253 | 547 | 1.11 | 1.28 | . 717 |
| June. | 319 | 146 | 196 | . 397 | . 44 | . 257 |
| July. | 409 | 108 | 169 | . 342 | . 39 | $.221$ |
| August. | 176 | 78 | 116 | . 235 | . 27 | $.152$ |
| Seftember | 998 | 78 | 182 | .368 | . 41 | . 238 |
| The yeer. | 12,600 | 78 | 579 | 1.17 | 15.91 | . 756 |
| October. |  |  |  |  |  |  |
| November... | 1,690 | 74 142 | 152 | . 308 | . 36 | . 199 |
| December. | 1,740 | 202 | 531 | 1.07 | 1.02 | $\begin{array}{r} .589 \\ .692 \end{array}$ |
| Jenuery. | 2,500 | 400 | 939 | 1.90 | 2.19 | 1.23 |
| Februery | 3,560 | 360 | 853 | 1.73 | 1.87 | 1.12 |
| Merch. | 11,600 | 1,200 | 3,557 | 7.20 | 8.30 | 4.65 |
| April. | 4,240 | 498 | 1,331 | 2.69 | 3.00 | 1.74 |
| Mey. | 500 | 222 | 348 | . 704 | . 81 | . 455 |
| June | 496 | 155 | 233 | . 472 | . 53 | . 305 |
| July. | 326 | 95 | 177 | . 358 | . 41 | . 231 |
| August. | 508 | 91 | 150 | . 304 | . 35 | . 196 |
| September | 160 | 76 | 105 | . 213 | . 24 | .138 |
| The year. | 11,600 | 74 | 737 | 1.49 | 20.31 | . 963 |
| October. | 1,670 |  |  |  |  |  |
| November. | 1,485 | 104 | 264 | . .354 | . 62 | . 345 |
| December. | 1,750 | 108 | 723 | 1.46 | 1.68 | . 944 |
| Januery.. | 4,260 | 768 | 1,685 | 3.41 | 3.93 | $2.20$ |
| Februery. | 4,610 | 732 | 1,341 | 2.71 | 2.82 | 1.75 |
| March. | 17.989 | 449 | , 607 | 1.23 | 1.42 | . 795 |
| Apr11 | 11,800 | 390 | 2,064 | 4.18 | 4.66 | 2.70 |
| June. | 2,610 | 372 | 909 | 1.84 | 2.12 | 1.19 |
|  | 4,370 | 300 | 655 | 1.33 | 1.48 | . 860 |
| Algust | 4,150 | 218 | 597 | 1.21 | 1.40 | . 782 |
| September | +,450 | 108 | 296 279 | . 599 | .69 .40 | $\begin{aligned} & .387 \\ & .234 \end{aligned}$ |
| The year. | 11,800 | 82 | 787 | 1.59 | 21.62 | 1.03 |
| October. | 5,410 | 117 | 926 |  |  |  |
| November. | 2,420 | 425 | 820 | 1.66 | 1.85 | 1.07 |
| December. | 1,090 | 260 | 446 | . 903 | 1.04 | -. 584 |
| January.. | 994 | 289 | 471 | . 953 | 1.10 | . 616 |
| February. | 484 | 294 | 356 | . 721 | . 75 | . 466 |
| March. | 2,030 | 242 | 669 | 1.35 | 1.56 | . 873 |
| May. | 567 1,650 | 252 | 369 | . 747 | . 83 | . 483 |
| June | 1,410 | 141 | 433 | . 877 | 1.01 | . 567 |
| July. | 323 | 100 | 151 | . 3506 | . .35 | . 293 |
| August. | 560 | 66 | 127 | . 257 | . 30 | $.166$ |
| September | 612 | 76 | 156 | . 316 | . 35 | $.204$ |
| The year. | 5,410 | 66 | 430 | . 870 | 11.81 | . 562 |
| Detober... | 190 | 76 | 98.6 |  | . 23 |  |
| November. | 162 | 74 | 105 | . 213 | .24 | .138 |
| December | 3,350 | 200 | 625 | 1.27 | 1.46 | . 821 |
| Januery. | 2,340 | 172 | 399 | . 808 | . 93 | . 522 |
| February | 5,460 | 514 | 1,390 | 2.81 | 2.93 | 1.82 |
| Nerch | 3,600 | 450 | , 986 | 2.00 | 2.31 | 1.29 |
| April. | 2,620 | 624 | 1,074 | 2.17 | 2.42 | 1.40 |
| May. | . 855 | 175 | 401 | . 812 | . 94 | . 525 |
| June | 2,690 | 162 | 378 | . 765 | . 85 | . 494 |
| July. | 1,110 | 124 | 340 | . 688 | . 79 | . 445 |
| August. | 256 | 78 | 120 | . 243 | . 28 | .157 |
| September. | 988 | 64 | 126 | . 255 | . 28 |  |
| The yeer. | 5,460 | 64 | 497 | 1.01 | 13.66 | .653 |

Monthly discharge of Conococheague Creek at Fairview, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| October | 2,370 | 97 | 335 | 0.678 | 0.78 |  |
| November. | 1,680 | 142 | 435 | . 881 | . 98 | . 568 |
| December. | 341 | 106 | 144 | .291 | . 34 | - 188 |
| Jamuary. | 350 | 100 | 133 | . 269 | . 31 | .174 |
| February. | 2,200 | 105 | 647 | 1.31 | 1.41 | . 847 |
| March... | 2,330 | 530 | 1,082 | 2.19 | 2.52 | $1.42$ |
| Apr11 | 6,180 | 860 | 2,041 | 4.13 | 4.61 | 2.67 |
| May. | 1,310 | 326 | 594 | 1.20 | 1.38 | . 776 |
| June | 2,850 | 274 | 612 | 1.24 | $\begin{array}{r}1.38 \\ \hline .47\end{array}$ | $.801$ |
| July... | 340 919 | 136 108 | 200 | . 405 | .47 .53 | $\text { . } 262$ $.297$ |
| August... | 919 2,090 | 108 | 227 306 | . 460 | . 53 | $\begin{array}{r} .297 \\ .400 \end{array}$ |
| September. | 2,090 |  |  |  |  |  |
| The year. | 6,180 | 97 | 559 | 1.13 | 15.40 | .730 |
| October. | 298 | 116 | 165 | .334 | . 39 | .216 |
| November. | 2,710 | 218 | 745 | 1.51 | 1.68 | .876 |
| December. | 2,520 | 404 | 828 | 1.68 | 1.93 | . 09 |
| January. | 1,190 | 344 | 566 | 1.15 | 1.32 | . 743 |
| February. | 1,440 | 291 | 444 | . 899 | . 94 | . 581 |
| March. | 2,340 | 316 | 798 | 1.62 | 1.86 | . 05 |
| April. | 3,100 | 320 | 788 | 1.60 | 1.78 | 1.03 |
| May. | 1,810 | 139 | 445 | . 441 | 1.00 | . .582 |
| June | 1,230 | 116 | 296 | . 599 | . 69 | . 387 |
| August. | - 290 | 93 | 128 | . 259 | . 30 | . 167 |
| September | 1,260 | 67 | 148 | .300 | . 33 | . 194 |
| The year. | 3,100 | 67 | 463 | .937 | 12.73 | . 606 |
| October. | 86 | 65 | 74.2 | . 150 | . 17 | . 097 |
| November | 474 | 74 | 143 | . 289 | . 32 | . 187 |
| Docember | 3,330 | 98 | 573 | 1.16 | 1.34 | . 750 |
| January. | 1,100 | 268 | 407 | . 8274 | .95 | . 533 |
| February | 2,500 | 230 | 648 | 1.31 | 1.37 | . 847 |
| March. | 1,720 | 291 | 850 | 1.72 | 1.98 | 1.11 |
| April | 4,700 | 419 | 1,711 | 3.46 | 3.86 | 2.24 |
| May. | 6,020 | 358 378 | 1,089 786 | 2.20 1.59 | 2.54 1.78 | 1.42 |
| June | 1,050 | 226 | 481 | -. 974 | 1.12 | 1.630 |
| August. | 3,040 | 294 | 921 | 1.86 | 2.15 | 1.20 |
| September | 757 | 165 | 271 | . 549 | . 61 | .355 |
| The year. | 6,020 | 65 | 662 | 1.34 | 18.19 | . 866 |
| October............ | 9,070 | 148 | 1,274 | 2.58 | 2.97 | 1.67 |
| November. | 1,010 | 386 | 611 | 1.24 | 1.38 | . 801 |
| December. | 6,880 | 296 | 1,190 | 2.41 | 2.78 | 1.56 |
| January. | 2,970 | 518 | 901 | 1.82 | 2.10 | 1.18 |
| February. | 2,880 | 508 | 1,178 | 2.38 | 2.48 | 1.54 |
| March. | 3,310 | 514 | 1,145 | 2.32 | 2.67 | 1.50 |
| April. | 3,640 | 414 | 924 | 1.87 | 2.09 | 1.21 |
| May.. | 6,780 | 456 | 1,287 | 2.61 | 3.00 | 1.69 |
| June. | 922 | 240 | 461 | . 933 | 1.04 | . 603 |
| July. | 345 | 152 | 213 | . 431 | . 50 | . 279 |
| August. | 156 | 98 | 117 | . 237 | . 27 | . 153 |
| September | 108 | 66 | 83.7 | . 169 | . 18 | . 109 |
| The year....... | 9,070 | 66 | 782 | 1.58 | 21.47 | 1.02 |

Yearly discharge of Conococheague Creek at Fairview, Ma.

| Year | Year ending Sept. 30 |  |  |  | Calendar yoar |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | Dlecharge in second-feet |  | Funoff in inches | $\begin{aligned} & \text { Discharge } \\ & \text { in million } \\ & \text { gallons per } \\ & \text { day per } \\ & \text { square mile } \end{aligned}$ |
|  | Mean | Per square mile |  |  | Mean | Por square milo |  |  |
| 1929. | 533 | 1.08 | 14.64 | 0.698 | 692 | 1.40 | 19.00 | 0.905 |
| 1930. | 470 | . 949 | 12.86 | . 613 | 267 | . 539 | 7.29 | . 348 |
| 1931. | 320 | . 646 | 8.80 | . 418 | 328 | . 663 | 9.03 | . 429 |
| 1932. | 342 | . 691 | 9.42 | . 447 | 520 | 1.05 | 14.31 | . 679 |
| 193\%. | 842 | 1.70 | 23.07 | 1.10 | 694 | 1.40 | 19.03 | . 905 |

Yearly discharge of Conococheague Creek at Falrview, Md.--Continued

| Year | Xear ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in eecond-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | D1scharge in million gallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Por equare mile |  |  |
| 1934..... | 418 | 0.846 | 11.47 | 0.547 | 573 |  |  |  |
| 1935. | 579 | 1.17 | 15.91 | 0.54 | 5768 | 1.1647 | 15.71 | 0.750 .612 |
| 1936. | 737 | 1.49 | 20.31 | . 963 | 740 | 1.50 | 20.40 |  |
| 1937. | 787 | 1.59 | 21.62 | 1.03 | 873 | 1.77 | 23.97 | 1.14 |
| 1938. | 430 | . 870 | 11.81 | . 562 | 316 | . 640 | 8.69 | -. 414 |
| 1939. | 497 | 1.01 | 13.66 | . 653 | 503 | 1.02 | 13.83 | . 659 |
| 1940 | 559 | 1.13 | 15.40 | . 730 | 628 | 1.27 | 17.30 | . 821 |
| 1941. | 463 | . 937 | 12.73 | . 606 | 385 | -. 779 | 10.56 |  |
| 1942. | 662 | 1.34 | 18.19 | . 866 | 855 | 1.73 | 23.49 | 1.12 |
| 1943. | 782 | 1.58 | 21.47 | 1.02 | - | - | 23.40 | 1.12 |
| R1 ghest. | 842 | 1.70 | 23.07 | 1.10 |  |  |  |  |
| Average. | 561 | 1.14 | 15.42 | . 737 | 560 | 1.13 | 15.39 | 1.14 .730 |
| Lowast.. | 320 | . 646 | 8.80 | . 418 | 267 | -. 538 | 7.29 |  |

Opaquon Creak near Martinsburg, W. Ve
Location.- Chain gage, Iat. $39^{\circ} 5^{\prime} 1^{\prime 2} 4^{\prime \prime}$, long. $7^{\circ} 7^{\circ} 51^{\prime \prime} 9^{\prime \prime}$, at highway bridge 3 mileo southeaet of Martinsburg, Berkeley county, and 0.2 mile upstream from Evans Run. Drainage area.- 275 square miles
Recorde avallabla.- May 1905 to July 1906.
Extremae:- Maximum daliy diacharga, 3,440 sacond-feat Jan. 4, 1906; m1nimum dally, 50 eacond-feat oct. $10,16,17$, Nov. $5-7,10,18-28,1905$.


Antietan Creek near Sharpsburg, Md.

[^2]Monthly discharge of Antletem Creek near Sherpsburg, Md.


| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1901-2 |  |  |  |  |  |  |
| October | 261 | 91 | 130 | 0.468 | 0.54 | 0.302 |
| November 1-16 | 110 | 74 | 98.4 | .354 | . 21 | . 229 |
| December. | - | - | - |  |  |  |
| January.. | 1,250 | 231 | 410 | 1.47 | 1.70 | . 950 |
| February. | 6,840 | 177 | . 871 | 3.13 | 3.26 | 2.02 |
| March.... | 3,300 | 517 | 1,068 | 3.84 | 4.43 | 2.48 |
| April | 2,840 | 399 | 662 | 2.38 | 2.66 | 1.54 |
| May. | 517 | 261 | 313 | 1.13 | 1.30 | . 730 |
| June | 327 | 177 | 249 | . 896 | 1.00 | . 579 |
| July. | 805 | 131 | 232 | . 835 | . 96 | . 540 |
| August. | 399 | 74 | 141 | . 507 | . 58 | . 328 |
| Septomber. | 293 | 74 | 113 | . 406 | . 45 | . 262 |
|  |  |  |  |  |  |  |
| October.. | 293 | 110 | 150 | . 540 | . 62 | .349 |
| November. | 293 | 91 | 131 | . 471 | . 53 | . 304 |
| December. | 1,160 | 153 | 570 | 2.05 | 2.36 | 1.32 |
| January. | 1,610 | 399 | 843 | 3.03 | 3.49 | 1.96 |
| February | 2,290 | 293 | 849 | 3.05 | 3.18 | 1.97 |
| March. | 1,280 | 437 | 750 | 2.70 | 3.11 | 1.75 |
| April | 3,040 | 517 | 926 | 3.33 | 3.72 | 2.15 |
| May. . | 701 | 293 | 398 | 1.43 | 1.65 | . 924 |
| June. | 860 | 293 | 350 | 1.26 | 1.41 | . 814 |
| July. | 4,110 | 362 | 738 | 2.65 | 3.06 | 1.71 |
| August. | 860 | 203 | 354 | 1.27 | 1.46 | . 821 |
| Sertember | 560 | 177 | 242 | . 871 | . 97 | . 563 |
| The jear. | 4,110 | 91 | 524 | 1.88 | 25.56 | 1.22 |
| October | 560 | 165 | 226 | . 813 | . 94 | . 525 |
| November. | 203 | 153 | 172 | . 619 | . 69 | . 400 |
| December | 399 | 153 | 195 | .701 | . 81 | . 453 |
| January l-23 | 2,480 | 131 | 300 | 1.08 | . 92 | . 698 |
| July 12-31 | 261 | 110 | 145 | . 522 | . 39 | . 337 |
| Ancust... | 560 | 82 | 126 | . 453 | . 52 | . 293 |
| September. | 165 | 74 | 101 | . 363 | . 40 | . 235 |
| Octaber. | 190 | 74 | 95.7 | 348 |  |  |
| November. | 120 | 66 | 92.8 | . 334 | . 37 | . 216 |
| December. | 246 | 74 | 110 | . 396 | . 46 | . 256 |
| January. | 805 | 110 | 229 | . 824 | :95 | . 533 |
| February. | 203 | 131 | 161 | .579 | . 60 | . 374 |
| March. | 1,060 | 131 | 508 | 1.83 | 2.11 | 1.18 |
| Apr11 | 476 | 231 | 332 | 1.19 | 1.33 | . 769 |
| May.. | 231 | 153 | 196 | . 705 | . 81 | -456 |
| June | 399 | 131 | 190 | . 683 | . 76 | . 441 |
| July. | 1,750 | 142 | 311 | 1.12 | 1.29 | . 724 |
| August 1-25 | 2,520 | 177 | 326 | 1.17 | 1.09 | . 756 |
| August 21-31.... | 」80 | 231 | 269 |  |  |  |
| Sept ember.. | 435 | 184 | 245 |  |  |  |
|  |  |  |  |  |  |  |
| October.... | 238 | 138 | 169 |  |  |  |
| November... | 168 | 129 | 145 |  |  |  |
| January.. | - | - | 152 |  |  |  |
| February. | 935 | - | 243 |  |  |  |
| March.. | 1,490 | 337 | 592 |  |  |  |
| April. | 1,440 | 296 | 502 |  |  |  |
| May. . | 3,210 | 310 | 603 |  |  |  |
| June. | 393 | 185 | 264 |  |  |  |
| July. | 232 | 133 | 171 |  |  |  |
| August.... | 181 | 81 | 112 |  |  |  |
| September. | 268 | 73 | 93.2 |  |  |  |
| The year... | 3,210 | 73 | 267 |  |  |  |

Monthly discharge of Antietam Creek near Sharpsburg, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | square mile |  |  |
|  |  |  | 300 |  |  |  |
|  | 1,590 | $\begin{array}{r} 96 \\ 213 \end{array}$ | $296$ |  |  |  |
|  | 519 319 | 213 | $227$ |  |  |  |
|  | 278 | - | 217 |  |  |  |
|  | 437 | - | 326 |  |  |  |
|  | 1,160 | 291238 | 430 |  |  |  |
|  | 598 |  | 317 |  |  |  |
|  | 251 | 156 | 189 |  |  |  |
|  | 333 | 103 | 157 |  |  |  |
|  | 166 |  | 110 |  |  |  |
|  | 106 123 | 93 | 9 |  |  |  |
|  | 1,590 | 50 | 229 |  |  |  |
| October............ | 119 | 52 | 86.5 |  |  |  |
| November. | 112 | $\begin{aligned} & 72 \\ & 68 \end{aligned}$ | 97.3 92.5 |  |  |  |
| December. | 406 134 |  | 78.4 |  |  |  |
| February. | 101 | 50 | 72.5 |  |  |  |
| March.... | 319 | 65 | $167$ |  |  |  |
| April.... | 369 | $\begin{aligned} & 70 \\ & 77 \end{aligned}$ | 139 |  |  |  |
| June. | 699 | $\begin{aligned} & 82 \\ & 06 \end{aligned}$ | 154 |  |  |  |
| July.... | 1,240 |  |  |  |  |  |
| August..... | 553 306 | 90 70 |  |  |  |  |
| September.. |  |  |  |  |  |  |
| The yea | 1,240 | 50 | 125 |  |  |  |
| october............ | 93 | $50$ | $\begin{aligned} & 74.1 \\ & 77.5 \end{aligned}$ |  |  |  |
| November. | 90 |  |  |  |  |  |
| December. . | 109 | 56 | 69.6 |  |  |  |
| January.. | 183 | 71 | 175.3 |  |  |  |
| February. | 233 | 79 | 115 |  |  |  |
| March. | 545 | 90 176 | 297 |  |  |  |
| May. | 1,940 | 224 | 520 |  |  |  |
| June | 261 | 143 |  |  |  |  |
| July. | 143 | 101 | $\begin{gathered} 126 \\ 97.2 \end{gathered}$ |  |  |  |
| August... | 457 | 76 | 109 |  |  |  |
| The year | 1,940 | 50 | 168 |  |  |  |
| 1932-33 | 725 |  | 170418 |  |  |  |
| November. | 2,140 | 153150 |  |  |  |  |
| December. | 379 |  | 222 |  |  |  |
| January.. | 480 | 150 | 264 |  |  |  |
| February. | 445 | 222 | 294 |  |  |  |
| March. | 1,260 | 234 | 543 |  |  |  |
| April.... | 1,040 | $\begin{aligned} & 445 \\ & 318 \end{aligned}$ | 647 |  |  |  |
| May. . | 515 | $174$ | 248 |  |  |  |
| July. | 1,340 | 151 | $289$ |  |  |  |
| August. | 3,230 | 136 | $\begin{aligned} & 334 \\ & 267 \end{aligned}$ |  |  |  |
| September | 1,000 | 186 |  |  |  |  |
| The yes | 3,230 | 75 | 347 |  |  |  |
| 1933-34 | 560 | 180 | 234 |  |  |  |
| Novamber. . | 198 | 141 | 162 |  |  |  |
| December. | 176 | $\begin{aligned} & 120 \\ & 110 \end{aligned}$ | 203 |  |  |  |
| January. . | 380 |  |  |  |  |  |
| February. | 152 | 90 | 120 |  |  |  |
| March.... |  | 110 | 193 |  |  |  |
| April. | 398 |  | 294 |  |  |  |
| May . . . | 340 | 226 174 | 229 |  |  |  |
| June. | 300 | 115 | 158 |  |  |  |
| July. | 145 | 86 |  |  |  |  |
| August. . . . . . . . . . . | 178 | $\begin{aligned} & 76 \\ & 66 \end{aligned}$ | $\begin{gathered} 96.9 \\ 140 \end{gathered}$ |  |  |  |
|  | 1,020 |  |  |  |  |  |
| The year.................... | 1,020 | 66 | 173 |  |  |  |

Monthly discharge of Antietam Greek neer Sharpsburg, Md.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff <br> in <br> inches | Discherge in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere m1le |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 358 | 95 | 128 |  |  |  |
| November. | 196 | 81 | 105 |  |  |  |
| December. | 1,870 | 184 | 363 |  |  |  |
| Jenuery. | 338 | 170 | 217 |  |  |  |
| February. | 681 | 202 | 366 |  |  |  |
| March. | 570 | 307 | 410 |  |  |  |
| April. | 744 | 325 | 459 |  |  |  |
| Mey. | 507 | 228 | 336 |  |  |  |
| June. | 263 | 156 | 191 |  |  |  |
| July. | 1,820 | 117 | 205 |  |  |  |
| August.. | 158 | 95 | 122 |  |  |  |
| September. | 267 | 87 | 114 |  |  |  |
| The year | 1,870 | 81 | 251 |  |  |  |
| October. | 283 | 74 | 97.8 |  |  |  |
| November. | 188 | 89 | 120 |  |  |  |
| December. | 292 | 111 | 171 |  |  |  |
| Januery. | 606 | 158 | 376 |  |  |  |
| Februery. | 1,190 | 212 | 362 |  |  |  |
| March. | 3,230 | 755 | 1,290 |  |  |  |
| April | 1,190 | 422 | 692 |  |  |  |
| Mey. | 427 | 219 | 311 |  |  |  |
| Juno. | 386 | 166 | 212 |  |  |  |
| July | 238 | 131 | 163 |  |  |  |
| August. | 430 | 118 | 157 |  |  |  |
| September | 173 | 95 | 116 |  |  |  |
| The yeer. | 3,230 | 74 | 340 |  |  |  |
| October... | 271 | 93 | 118 |  |  |  |
| November. | 107 | 85 | 93.5 |  |  |  |
| December. | 427 | 85 | 207 |  |  |  |
| Jenuery. | 1,000 | 229 | 481 |  |  |  |
| Februery. | 1,910 | 423 | 615 |  |  |  |
| Merch. | 550 | 307 | 395 |  |  |  |
| April | 5,180 | 261 | 718 |  |  |  |
| Mey. | 975 | 299 | 496 |  |  |  |
| June | 725 | 257 | 347 |  |  |  |
| July. | 569 | 181 | 243 |  |  |  |
| August. | 866 | 140 | 207 |  |  |  |
| September | 212 | 114 | 140 |  |  |  |
| The yeer | 5,180 | 85 | 336 |  |  |  |
| October. | 1,70c | 107 | 301 |  |  |  |
| November.. | - 654 | 240 | 330 |  |  |  |
| December.. | 500 | 190 | 260 |  |  |  |
| Jenuary. | 400 | 160 | 223 |  |  |  |
| Febmuary. | 226 | 159 | 179 |  |  |  |
| Merch. . | 355 266 | 164 | 234 210 |  |  |  |
| May.. | 642 | 140 | 225 |  |  |  |
| June | 300 | 130 | 172 |  |  |  |
| July. | 238 | 111 | 136 |  |  |  |
| August.. | 240 | 83 | 113 |  |  |  |
| September. | 424 | 92 | 122 |  |  |  |
| The yeer. | 1,700 | 83 | 209 |  |  |  |
| October............. |  |  |  |  |  |  |
| November. . . | 124 | 79 | 97.2 |  |  |  |
| December. | 696 | 110 | 265 |  |  |  |
| January. | 568 | 133 | 200 |  |  |  |
| Februery. | 1,420 | 332 | 532 |  |  |  |
| March. | 916 | 334 | 455 |  |  |  |
| April. | 769 | 321 | 453 |  |  |  |
| May.. | 515 | 218 | 332 |  |  |  |
| June. | 451 | 167 | 217 |  |  |  |
| July.. | 319 | 130 | 171 |  |  |  |
| August. | 231 | 97 | 121 |  |  |  |
| September. | 165. | 84 | 103 |  |  |  |
| The year.. | 1.420 | 79 | 251 |  |  |  |

Monthly dischargo of Antletam Creek near Sharpsburg, Md.--Continued


Yearly discharge of Antietam Creek near Sharpsburg, Md.


Chesapeake \& Ohio Canal at Point of Rocks, Md.
Location.- Staff gage, lat. $39^{\circ} 16^{\prime} 5^{\prime \prime}$, long. $77^{\circ} 32155^{\prime \prime}$, at canal locks 0.6 mile above Potomac River bridge at Point of Rocks, Frederick County.
Records available.- July 1931 to September 1936.
Fxtremes:- Maximum discharge observed, 146 second-feot May 13, 1932 (gage he1ght, 2.64 feett; no flow at times.
Remarks. - Canal diverts from left bank of Potomac River at Harpers Ferry and returns below gacing station on Potomac River at Point of Rocks. Canal closed after Nov. 20, 1935 and not reopened, as flood of March 2936 destroyed canal banks above gage

Monthly discharge of Chesapeake \& Ohio Canal at Point of Rocka, Md.

| Month | Diecharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per <br> square <br> mile |  |  |
| 1931 |  |  |  |  |  |  |
| July 14-31. | 64 | 39 | $47 \cdot 3$ |  |  |  |
| August..... | 55 | 30 | 41.5 |  |  |  |
| September.. | 52 | 34 | 41.3 |  |  |  |
| 1931-32 |  |  |  |  |  |  |
| October... | 42 | 8.1 | 34.0 |  |  |  |
| November.. | 30 | 0 | 17.8 |  |  |  |
| December. . . . . . . . . . . . . . . . . . . . . | 3.1 | 0 | . 38 |  |  |  |
| Januery. . . . . . . . . . . . . . . . . . . . . . . | 0 | 0 | 0 |  |  |  |
| February. . . . . . . . . . . . . . . . . . . . . . | 0 | 0 | 0 |  |  |  |
| March............................ | 0 | 0 | 0 |  |  |  |
| April. . . . . . . . . . . . . . . . . . . . . | 48 | 0 | 7.6 |  |  |  |
| May. . . . . . . . . . . . . . . . . . . . . . . . . | 146 | 8.1 | 41.1 |  |  |  |
| June. . . . . . . . . . . . . . . . . . . . . . . . . | 31 | 14 | 21.5 |  |  |  |
| July. . . . . . . . . . . . . . . . . . . . . . . . . . | 63 | 12 | 23.9 |  |  |  |
| August. . . . . . . . . . . . . . . . . . . . . . . | 56 | 30 | 45.2 |  |  |  |
| September....................... | 39 | 22 | 32.0 |  |  |  |
| The year..................... | 146 | 0 | 18.7 |  |  |  |

Monthly discnarge of Chesepeoke \& Ohio Cenal ot Point of Rocks, Md.--Continued

| Month | Dischorge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { inches } \end{gathered}$ | Discherge in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Meen | Per squere milo |  |  |
|  | $\begin{array}{r} 72 \\ 68 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 63 \\ 43 \\ 40 \\ 64 \\ 53 \end{array}$ | $\begin{array}{r} 24 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 27 \\ 12 \\ 20 \\ 36 \end{array}$ | $\begin{aligned} & 49.1 \\ & 8.61 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 40.3 \\ & 32.2 \\ & 26.2 \\ & 36.0 \\ & 42.3 \end{aligned}$ |  |  |  |
| The jear.. | 72 | 0 | 19.7 |  |  |  |
| October. <br> November <br> December <br> Jenuery. <br> Februery March. <br> April. <br> May. . <br> June. <br> July. <br> August. <br> September. | $\begin{array}{r} 58 \\ 36 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 38 \\ 44 \\ 36 \\ 26 \\ 64 \end{array}$ | 44 0 0 0 0 0 0 0 26 11 16 16 | $\begin{gathered} 50.7 \\ 43.6 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 19.5 \\ 32.8 \\ 22.5 \\ 19.8 \\ 28.3 \end{gathered}$ |  |  |  |
| The jear. | 64 | 0 | 18.2 |  |  |  |
| October. <br> November <br> December <br> January. <br> February <br> March. <br> April. <br> Mey. <br> June <br> July. <br> August. <br> September | $\begin{array}{r} 52 \\ 45 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 43 \\ 43 \\ 43 \\ 46 \\ 66 \end{array}$ | 43 0 0 0 0 0 0 0 34 38 34 34 | $\begin{gathered} 45.5 \\ 22.2 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 23.9 \\ 40.5 \\ 39.9 \\ 40.0 \\ 45.0 \end{gathered}$ |  |  |  |
| The jeer..... | 56 | 0 | 21.5 |  |  |  |
| October. <br> November <br> December <br> Februery. <br> March. <br> April. <br> Меј. <br> June <br> July. <br> August <br> Soptember | $\begin{array}{r} 57 \\ 53 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}$ | $\begin{array}{r} 38 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}$ | $\begin{gathered} 50.5 \\ 34.6 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{gathered}$ |  |  |  |
| The year....... | 57 | 0 | 7.1 |  |  |  |

Yearly ilscharge of Chesapeeke \& Ohio Canel at Point of Rocks, md.

| Year | Yeer ending Sept. 30 |  |  |  | Celender yeer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | Discharge in million gellons per dey per square mile | Discherge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge 1n million gellons per dey per square mile |
|  | Meon | Per squere mile |  |  | Meen | Por squere mile |  |  |
| $\begin{aligned} & 1932 \ldots \\ & 1933 . . \\ & 1934 . . \\ & 1935 . . \\ & 1936 . . \end{aligned}$ | $\begin{array}{r} 18.7 \\ 19.7 \\ 18.2 \\ 21.5 \\ 7.1 \\ \hline \end{array}$ |  |  |  | 19.2 22.7 16.0 23.0 - |  |  |  |

# North River neer Burketown, Va 

 Burketown, Auguste County, and 8 miles upstream from Middle River. Datum of gage is $1,103.49$ feet above mean see level, detum of 1929. Prior to Dec. 12, 1938, staff gege et site 2 miles downstraam
Drainege area.- 375 squere miles; 381 square miles prior to Dec. 12, 1938
Records avallabla.- June 1926 to September 1943.
Extremes.- Maximum discharge, 43,000 second-feet 0ct. 15, 1942 (gaga height, 32.4 feet, from floodmark), by slope-area determinetion; minimum, 20 sacond-feat Sept. 24, 1930 (cage height, 1.16 feat, site and datum then in use).
Records.- Some regulation at low flow by mills ebove stetion
Monthly discharge of North R1ver naer Burketown, Ve

| Month | Discharge in second-feet |  |  |  | Runoff in <br> inchas | D1scherge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mila |  |  |
| 1926 |  |  |  |  |  |  |
| June | 237 | 85 | 136 | 0.357 | 0.40 | 0.231 |
| July. | 2,510 | 62 | 169 | . 444 | . 51 | . 287 |
| August | 1,480 | 73 | 237 | . 622 | . 72 | . 402 |
| September | 308 | 81 | 158 | . 425 | . 46 | . 268 |
| 1926-27 |  |  |  |  |  |  |
| October..... | 369 | 101 | 198 | . 520 | . 60 | . 336 |
| November. | 4,300 | 134 | 711 | 1.87 | 2.09 | 1.21 |
| Dacember. | 3,400 | 259 | 649 | 1.70 | 1.96 | 1.10 |
| Jenuary. | 684 | 214 | 323 | . 848 | . 98 | . 548 |
| Februery | 2,160 | 290 | 719 | 1.89 | 1.97 | 1.22 |
| March. | 760 | 214 | 370 | . 971 | 1.12 | . 628 |
| April | 3,490 | 308 | 1,160 | 3.04 | 3.39 | 1.96 |
| May.. | 1,820 | 203 | 453 | 1.19 | 1.37 | . 769 |
| Juna | 225 | 134 | 182 | . 478 | . 53 | . 309 |
| July. | 383 | 97 | 145 | . 381 | . 44 | . 246 |
| August. | 253 | 105 | 152 | . 399 | . 46 | . 258 |
| September | 129 | 73 | 101 | . 265 | . 30 | . 171 |
| The jaar. | 4,300 | 73 | 427 | 1.12 | 15.21 | .724 |
| October. . . . . | 3,450 | 73 | 445 | 1.17 | 1.35 | . 756 |
| November. | 1,560 | 178 | 368 | . 966 | 1.08 | . 624 |
| December. | 1,650 | 203 | 503 | 1.32 | 1.52 | . 853 |
| January. | 521 | 163 | 287 | . 753 | . 87 | . 487 |
| Februery. | 760 | 225 | 411 | 1.08 | 1.16 | . 698 |
| March. | 875 | 183 | 364 | . 955 | 1.10 | . 617 |
| April. | 3,370 | 334 | 711 | 2.87 | 2.09 | 1.21 |
| May. | 5,260 | 248 | 685 | 1.80 | 2.08 | 1.16 |
| June. | 722 | 214 | 392 | 1.03 | 1.15 | . 666 |
| July. | 1,070 | 129 | 323 | . 848 | . 98 | . 548 |
| August. | 4,310 | 124 | 758 | 1.99 | 2.29 | 1.29 |
| Septembar | 760 | 225 | 411 | 1.08 | 1.20 | . 698 |
| The jeer | 5,260 | 73 | 472 | 1.24 | 16.87 | . 801 |
| October.......... | 246 | 120 | 160 | . 420 | . 48 | . 271 |
| Novembar. | 140 | 97 | 120 | . 315 | . 35 | . 204 |
| Decamber. | 341. | 140 | 211 | . 554 | . 64 | . 358 |
| Jenuery. | 532 | 181 | 335 | . 879 | 1.01 | . 568 |
| February. | 3,020 | 181 | 401 | 1.05 | 1.09 | . 679 |
| March. | 3,280 | 334 | 996 | 2.61 | 3.01 | 1.69 |
| April. | 4,400 | 246 | 859 | 2.25 | 2.51 | 1.45 |
| May. | 1,990 | 257 | 656 | 1.72 | 1.98 | 1.11 |
| June | 1,230 | 202 | 378 | . 992 | 1.11 | . 641 |
| July. | 347 | 97 | 184 | . 483 | . 56 | . 312 |
| August. | 120 | 62 | 87.9 | . 231 | . 27 | . 149 |
| September. | 170 | 50 | 65.8 | .173 | . 19 | .112 |
| The jeer | 4,400 | 50 | 371 | . 974 | 13.20 | . 630 |
| Octobar...... | 4,050 | 68 |  |  |  |  |
| November. | 3,370 | 170 | 558 | 1.46 | 1.63 | . 944 |
| December. | 606 | 170 | 293 | . 769 | . 89 | . 497 |
| Jenuary. | 496 | 155 | 245 | . 643 | . 74 | . 416 |
| February | 718 | 155 | 328 | . 861 | . 90 | . 556 |
| Merch. | 1,070 | 186 | 421 | 1.10 | 1.27 | . 721 |
| Apr 11 | 322 | 145 | 221 | . 580 | . 65 | . 375 |
| Mey. | 140 | 85 | 106 | . 278 | . 32 | .180 |
| June. | 150 | 62 | 88.0 | . 231 | . 26 | . 149 |
| July... | 72 | 35 | 55.3 | .145 | .17 | . 094 |
| August.... | 68 | 32 | 45.5 | . 119 | .14 | . 077 |
| September. | 44 | 22 | 34.2 | . 090 | . 10 | . 058 |
| The yaar. | 4,050 | 22 | 235 | .617 | 8.38 | .399 |

Monthly Cischarge of North River near Burketown, Va.-.Continued

| Month | Discharge in second-faet |  |  |  | $\begin{gathered} \text { Runof } \mathrm{f} \\ \text { In } \\ \text { Inches } \end{gathered}$ | Discharte <br> in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1930-31 |  |  |  |  |  |  |
| October. | 50 | 25 | 38.1 | 0.100 | 0.12 | 0.065 |
| November. | 50 | 25 | 36.5 | . 096 | . 11 | . 062 |
| Dacamber. | 160 | 25 | 43.3 | . 114 | . 13 | . 074 |
| January. | 990 | 22 | 82.9 | . 218 | .25 | . 141 |
| Fabruary. | 72 | 35 | 47.9 | . 126 | . 13 | . 081 |
| March.... | 1,070 | 62 | 214 | . 562 | . 65 | .363 |
| April. | 1,230 | 207 | 602 | 1.58 | 1.76 | 1.02 |
| May.. | 1,230 | 186 | 559 | 1.47 | 1.70 | . 950 |
| June. | 873 | 160 | 348 | .913 | 1.02 | . 590 |
| July. | 1,390 | 120 | 361 | . 948 | 1.09 | . 613 |
| August. | 990 | 125 | 288 | . 756 | . 87 | . 489 |
| September. | 286 | 65 | 124 | . 325 | . 36 | . 210 |
| The yaar. | 1,390 | 25 | 230 | . 604 | 8.19 | . 390 |
| October. | 88 | 43 | 63.2 | . 166 | . 19 | . 107 |
| November. | 64 | 30 | 48.9 | . 128 | . 14 | . 083 |
| December. | 77 | 34 | 43.5 | $-114$ | . 13 | . 074 |
| January. | 118 | 43 | 76.5 $\mathbf{8} 70$ | . 201 | . 23 | - 130 |
| February. | 2,630 | 100 | 370 | . 971 | 1.05 | . 628 |
| March. | 3,900 | 888 | 774 392 | 2.03 | 2.34 | 1.31 |
| April. | +950 | 208 | 392 813 | 1.03 | 1.15 2.46 | .666 1.38 |
| May. | 3,140 | 198 85 | 813 114 | 2.13 | 2.46 .33 | 1.38 .193 |
| June | 177 347 | 85 57 | 110 | . 289 | . 33 | . 187 |
| July. ${ }^{\text {August }}$ | 69 | 32 | 50.1 | . 131 | . 15 | . 085 |
| Septamber | 242 | 33 | 50.7 | .133 | . 15 | . 086 |
| Tha yaar | 3,900 | 30 | 243 | . 638 | 8.65 | . 412 |
| October | 3,820 | 38 | 468 | 1.23 | 1.42 | .795 |
| Novembar | 3,220 | 310 | 796 | 2.09 | 2.33 | 1.35 |
| Decembar | 1,390 | 166 | 361 | . 948 | 1.09 | . 613 |
| Jamuery. | 2,460 | 258 | 575 | 1.51 | 1.74 | . 976 |
| February. | 910 | 384 | 617 | 1.62 | 1.69 | 1.05 |
| March... | 2,380 | 293 | 605 | 1.59 | 1.83 | 1.03 |
| April | 6,750 | 359 | 1,340 | 3.52 | 3.93 | 2.28 |
| May. | 990 | 264 | 511 | 1.34 | 1.54 | . 866 |
| June | 299 | 85 | 151 | .396 | . 44 | . 256 |
| July. | 2,290 | 59 | 375 | . 984 | 1.13 | . 636 |
| August. | 3,820 | 127 | 469 | 1.23 | 1.42 | . 795 |
| Saptamber | 264 | 88 | 149 | .391 | . 44 | . 253 |
| The year | 6,750 | 38 | 533 | 1.40 | 19.00 | . 905 |
| October....... | 123 | 56 | 76.3 | . 200 | . 23 | . 129 |
| November. | 93 | 48 | 60.1 | . 158 | . 18 | . 102 |
| December. | 70 | 44 | 52.6 | . 138 | . 16 | . 089 |
| January.. | 144 | 48 | 89.8 | . 236 | . 27 | . 153 |
| February. | 103 | 54 | 78.1 | . 205 | . 21 | . 132 |
| March. | 2,570 | 76 | 605 | 1.59 | 1.83 | 1.03 |
| April. | 740 | 195 | 352 | . 924 | 1.03 | . 597 |
| Mey.. | 242 | 103 | 169 | . 444 | . 51 | . 287 |
| June. | 508 | 79 | 158 | - 415 | . 46 | . 268 |
| July. | +252 | 54 | 78.7 | . 207 | . 24 | . 134 |
| August | 3,860 | 48 | 383 | 1.01 | 1.16 | . 653 |
| September | 2,920 | 73 | 446 | 1.17 | 1.30 | . 756 |
| The year. | 3,860 | 44 | 213 | . 559 | 7.58 | .361 |
| October... | 700 | 110 | 243 | . 638 | . 74 | . 412 |
| November. | 3,520 | 103 | 392 | 1.03 | 1.15 | . 666 |
| December. | 14,800 | 252 | 1,087 | 2.85 | 3.29 | 1.84 |
| Jenuary.. | 5,330 | 264 | 850 | 2.23 | 2.57 | 1.44 |
| February. | 1,970 | 473 | 860 | 2.26 | 2.35 | 1.46 |
| March... | 1,890 | 370 | 720 | 1.89 | 2.18 | 1.22 |
| April. | 2,490 | 334 | 1,134 | 2.98 | 3.32 | 1.93 |
| May. | 1,220 | 275 | 431 | 1.13 | 1.30 | . 730 |
| June. | 252 | 96 | 174 | . 457 | . 51 | . 295 |
| July.. | 3.700 | 139 | 232 | . 609 | . 70 | . 394 |
| August.. | 3,170 | 114 | 523 | 1.37 | 1.58 | ${ }^{.} 885$ |
| September. | 6,030 | 162 | 787 | 2.07 | 2.31 | 1.34 |
| The yerr.... | 14,800 | 96 | 617 | 1.62 | 22.00 | 1.05 |


| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million callons per cay per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1935-36 |  |  |  |  |  |  |
| October | 210 | 90 | 120 | 0.315 | 0.36 | 0.204 |
| November | 2,060 | 90 | 415 | 1.09 | 1.22 | . 704 |
| December. | 1,060 | 200 | 391 | 1.03 | 1.19 | . 666 |
| January. | 2,920 | 195 | 958 | 2.51 | 2.89 | 1.62 |
| February | 2,830 | 231 | 1,029 | 2.70 | 2.91 | 1.75 |
| March. | 13,600 | 474 | 1,932 | 5.07 | 5.84 | 3.28 |
| Apr11. | 1,970 | 275 | 728 | 1.91 | 2.13 | 1.23 |
| May. . | 316 | 152 | 227 | . 596 | . 69 | . 385 |
| June | 236 | 210 | 154 | . 404 | . 45 | . 261 |
| July. | 242 | 76 | 107 | . 281 | . 32 | . 182 |
| August. | 152 | 54 | 82.9 | . 218 | . 25 | . 141 |
| September | 281 | 44 | 72.6 | . 188 | . 21 | . 122 |
| The year. | 13,600 | 44 | 517 | 1.36 | 18.46 | . 878 |
| October | 2,570 | 51 | 236 | . 619 | . 71 | . 400 |
| November | 144 | 70 | 102 | . 268 | . 30 | . 173 |
| December | 660 | 70 | 399 | 1.05 | 1.21 | . 679 |
| January. | 4,030 | 660 | 1,337 | 3.51 | 4.05 | 2.27 |
| February. | 5,770 | 433 | 935 | 2.45 | 2.55 | 1.58 |
| March.... | 590 | 278 | 357 | . 937 | 1.08 | . 606 |
| April | 10,000 | 190 | 947 | 2.49 | 2.78 | 1.61 |
| May.. | 1,030 | 248 | 413 | 1.08 | 1.24 | . 698 |
| June | 1,240 | 218 | 463 | 1.22 | 1.36 | . 789 |
| July. | 392 | 91 | 159 | . 417 | . 48 | . 270 |
| August. | 1,440 | 70 | 253 | . 664 | . 77 | . 429 |
| September | 2,350 | 152 | 507 | 1.33 | 1.48 | . 860 |
| The year | 10,000 | 51 | 506 | 1.33 | 18.01 | .860 |
| October. | 5,240 | 152 | 1,149 | 3.02 | 3.48 | 1.95 |
| November | 1,060 | 264 | 1,1457 | 1.20 | 1.34 | . 776 |
| December. | 621 | 247 | 324 | . 850 | . 98 | . 549 |
| Jenuary.. | 900 | 190 | 307 | . 806 | . 93 | . 521 |
| February. | 364 | 221 | 279 | . 732 | . 76 | . 473 |
| March. | 340 | 195 | 268 | . 703 | . 81 | . 454 |
| April. | 304 | 236 | 274 | . 719 | . 80 | . 465 |
| May. | 980 | 103 | 289 | . 759 | . 88 | . 491 |
| June | 950 | 124 | 299 | . 785 | . 88 | . 507 |
| July.. | 2,770 | 106 | 522 | 1.37 | 1.58 | . 885 |
| August. | 2,770 | 143 | 603 | 1.58 | 1.82 | 1.02 |
| Septembe | 184 | 70 | 119 | . 312 | . 35 | . 202 |
| The year | 5,240 | 70 | 410 | 1.08 | 14.61 | . 698 |
| October | 91 | 39 | 71.5 | . 188 | . 22 | . 122 |
| November | 99 | 50 | 67.2 | . 176 | . 20 | . 114 |
| December | \% 550 | 70 | 136 | . 363 | . 42 | . 235 |
| January. | 3,230 | 100 | 352 | . 939 | 1.08 | . 607 |
| February | 5,370 | 383 | 1,256 | 3.35 | 3.49 | 2.17 |
| March. | 1,520 | 252 | 671 | 1.79 | 2.06 | 1.16 |
| April. | 1,490 | 168 | 418 | 1.11 | 1.24 | . 717 |
| May. | 1,220 | 174 | 332 | . 885 | 1.02 | . 572 |
| June | 362 | 98 | 147 | . 392 | . 44 | . 253 |
| July. | 6,300 | 91 | 613 | 1.63 | 1.88 | 1.05 |
| August. | 1,130 | 126 | 277 | . 739 | . 85 | . 478 |
| September | 119 | 70 | 89.5 | . 239 | .27 | .154 |
| The year. | 6,300 | 39 | 364 | . 971 | 13.17 | . 628 |
| 1939-40 |  |  |  |  |  |  |
| October..... | 395 | 70 | 114 | . 304 | . 35 | . 196 |
| November. | 98 | 70 | 83.0 | . 221 | . 25 | . 143 |
| December. . . | 112 | 70 66 | 184.0 | . 224 | . 26 | . 145 |
| February. | 694 | 76 | 330 | . 880 | . 95 | . 569 |
| March.... | 980 | 174 | 325 | . 867 | 1.00 | . 560 |
| April. | 2,240 | 272 | 646 | 1.72 | 1.92 | 1.11 |
| May... | 3,870 | 134 | + 458 | 1.22 | 1.41 | . 789 |
| June.. | 3,620 | 252 130 | 1,199 | 3.20 | 3.57 | 2.07 |
| July. | 366 | 130 | 213 | . 568 | . 65 | . 367 |
| August. | 4,2G0 | 120 | 751 | 2.00 | 2.31 | 1.29 |
| September..... | 1,790 | 152 | 349 | . 931 | 1.04 | . 602 |
| The year.. | 4,290 | 66 | 388 | 1.03 | 14.08 | . 666 |


| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1940-41 |  |  |  |  |  |  |
| October. | 176 | 100 | 126 | 0.336 | 0.39 | 0.217 |
| November. | 531 | 109 | 217 | . 579 | . 65 | . 374 |
| December. | 1,980 | 174 | 514 | 1.37 | 1.58 | . 885 |
| January. | 980 | 270 | 448 | 1.19 | 1.37 | .769 |
| Fobruary. . . . . . . . . . . . . . . . . . . | 359 | 165 | 238 | . 635 | . 66 | - 410 |
| March. . . | 555 | 141 | 323 | . 861 | . 99 | . 556 |
| April. | 2,580 | 191 | 563 | 1.50 | 1.67 | . 969 |
| May.. | 185 | 100 | 133 | . 355 | . 41 | . 229 |
| June. | 192 | 82 | 119 | . 317 | . 35 | . 205 |
| July. | 238 | 80 | 122 | . 325 | . 37 | .210 |
| August. | 80 | 46 | 64.3 | . 171 | . 20 | .111 |
| Soptember. | 68 | 44 | 54.6 | .146 | . 16 | . 094 |
| The year.................... | 2,580 | 44 | 244 | . 651 | 8.80 | . 421 |
| October. . . . . . . . . . . . . . . . . . . | 56 | 37 | 46.9 | . 125 | . 14 | . 081 |
| November. | 61 | 41 | 49.2 | . 131 | . 15 | . 085 |
| December. | 144 | 47 | 74.5 | . 199 | . 23 | . 129 |
| January. . . . . . . . . . . . . . . . . . . . | 138 | 88 | 101 | . 269 | . 31 | - 174 |
| February . . . . . . . . . . . . . . . . . . . | 443 | 99 | 201 | . 536 | . 56 | .346 |
| March. | 1,830 | 121 | 477 | 1.27 | 1.46 | . 821 |
| April. | 568 | 131 | 297 | . 792 | . 88 | . 512 |
| May... | 14,500 | 96 | 1,486 | 3.96 | 4.56 | 2.56 |
| June . . . . . . . . . . . . . . . . . . . . . . . | 1,100 | 162 | 443 | 1.18 | 1.32 | . 763 |
| July. | 157 | 71 | 110 | . 293 | . 34 | . 189 |
| August. | 2,180 | 67 | 561 | 1.50 | 1.73 | . 969 |
| September. . . . . . . . . . . . . . . . . . | 525 | 117 | 195 | . 520 | . 58 | . 336 |
| The year................... | 14,500 | 37 | 339 | . 904 | 12.26 | . 584 |
| October. | 20,100 | 148 | 1,500 | 4.00 | 4.61 | 2.59 |
| November. . . . . . . . . . . . . . . . . . . . | 523 | 226 | 338 | . 901 | 1.01 | . 582 |
| December | 4,380 | 183 | 522 | 1.39 | 1.60 | . 898 |
| January. . . . . . . . . . . . . . . . . . . | 1,670 | 290 | 506 | 1.35 | 1.55 | . 873 |
| Fobruary. | 1,850 | 283 | 745 | 1.99 | 2.07 | 1.29 |
| March. | 2,720 | 240 | 822 | 2.19 | 2.52 | 1.42 |
| April. | 2,510 | 233 | 573 | 1.53 | 1.71 | . 989 |
| May.. | 2,650 | 226 | 841 | 2.24 | 2.58 | 1.45 |
| June. | 1,280 | 283 | 513 | 1.37 | 1.53 | . 885 |
| July. | 1,920 | 190 | 512 | 1.37 | 1.58 | . 885 |
| Auguet. | 215 | 85 | 128 | . 341 | . 39 | . 220 |
| September. . . . . . . . . . . . . . . . . . | 90 | 65 | 77.6 | . 207 | . 23 | . 134 |
| The year.................... | 20,100 | 65 | 591 | 1.58 | 21.39 | 1.02 |

Yearly discharge of North River near Burketown, Va

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Diecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per equare mile |  |  |
| 1927. | 427 | 1.12 | 15.21 | 0.724 | 407 | 1.07 | 14.51 | 0.692 |
| 1928. | 472 | 1.24 | 16.87 | . 801 | 403 | 1.06 | 14.39 | . 685 |
| 1929. | 371 | . 974 | 13.20 | . 630 | 437 | 1.15 | 15.56 | . 743 |
| 1930. | 235 | . 617 | 8.38 | . 399 | 137 | . 360 | 4.91 | . 233 |
| 1931. | 230 | . 604 | 8.19 | . 390 | 233 | . 612 | 8.29 | . 396 |
| 1932. | 243 | . 638 | 8.65 | . 412 | 365 | . 958 | 13.03 | . 619 |
| 1933. | 533 | 1.40 | 19.00 | . 905 | 414 | 1.09 | 14.73 | . 704 |
| 1934. | 213 | . 559 | 7.58 | . 361 | 342 | . 898 | 12.19 | . 580 |
| 1935. | 617 | 1.62 | 22.00 | 1.05 | 550 | 1.44 | 19.59 | . 931 |
| 1936. | 517 | 1.36 | 18.46 | . 879 | 502 | 1.32 | 17.91 | . 853 |
| 1937. | 506 | 1.33 | 18.01 | . 860 | 606 | 1.59 | 21.59 | 1.03 |
| 1938. | 410 | 1.08 | 14.61 | . 698 | 270 | . 709 | 9.65 | . 458 |
| 1939. | 364 | . 971 | 13.17 | . 628 | 364 | . 971 | 13.19 | . 628 |
| 1940. | 388 | 1.03 | 14.08 | . 666 | 436 | 1.16 | 15.84 | . 750 |
| 1941. | 244 | . 651 | 8.80 | . 421 | 186 | . 496 | 6.70 | . 321 |
| 1942. | 339 | . 904 | 12.26 | . 584 | 524 | 1.40 | 18.96 | .905 |
| 1943. | 591 | 1.58 | 21.39 | 1.02 | - | - | - | - |
| H1ghest | 617 | 1.62 | 22.00 | 1.05 | 606 | 1.59 | 21.59 | 1.03 |
| Average | 394 | 1.04 | 14.11 | . 672 | 386 | 1.02 | 13.82 | . 659 |
| Lowest. | 213 | . 559 | 7.58 | . 361 | 137 | . 360 | 4.91 | . 233 |

North River at Port Republic, Va.
Location. - Staff gage, lat. $38^{\circ} 18^{\prime} 06^{\prime \prime}$, long. $78^{\circ} 48^{\prime} 42^{\prime \prime}$, on highway bridge at Port Republic, Rockingham County, 500 feet upstream from South River
Drainage area.- 804 square miles.
Records avallable.- August 1895 to March 1899.
Exfremes.-Max1mum discharge observed, 23,900 second-feet Sept. 30, 1896 (gage height, 18.0 feet), from rating curve extended above 3,420 second-feet; minimum, i'77 secondfeet Sept. 24-28, 1896 (gage height, 1.65 feet).
Remarks:- Low flow regulated by power plant about 200 feet above the bridge.
Monthly discharge of North River at Port Republic, Va.

| Month | Discharge in second-feet |  |  |  | Runoff in <br> inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | Per square mile |  |  |
| 1895 |  |  |  |  |  |  |
| August 6-31. | $\begin{array}{r} 445 \\ 2640 \end{array}$ | $292$ | 319 346 | $0.397$ | $0.39$ | $0.257$ |
| September. | $2,640$ |  |  |  |  |  |
|  |  |  |  |  |  |  |
| October. | 245 | 202 | 219 | . 272 | . 31 | . 176 |
| November | 275 | 202 | 239 | . 297 | . 33 | . 192 |
| December | 500 | 215 | 251 | . 312 | . 36 | . 202 |
| January. | 5,500 | 275 | 799 | . 994 | 1.15 | . 642 |
| February | 4,800 | 500 | 1,488 | 1.85 | 1.93 | 1.20 |
| March. | 7,130 | 445 | 1,653 | 2.05 | 2.37 | 1.32 |
| April 1-15, 28-30 | 4,340 | 350 | 1,594 | 1.98 | 1.33 | 1.28 |
| May. | 4,960 | 395 | 824 | 1.02 | 1.18 | . 659 |
| June | 2,940 | 350 | 642 | . 799 | . 89 | . 516 |
| July. | 7,600 | 472 | 1,085 | 1.35 | 1.56 | . 873 |
| August. | 1,550 | 310 | 458 | . 570 | . 66 | . 368 |
| September | 23,900 | 177 | 1,231 | 1.53 | 1.71 | . 989 |
| October. | 7,600 | 420 | 945 | 1.17 | 1.35 |  |
| November | 5,270 | 420 | 1,088 | 1.35 | 1.51 | . 873 |
| December. | 2,790 | 420 | 699 | . 869 | 1.00 | . 562 |
| January | 420 | 372 | 388 | . 483 | . 56 | . 312 |
| February | 11,200 | 420 | 3,138 | 3.90 | 4.06 | 2.52 |
| March. | 2,020 | 625 | 1,250 | 1.55 | 1.79 | 1.00 |
| April. | 865 | 445 | 642 | . 799 | . 89 | . 516 |
| May | 13,800 | 445 | 2,212 | 2.75 | 3.17 | 1.78 |
| June | 865 | 420 | 489 | . 608 | . 68 | . 393 |
| July. | 1,420 | 330 | 463 | . 576 | . 66 | . 372 |
| August. | 330 | 275 | 292 | . 363 | . 42 | . 235 |
| September | 275 | 215 | 234 | . 291 | . 32 | . 188 |
| The jear. | 13,800 | 215 | 973 | 1.21 | 16.41 | . 782 |
| October. | 310 | 215 | 250 |  |  |  |
| November. | 555 | 215 | 256 | . 318 | . 35 | . 206 |
| December. | 590 | 230 | 319 | . 397 | . 46 | . 257 |
| January. | 700 | 275 | 491 | . 611 | . 70 | . 395 |
| February. | 625 | 310 | 414 | . 515 | . 54 | . 333 |
| March. | 2,480 | 310 | 581 | . 723 | . 83 | . 467 |
| April | 4,030 | 555 | 1,110 | 1.38 | 1.54 | . 892 |
| May. | 7,210 | 445 | 1,430 | 1.78 | 2.05 | 1.15 |
| June | 2,480 | 275 | 585 | . 728 | . 81 | . 471 |
| July. | 3,720 | 275 | 822 | 1.02 | 1.18 | . 659 |
| August. | 9,920 | 555 | 3,030 | 3.77 | 4.35 | 2.44 |
| September | 662 | 445 | -520 | . 647 | . 72 | 2.418 |
| The year | 9,920 | 215 | 823 | 1.02 | 13.89 | .659 |
| October. | 11,500 | 275 | 1,814 | 2.26 | 2.61 | 1.46 |
| November | 865 | 330 | - 507 | .631 | . 70 | . 408 |
| December | 6,820 | 395 | 1,089 | 1.35 | 1.56 | . 873 |
| January. | 6,360 | 445 | 1,126 | 1. 40 | 1.61 | . 905 |
| February. | 9,920 | 395 | 2,132 | 2.65 | 2.76 | 1.71 |
| March........ | 17,700 | 865 | 3,452 | 4.29 | 4.95 | 2.77 |

## South Fork Shenandoah River near Lynnwood, Va

Location.- Water-stage recorder, lat $38^{\circ} 19^{\prime}$, long. $78^{\circ} 46^{\prime}$, $1 \frac{1}{2}$ miles northeast of Lynnwood, Rockingham County, and 3 miles downstream from confluence of North and South Rivers. Datum of gace is $1,013.13$ feet above mean sea level, datum of 1928 Drainage area.- 1,076 square miles
Records avaTIable.- September 1930 to September 1943
Extremes.- Maximum discharge, 80,000 second-feet Oct. 15, 1942 (gage helght, 27.2 feet), Trom rating curve extended above 20,000 second-feet by logaritimic plotting on basis of computation of flow over dam at eage helght 27.2 reet; minimum, 32 second-feet Sept. 20, 1932 (gage height, 1.63 feet); minimum daily, 93 second-feet Sept. 2I, 29, 1930.
Remarks.- Low flow regulated by mill above station.
Monthly discharge of South Fork Shenandoah River near Lynnwood, Va.

| Month | Discharge in second-feet |  |  |  | Runoff in inchee | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| September $\begin{array}{r}1930 \\ \text { 15-30.. }\end{array}$ | 148 | 93 | 115 | 0.107 | 0.06 | 0.069 |
|  |  |  |  |  | 13 | 73 |
| November | 223 | 114 | 150 | .139 | . 16 | . 090 |
| December. | 333 | 129 | 172 | . 160 | . 18 | . 103 |
| January. | 1,500 | 166 | 278 | . 258 | . 30 | . 167 |
| February. | 264 | 133 | 203 | . 189 | . 20 | . 122 |
| March. | 2,160 | 228 | 497 | . 462 | . 53 | . 299 |
| April. | 2,760 | 502 | 1,310 | 1.22 | 1.36 | . 789 |
| May... | 2,730 | 414 | 1,090 | 1.01 | 1.16 | . 653 |
| June. | 1,850 | 361 | 713 | . 663 | -74 | . 429 |
| July... | 2,640 4,700 | 317 290 | 696 784 | .647 .729 | .75 .84 | . 418 |
| August... | 4.700 724 | $\begin{array}{r}290 \\ 243 \\ \hline\end{array}$ | $\begin{array}{r}784 \\ 359 \\ \hline\end{array}$ | $\begin{array}{r}.729 \\ .334 \\ \hline\end{array}$ | $\begin{array}{r}.85 \\ .37 \\ \hline\end{array}$ | . 216 |
| The year. | 4,700 | 100 | 532 | . 494 | 6.72 | .319 |
| October. . . . . . . . | 302 | 155 | 199 | . 185 | . 21 | . 120 |
| November. | 194 | 136 | 168 | . 156 | . 17 | . 101 |
| December. | 200 | 153 | 180 | . 167 | . 19 | . 108 |
| Jamuary | 1,060 | 242 | 485 | . 451 | . 52 | . 291 |
| February. | 5,340 | 384 | 882 | . 820 | . 88 | . 530 |
| March. | 6,310 | 363 | 1,710 | 1.59 | 1.83 | 1.03 |
| April | 2,250 | 577 | 1,010 | . 939 | 1.05 | . 607 |
| May | 5,070 | 512 | 1,500 | 1.39 | 1.60 | . 898 |
| June | 489 | 296 | 382 | . 355 | . 40 | . 229 |
| July. | 800 | 206 | 324 | . 301 | . 35 | . 195 |
| August. | 240 | 120 | 166 | . 154 | . 18 | . 100 |
| September | 627 | 116 | 186 | .173 | . 19 | . 112 |
| The year. | 6,310 | 116 | 600 | . 558 | 7.57 | . 361 |
| October. | 10,700 | 116 | 1,090 | 1.01 | 1.16 | . 653 |
| November | 7,350 | 699 | 1,820 | 1.69 | 1.89 | 1.09 |
| December | 4,180 | 504 | 1,030 | . 957 | 1.10 | . 619 |
| January | 6,030 | 693 | 1,450 | 1.35 | 1.56 | . 873 |
| February | 2,540 | 1,080 | 1,610 | 1.50 | 1.56 | . 969 |
| March.. | 5,340 | 782 | 1,470 | 1.37 | 1.58 | . 885 |
| April | 11,800 | 930 | 3,130 | 2.91 | 3.25 | 1.88 |
| May . | 2,500 | 777 | 1,310 | 1.22 | 1.41 | . 789 |
| June | 1,080 | 373 336 | , 569 | . 529 | . 59 | . 342 |
| July. | 5,120 | 356 406 | 1,810 | .959 .802 | 1.08 .92 | . 518 |
| September | 652 | 341 | 430 | . 400 | . 45 | .259 |
| The year | 11,800 | 116 | 1,310 | 1.22 | 16.55 | . 789 |
| October. | 334 | 252 | 289 | . 268 | .31 | . 174 |
| November | 304 | 218 | 250 | . 232 | . 26 | . 150 |
| December. | 360 | 196 | 238 | . 221 | - 25 | .143 |
| January. | - 293 | 206 | 251 | .233 | - 27 | . 151 |
| February. | , 314 | 188 | 232 | . 216 | . 22 | -140 |
| March. | 3,860 | 250 | 1,377 | 1.28 | 1.48 .98 | . .827 |
| Apr11. | 1,840 | 566 | 940 | . 874 | . 98 | . 565 |
| May. . . . . | 617 | 428 | 490 | .455 .472 | . 52 | . 294 |
| June. | 2,050 | 276 | 508 | . 472 | . 34 | . 305 |
| Augy Jut. | 3,020 | 219 | 708 | . 658 | . 76 | . 425 |
| September. | 6,040 | 286 | 842 | . 783 | . 87 | . 506 |
| The year... | 6,040 | 196 | 538 | . 500 | 6.79 | .323 |

Monthly discharge of South Fork Shenandoah River near Lynnwood, Va. - Continued

| Month | Discharge in second-feet |  |  |  | Runoff in Inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per <br> square <br> mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 1,520 | 304 | 570 | 0.530 | 0.61 | 0.343 |
| November. | 6,690 | 306 | 726 | . 675 | . 75 | . 436 |
| December. | 31,200 | 695 | 2,667 | 2.48 | 2.86 | 1.60 |
| January | 16,000 | 650 | 2,128 | 1.98 | 2.28 | 1.28 |
| February | 3,780 | 1,230 | 1,989 | 1.85 | 1.93 | 1.20 |
| March. | 5,710 | ,992 | 1,919 | 1.78 | 2.05 | 1.15 |
| April | 5,940 | 1,080 | 2,968 | 2.76 | 3.08 | 1.78 |
| May. | 1,880 | 696 | 984 | . 914 | 1.05 | . 591 |
| June | 1,140 | 437 | 590 | . 548 | . 61 | . 354 |
| July | 1,310 | 428 | 660 | . 613 | . 71 | . 396 |
| August. | 6,680 | 406 | 2,138 | 1.06 | 1.22 | . 685 |
| September | 19,700 | 484 | 2,136 | 1.99 | 2.22 | 1.29 |
| The jear. | 31,200 | 304 | 1,535 | 1.43 | 19.37 | . 924 |
| October. | 750 | 370 | 447 | . 415 | . 48 | . 268 |
| November | 2,790 | 390 | 979 | . 910 | 1.02 | . 588 |
| December | 3,550 | 683 | 1,249 | 1.16 | 1.34 | . 750 |
| Jamuary | 7,940 | 700 | 2,806 | 2.61 | 3.01 | 1.69 |
| February | 8,160 | 850 | 2,928 | 2.72 | 2.93 | 1.76 |
| March. | 52,400 | 1,270 | 5,784 | 5.38 | 6.20 | 3.48 |
| April | 4,480 | 829 | 1,978 | 1.84 | 2.05 | 1.19 |
| May | 1,300 | 474 | 702 | . 652 | . 75 | . 421 |
| June | 914 | 352 | 471 | . 438 | . 4.8 | . 283 |
| July | 1,750 | 312 | 422 | . 392 | . 45 | . 253 |
| August |  | 268 | 348 | . 323 | .37 | . 209 |
| September | 3,000 |  |  |  |  |  |
| The jear | 52,400 | 238 | 1,543 | 1.43 | 19.53 | . 924 |
| October. | 8,360 | 286 | 853 | . 793 | . 91 | . 513 |
| November. | 422 | 298 | 348 | . 323 | . 36 | . 209 |
| December. | 1,500 | 300 | 963 | . 895 | 1.03 | . 578 |
| Januery | 13,000 | 1,550 | 3,516 | 3.27 | 3.77 | 2.11 |
| February | 14,400 | 1,390 | 2,523 | 2.34 | 2.44 | 1.51 |
| March. | 1,660 | 783 | 1,062 | . 987 | 1.14 | . 638 |
| Apr11 | 30,800 | 660 | 2,735 | 2.54 | 2.83 | 1.64 |
| May. | 2,440 | 674 | 1,111 | 1.03 | 1.19 | . 666 |
| June | 1,950 | 562 | 884 | . 822 | . 92 | . 531 |
| July.. | 1,440 | 444 | 600 | . 558 | . 64 | . 361 |
| Angist. | 3,760 | 364 | 800 | . 743 | . 86 | . 480 |
| September. | 3,700 | 478 | 1,071 | . 995 | 1.11 | . 643 |
| The year. | 30,800 | 286 | 1,364 | 1.27 | 17.20 | . 821 |
| October.. | 15,100 | 458 | 3,023 | 2.81 | 3.24 | 1.82 |
| November. | 4,390 | 840 | 1,524 | 1.42 | 1.58 | . 918 |
| December. | 1,600 | 672 | 887 | . 324 | . 95 | . 533 |
| January. | 2,080 | 588 | 831 | . 772 | . 89 | . 499 |
| February. | 971 | 650 | 727 | . 676 | . 70 | . 437 |
| March. | 1,100 | 593 | 755 | . 702 | . 81 | . 454 |
| April | 934 | 567 | 694 | . 645 | . 72 | . 417 |
| May. | 1,300 | 406 | 607 | . 564 | . 65 | . 365 |
| June | 1,560 | 348 | 642 | . 597 | . 67 | . 386 |
| July. | 4,020 | 320 | . 965 | . 897 | 1.03 | . 580 |
| August. | 5,210 | 369 | 1,079 | 1.00 | 1.15 | . 646 |
| September. | 943 | 275 | 353 | . 328 | . 37 | .212 |
| The year. | 15,100 | 275 | 1,012 | . 941 | 12.76 | . 608 |
| October..... | 278 | 234 | 250 | . 232 | . 27 |  |
| November. | 540 | 229 | 285 | . 265 | . 30 | . 171 |
| Decomber. | 2,060 | 278 | 533 | . 495 | . 57 | . 320 |
| January.. | 6,930 | 384 | 824 | . 766 | . 88 | . 495 |
| February | 11, 500 | 1,020 | 2,708 | 2.52 | 2.62 | 1.63 |
| March... | 3,580 | -766 | 1,639 | 1.52 | 1.75 | . 982 |
| April. | 2,800 | 552 | -998 | - .928 | 1.04 | . 600 |
| May. | 1,620 | 500 | 694 | . 645 | . 74 | . 417 |
| June | 590 | 321 | 428 | . 3 ¢ 8 | . 44 | . 257 |
| July. | 7,720 | 296 | 886 | . 823 | . 95 | . 532 |
| August.. | 1,570 | 324 | 579 | . 538 | . 62 | . 348 |
| September. | 1,354 | 218 | 265 | . 246 | . 27 | . 259 |
| The year. | 11,500 | 218 | 829 | . 770 | 10.45 | . 498 |


| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  | 0.248 | 0.29 | 0.160 |
| October.. | 624 322 | 220 | 274 | 0.248 .255 | -. 28 | . 165 |
| December. | 296 | 214 | 254 | . 236 | . 27 | . 153 |
| January. | 1,100 | 210 | 357 | . 332 | . 38 | . 215 |
| February. | 2,650 | 250 | 1,043 | . 969 | 1.04 | . 626 |
| March... | 1,600 | 464 | 743 | . 691 | . 80 | . 447 |
| Apr11 | 3,900 | 611 | 1,259 | 1.17 | 1.31 | . 756 |
| May.. | 5.680 | 391 | , 902 | . 838 | . 97 | .542 |
| June. | 4,360 | 632 | 2,188 | 2.03 | 2.27 | . 31 |
| July... | 1,310 24,900 | 452 | 2,835 2,85 | 2.590 | 3.68 | 1.74 |
| August... | 24,900 4,000 | 540 | $\begin{array}{r}2,805 \\ \hline 987 \\ \hline\end{array}$ | 2.697 | 1.02 | . 593 |
| The year. | 24,900 | 201 | 981 | . 912 | 12.41 | . 589 |
| October............ | 630 | 358 | 441 | . 410 | . 47 | . 265 |
| November | 2,260 | 364 | 714 | . 664 | . 74 | . 429 |
| December | 5,120 | 504 | 1,306 | 1.21 | 1.40 1.28 | . 7817 |
| January. . | 2,310 | 771 500 | 1,193 | 1.11 | 1.28 .64 | . 398 |
| February. | 1,800 | 458 | 868 | . .907 | . 93 | . 522 |
| March. | 5,980 | 618 | 1,431 | 1.33 | 1.48 | . 860 |
| May.. | 600 | 319 | 440 | . 409 | . 47 | .264 |
| June | 628 | 290 | 377 | . 350 | . 39 | . 226 |
| July... | 308 | 229 | 256 | . 238 | . 27 | . 154 |
| August. | 250 | 180 | 214 | . 199 | . 22 | . 129 |
| The year | 5,980 | 180 | 698 | . $649^{\prime \prime}$ | 8.79 | .419 |
| October........... | 230 | 174 | 192 | . 178 | . 21 | . 115 |
| November. | 226 | 174 | 197 | . 183 | . 20 | . 118 |
| December | 478 | 177 | 239 | . 222 | . 26 | .143 |
| January. | 351 | 240 | 273 | . 254 | . 29 | -164 |
| February | 892 | 282 | 460 | . 428 | . 45 | . 277 |
| March. | 3,270 | 299 | 887 | . 824 | . 95 | . 533 |
| April. | 1,030 | 304 | 574 2,836 | 2.543 | 3.04 | 1.71 |
| May. . | 22,400 2,630 | 478 | 1,060 | -. 985 | 1.10 | . 637 |
| June. | , 596 | 282 | 1,392 | . 364 | . 42 | . 235 |
| August | 4,720 | 263 | 1,307 | 1.21 | 1.40 | . 782 |
| Soptember | 1,480 | 310 | 510 | . 474 | . 53 | . 306 |
| The year. | 22,400 | 174 | 748 | .695 | 9.44 | . 449 |
| October............ | 42,700 | 371 | 4,172 | 3.98 | 4.47 | 2.51 |
| November | 1,360 | 644 | 917 | . 852 | . 95 | . 551 |
| December. | 10,700 | 517 | 1,380 | 1.28 | 1.48 | . 327 |
| January. | 3,970 | 860 | 1,380 | 1.28 | 1.48 | . 827 |
| February | 4,500 | 852 | 1,968 | 1.83 | 1.91 | 1.18 |
| March... | 5,890 | 724 | 2,009 | 1.87 | 2.16 | 1.21 |
| April. | 7,000 | 760 | 1,625 | 1.51 | 1.68 | . 976 |
| May. | 4,610 | 708 | 1,771 | 1.65 | 1.90 | 1.073 |
| June | 3,130 | 660 | 1,219 | 1.13 | 1.26 1.14 | . 641 |
| July.... | 4,000 | 540 |  | $.992$ |  | $.641$ |
| August. | 517 310 | 299 240 | 379 <br> 267 | .352 .248 | .41 .28 | $\begin{array}{r}.228 \\ .160 \\ \hline\end{array}$ |
| The year. | 42,700 | 240 | 1,515 | 1.41 | 19.12 | . 911 |

Yearly discharge of South Fork Shenandoah River near Lynnwood, Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | DIscharge in second-feet |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per aquare mile |  |  |
| 1931. | 532 | 0.494 | 6.72 | 0.319 | 541 | 0.503 | 6.92 | 0.325 |
| 1932. | 600 | . 558 | 7.57 | . 361 | 882 | . 820 | 11.15 | . 530 |
| 1933 | 1,310 | 1.22 | 16.55 | . 789 | 1,047 | . 973 | 13.22 | . 629 |
| 1934 | 538 | . 500 | 6.79 | .323 | 807 | . 750 | 10.19 | . 485 |
| 1935 | 1,535 | 1.43 | 19.37 | . 924 | 1,425 | 1.32 | 17.99 | . 853 |
| 1936. | 1,543 | 1.43 | 19.53 | . 924 | 1,502 | 1.40 | 18.99 | . 905 |
| 1937 | 1,364 | 1.27 | 17.20 | . 821 | 1,638 | 1.52 | 20.67 | . 982 |
| 1938 | 1,012 | . 941 | 12.76 | . 608 | 644 | . 599 | 8.13 | . 387 |
| 1939. | 829 | . 770 | 10.45 | . 498 | 806 | . 749 | 10.15 | . 484 |
| 1940. | 981 | . 912 | 12.41 | . 589 | 1,121 | 1.04 | 14.18 | . 672 |
| 1941. | 698 | . 649 | 8.79 | . 419 | 543 | . 505 | 6.85 | . 326 |
| 1942. | 748 | . 695 | 9.44 | . 449 | 1,242 | 1.15 | 15.67 | . 743 |
| 1943. | 1,515 | 1.41 | 19.12 | . 911 | - | - | - |  |
| Hi chest | 1,543 | 1.43 | 19.53 | .924 | 1,638 | 1.52 | 20.67 | . 982 |
| Average. | 1,016 | . 944 | 12.82 | . 610 | 1,016 | . 944 | 12.83 | . 610 |
| Lowest . | 532 | . 494 | 6.72 | . 319 | 541 | . 503 | 6.92 | . 325 |

South Fork Shenandoah River near Luray, Va.
Location. - Water-atage recorder, lat. $38^{\circ} 391$, long. $78^{\circ}{ }^{\circ} 2^{\prime \prime}$, at highway bridge 2 miles upstream from Mill Creek and 4 miles west of Luray, Page County. Datum of gage is 721.5 feet above mean sea level, unadjusted. Prior to october 1938, chain gage at same site and datum.
Drainage area.- 1,377 square miles.
Reccras avallable.-Apr11 1925 to September 1930, October 1938 to September 1943.
Extremes. - Maximum discharge, 100,000 second-feet Oct. 16, 1942 (gage helght, 25.7
feet); minimum, 70 second-feet Sept. 27, 1941 (rage height, 2.15 feet); minimum dally, 135 aecond-feet Sept. 16, 1925, Sept. 28, 1930.

Flod of Mar 18, 1936 reached a stage of 23.6 feet, from floodmarks (discharge, 81, 600 second-feet).
Remarlis.- Flow regulated by power plant at Newport, 10 miles upstream.
Monthly discharge of South Fork Shenandoah River near Luray. Va.


Monthly discharge of South Fork Shenandoeh River neer Luray, Ve.--Continued

| Month | Discharge in socond-foet |  |  |  | Runoffinchesinch | Discharge in million gellons per dey per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | Per square mile |  |  |
| 1926-27 |  |  |  |  |  |  |
| October. | 865 | 292 | 524 | 0.381 | 0.44 | 0.246 |
| November. | 12,400 | 442 | 2,010 | 1.46 | 1.63 | . 944 |
| December. | 10,700 | 780 | 2,170 | 1.58 | 1.82 | 1.02 |
| Januery. | 2,220 | 740 | 1,120 | . 813 | . 94 | . 525 |
| February. | 8,280 | 910 | 2,380 | 1.73 | 1.80 | 1.12 |
| Merch. ... | 2,650 | 780 | 1,280 | . 930 | 1.07 | . 601 |
| Apr11 | 9,410 | 820 | 3,150 | 2.29 | 2.56 | 1.48 |
| May. | 3,490 | 665 | 1,360 | . 988 | 1.14 | . 639 |
| June | 780 | 360 | 625 | . 454 | . 51 | . 293 |
| July | 1,180 | 296 | 552 | - 401 | . 46 | . 259 |
| August. | 2,140 | 360 | 632 370 | . 459 | .53 .30 | .297 .174 |
| September | 562 | 247 | 370 | . 269 | . 30 | . 174 |
| The yeer. | 12,400 | 247 | 1,340 | . 973 | 13.20 | . 629 |
| October. . . . . . | 8,280 | 264 | 1,840 | 1.34 | 1.54 | . 866 |
| November. | 6,420 | 665 | 1,310 | . 951 | 1.06 | . 615 |
| December. | 7,420 | 865 | 2,100 | 1.53 | 1.76 | . 989 |
| Januery. | 1,580 | 665 | 999 | . 725 | . 84 | . 469 |
| Februery. | 2,920 | 820 | 1,460 | 1.06 | 1.14 | . 685 |
| Merch. | 2,020 | 702 | 1,090 | . 792 | .91 | . 512 |
| April | 10,500 | 1,040 | 2,250 | 1.63 | 1.82 | 1.05 |
| Mey. | 12,100 | 865 | 2,200 | 1.60 | 1.84 | 1.03 |
| June | 1,480 | 595 | 914 | . 664 | . 74 | . 429 |
| July | 2,650 | 335 | 819 | . 595 | . 69 | . 385 |
| August | 10,500 | 360 | 2,230 | 1.62 | 1.87 | 1.05 |
| September. | 7,630 | 820 | 2,170 | 1.58 | 1.76 | 1.02 |
| The year | 12,100 | 264 | 1,620 | 1.18 | 15.97 | .763 |
| October....... | 1,280 | 470 | 713 | . 518 | . 60 | . 335 |
| November | 740 | 184 | 463 | . 336 | .37 | . 217 |
| December | 1,090 | 214 | 598 | . 434 | . 50 | . 281 |
| Januery | 2,520 | 360 | 1,120 | . 813 | .94 | - 525 |
| February | 4,740 | 665 | 1,220 | . 886 | . 92 | . 573 |
| Merch. | 10,300 | 1,180 | 3,030 | 2.20 | 2.54 | 1.42 |
| April | 17,800 | 780 | 2,670 | 1.94 | 2.16 | 1.25 |
| Mey.. | 11,400 | 1,040 | 2,380 | 1.73 | 1.99 | 1.12 |
| June. | 2,140 | 780 360 | 1,260 915 | . 915 | 1.02 .77 | . 591 |
| July... | 2,390 | 296 | 435 | . 316 | .36 | +204 |
| August... September | 665 740 | 273 | 374 | . .272 | . 30 | $\begin{array}{r}.176 \\ \hline\end{array}$ |
| The jear | 17,800 | 184 | 1,260 | . 915 | 12.47 | . 591 |
| October. . . . . | 12,600 | 360 | 1,610 | 1.17 | 1.35 | . 756 |
| November. | 7,630 | 665 | 1,390 | 1.01 | 1.13 | . 653 |
| Decembar. | 2,650 | 665 | 1,080 | . 784 | . 90 | . 507 |
| Januery | 1,800 | 595 | 940 | . 683 | . 79 | . 441 |
| Fobruer | 4,740 | 600 | 1,370 | . 995 | 1.04 | . 643 |
| March. | 4,570 | 630 | 1,380 | 1.00 | 1.15 | . 646 |
| April. | 1,140 | 264 | 710 | . 516 | - 58 | . 333 |
| Mey. | 865 | 226 | 499 | . 362 | . 42 | . 234 |
| June | 1,090 | 222 | 438 | . 318 | . 25 | . 1306 |
| July. | 472 | 151 | 258 | . 187 | . 22 | . 121 |
| August.... | 415 | 135 | 257 | . 187 | . 21 | .121 |
| The year. | 12,600 | 135 | 849 | . 617 | 8.39 | . 399 |
| November.... | 814 | 307 | 438 | . 318 | . 35 | . 206 |
| December. | 3,250 | 413 | 884 | . 642 | . 74 | . 415 |
| Januery. | 8,600 | 544 | 992 | . 720 | . 83 | . 465 |
| Februery | 14,300 | 1,460 | 3,891 | 2.83 | 2.95 | 1.83 |
| March... | 4,610 | 1,060 | 2,294 | 1.67 | 1.92 | 1.08 |
| April | 3,540 | 730 | 1,351 | . 981 | 1.09 | . 634 |
| May.. | 2,120 | 628 | 883 | . 641 | . 74 | . 414 |
| June. | 1,110 | 400 | 555 | . 403 | . 45 | . 260 |
| July. | 7,820 | 338 | 1,040 | . 755 | . 87 | - 488 |
| August. | 2,290 | 419 302 | 826 381 | . 600 | .69 .31 | .388 .179 |

Monthly discharge of South Fork Shenandoah River near Luray, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Punoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | D1 scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1nımum | Mean | Per square mile |  |  |
| 1939-40 |  |  |  |  |  |  |
| October. | 708 | 282 | 361 | 0.262 | 0.30 | 0.169 |
| November. | 478 | 328 | 397 | . 288 | . 32 | . 186 |
| December. | 472 | 303 | 372 | . 270 | . 31 | 175 |
| January. | 1,390 | 264 | 483 | . 351 | . 40 | . 227 |
| February | 4,050 | 340 | 1,392 | 1.01 | 1.09 | . 653 |
| March. | 2,020 | 630 | 1,012 | . 735 | . 85 | . 475 |
| April | 4,360 | 785 | 1,663 | 1.21 | 1.35 | . 782 |
| May. | 3,380 | 583 | 1,110 | . 806 | . 93 | . 521 |
| June | 7,430 | 872 | 2,686 | 1.95 | 2.18 | 1.26 |
| July. | 1,270 | 602 | 808 | . 587 | . 68 | . 379 |
| August. | 32,400 | 554 | 3,637 | 2.64 | 3.05 | 1.71 |
| September | 4,220 | 616 | 1,230 | . 803 | 1.00 | . 577 |
| The year. | 32,400 | 264 | 1,259 | . 914 | 12.46 | . 591 |
| October.. | 794 | 450 | 553 | . 402 | . 46 | . 260 |
| November. | 2,700 | 456 | 975 | . 708 | . 79 | . 458 |
| December. | 5,880 | 674 | 1,633 | 1.19 | 1.37 | . 769 |
| January. | 3,200 | 1,070 | 1,641 | 1.19 | 1.37 | . 769 |
| February. | 1,350 | 636 | 890 | . 545 | . 67 | . 418 |
| March. | 2,140 | 614 | 1,150 | . 835 | . 96 | . 540 |
| April. | 7,640 | 794 | 1,810 | 1.31 | 1.46 | . 847 |
| May. . | 812 | 420 | 575 | . 418 | . 48 | . 270 |
| June. | 814 | 328 | 490 | . 355 | . 40 | . 230 |
| July. | 952 | 368 | 616 | . 447 | . 52 | . 289 |
| August... | 482 | 311 | 378 | . 275 | . 32 | . 178 |
| September | 520 | 237 | 322 | . 234 | . 26 | .151 |
| The year | 7,640 | 237 | 920 | . 668 | 9.06 | . 432 |
| October.. | 441 | 234 | 271 | . 197 | . 23 |  |
| November. | 312 | 151 | 254 | . 184 | . 21 | . 119 |
| December. | 610 | 248 | 365 | . 265 | . 31 | .171 |
| Januery. | 458 | 310 | 371 | . 269 | . 31 | .174 |
| February. | 1,050 | 370 | 579 | . 420 | . 44 | . 271 |
| March. | 4,530 | 424 | 1,176 | . 854 | . 98 | . 552 |
| April | 1,520 | 451 | , 798 | . 580 | . 65 | . 375 |
| May. | 26,600 | 339 | 3,410 | 2.48 | 2.56 | 2.60 |
| June | 2,540 | 661 | 1,256 | . 912 | 1.02 | . 589 |
| July. | 792 | 370 | - 513 | . 373 | . 43 | .241 |
| August. | 4,080 | 332 | 1,670 | 1.21 | 1.40 | . 782 |
| September | 2,420 | 433 | 728 | . 528 | . 59 | . 342 |
| The year | 26,600 | 151 | 954 | . 693 | 9.43 | . 448 |
| October. | 73,300 | 507 | 6,332 | 4.60 |  |  |
| November. | 1,790 | 920 | 1,254 | . 911 | 1.02 | . 589 |
| December. | 11,600 | 700 | 1,607 | 1.17 | 1.35 | . 756 |
| Jenuary.. | 6,150 | 1,290 | 2,001 | 1. 45 | 1. 67 | . 937 |
| February. | 5,640 | 1,170 | 2,612 | 1.90 | 1.98 | 1.23 |
| March. | 7,600 | 1,020 | 2,628 | 1.91 | 2.20 | 1.23 |
| April | 7,550 | . 960 | 2,112 | 1.53 | 1.71 | . 989 |
| May. | 5,990 | 1,010 | 2,312 | 1.68 | 1.94 | 1.09 |
| June | 3,340 | 796 | 1,456 | 1.06 | 1.18 | . 685 |
| July.. | 4,000 | 600 | 1,153 | . 837 | . 96 | . 541 |
| August.... | 730 | 423 | 521 | . 378 | . 44 | . 244 |
| September. | 450 | 287 | 386 | . 280 | . 31 | . 181 |
| The year... | 73,300 | 287 | 2,034 | 1.48 | 20.06 | . 957 |


| Yeer | Year ending Sept. 30 |  |  |  | Calender yeer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runofe } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Di.acherge in million gallons per day per square mile | Discherge in second-feet |  | Runoff in inches | Discharge in million gellons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
|  | 931 | 0.676 | 9.18 | 0.437 | 1,190 | 0.864 | 11.74 | 0.558 |
| 1927. | 1,340 | . .973 | 13.20 | . 629 | 1,390 | 1.01 | 13.67 | . 653 |
| 1928 | 1,620 | 1.18 | 15.97 | . 763 | 1,320 | . 959 | 13.08 | 620 |
| 1929 | 1,260 | . 915 | 12.47 | .591 | 1,460 | 1.06 | 14.38 | 5 |
| 1930. | 849 | . 617 | 8.39 | . 399 |  | - |  |  |
|  |  |  | - |  | 1,094 | . 794 | 10.78 | .513 |
| 1939 | 1,259 | -. 914 | 12.46 | . 591 | 1,430 | 1.04 | 14.15 | . 672 |
| 1941. | 1,920 | . 668 | 9.06 | . 432 | , 729 | . 529 | 7.19 | . 342 |
| 1942. | 954 | . 693 | 9.43 | . 448 | 1,657 | 1.20 | 16.35 | . 776 |
| 1943. . | 2,034 | 1.48 | 20.06 | . 957 | - | - | - |  |

South Fork Shenandoah River near Front Royal, Va
Locetion.- Weter-stage recorder, let. $38^{\circ} 54^{\prime} 50^{\prime \prime}$, long. $78^{\circ} 1^{\prime} 2^{\prime \prime \prime} 40^{\prime \prime}$, at highway bridge 1 mile west of Front Royal, Warren county, and $3 \frac{1}{2}$ miles upstream from confluence with North Fork. Detum of gege is 469.38 feet obove meen see level, detum of 1929 Prior to September 1930, staff gage at site 1 mile upstream.
Draínego eree.- 1,638 square miles.
Fecords evalleble.- June 1899 to July 1906, September 1930 to September 1943.
Pxtremes.- Maximum discharge, 130,000 second-foet oct. 16, 1942 (gage height, 34.8 feet, from floodmerk in gage house), by slope-eree determination; minimum, 59 second-feet, Jan. 30, 1934 (gege height, 0.56 foot); minimum dally, 103 second-feet mapt. 30, 1930.
Remarks.- Flow et low end medium steges regulated by power plants ebove stotion.


Monthly discharge of South Fork Shemandoah River near Front Royal, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { 1nches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Per square mile |  |  |
| 1901-2 <br> october............ <br> November. <br> December. <br> January. <br> February. <br> March. <br> April. <br> May. <br> June. <br> July. <br> Auguist. <br> September. | $\begin{array}{r} 9,730 \\ 2,600 \\ 43,500 \\ 9,600 \\ 54,700 \\ 76,800 \\ 12,300 \\ 3,150 \\ 1,030 \\ 1,680 \\ 795 \\ 2,370 \end{array}$ | 758 650 1,220 1,380 1,330 3,070 1,560 910 650 515 400 305 | $\begin{array}{r} 2,020 \\ 966 \\ 5,984 \\ 3,730 \\ 6,439 \\ 9,871 \\ 3,826 \\ 1,579 \\ 861 \\ 754 \\ 571 \\ 531 \end{array}$ | $\begin{aligned} & 1.23 \\ & .590 \\ & 3.65 \\ & 2.28 \\ & 3.93 \\ & 6.03 \\ & 2.34 \\ & .964 \\ & .526 \\ & .460 \\ & .349 \\ & .324 \end{aligned}$ | $\begin{array}{r} 1.42 \\ .66 \\ 4.21 \\ 2.63 \\ 4.09 \\ 6.95 \\ 2.61 \\ 1.11 \\ .59 \\ .53 \\ .40 \\ .36 \end{array}$ | 0.795 .381 2.36 1.47 2.54 3.90 1.51 .623 .340 .297 .226 .209 |
| The jear. | 76,800 | 305 | 3,084 | 1.88 | 25.56 | 1.22 |
| October... November December January. February March. Apr11.... May. June. July. August September | $\begin{array}{r} 2,370 \\ 2,750 \\ 6,220 \\ 14,300 \\ 7,700 \\ 17,400 \\ 12,400 \\ 2,300 \\ 13,600 \\ 7,220 \\ 2,010 \\ 5,570 \end{array}$ | $\begin{array}{r} 455 \\ 455 \\ 1,440 \\ 1,380 \\ 2,440 \\ 1,940 \\ 2,220 \\ 1,030 \\ 1,560 \\ 910 \\ 650 \\ 650 \end{array}$ | $\begin{array}{r} 848 \\ 784 \\ 3,114 \\ 3,859 \\ 3,768 \\ 5,043 \\ 4,494 \\ 1,417 \\ 4,308 \\ 2,338 \\ 1,046 \\ 1,738 \end{array}$ | $\begin{aligned} & .518 \\ & .479 \\ & 1.90 \\ & 2.36 \\ & 2.30 \\ & 3.08 \\ & 2.74 \\ & .865 \\ & 2.63 \\ & 1.43 \\ & .639 \\ & 1.06 \end{aligned}$ | $\begin{array}{r} .60 \\ .53 \\ 2.19 \\ 2.72 \\ 2.40 \\ 3.55 \\ 3.06 \\ 1.00 \\ 2.93 \\ 1.65 \\ .74 \\ 1.18 \end{array}$ | $\begin{gathered} .335 \\ .310 \\ 1.23 \\ 1.53 \\ 1.49 \\ 1.99 \\ 1.77 \\ .559 \\ 1.70 \\ .924 \\ .413 \\ .685 \end{gathered}$ |
| The year. | 17,400 | 455 | 2,720 | 1.66 | 22.55 | 1.07 |
| october...... <br> November.... <br> December..... <br> tanuary...... <br> February. <br> March. <br> April. <br> May. <br> June. <br> July. <br> August....... <br> September.... | $\begin{array}{r} 2,370 \\ 870 \\ 1,680 \\ 6,650 \\ 6,110 \\ 5,080 \\ 3,940 \\ 5,480 \\ 3,430 \\ 6,220 \\ 1,100 \\ 640 \end{array}$ | 650 580 580 705 560 1,050 7440 1,150 740 560 350 320 | $\begin{array}{r} 842 \\ 691 \\ 853 \\ 1,295 \\ 1,649 \\ 1,746 \\ 1,453 \\ 1,875 \\ 1,375 \\ 1,117 \\ 613 \\ 395 \end{array}$ | $\begin{gathered} .514 \\ .422 \\ .521 \\ .791 \\ 1.01 \\ 1.07 \\ .887 \\ 1.14 \\ .839 \\ .682 \\ .374 \\ .241 \end{gathered}$ | .59 .47 .60 .91 1.09 1.23 .99 1.31 .94 .79 .43 .27 | $\begin{aligned} & .332 \\ & .273 \\ & .337 \\ & .511 \\ & .653 \\ & .692 \\ & .573 \\ & .737 \\ & .542 \\ & .441 \\ & .242 \\ & .156 \end{aligned}$ |
| The year | 6,650 | 320 | 1,158 | .707 | 9.62 | . 457 |
| October....... <br> November. <br> Docember..... <br> January. . . . . <br> February 1-27 <br> March 5-31... <br> Apr11........ <br> May <br> June. <br> July. <br> Augrist....... <br> September.... | $\begin{array}{r} 368 \\ 368 \\ 1,150 \\ 2,000 \\ 6,320 \\ 6,870 \\ 1,810 \\ 2,000 \\ 9,380 \\ 5,480 \\ 3,070 \\ 1,200 \end{array}$ | 320 320 320 425 560 1,400 740 560 465 890 560 417 | $\begin{array}{r} 326 \\ 329 \\ 530 \\ 917 \\ 1,140 \\ 3,104 \\ 1,143 \\ 920 \\ 1,372 \\ 2,236 \\ 1,014 \\ 595 \end{array}$ | $\begin{gathered} .199 \\ .201 \\ .324 \\ .560 \\ .696 \\ 1.89 \\ .698 \\ .562 \\ .838 \\ 1.37 \\ .619 \\ .363 \end{gathered}$ | $\begin{array}{r} .23 \\ .22 \\ .37 \\ .65 \\ .70 \\ 1.90 \\ .78 \\ .65 \\ .94 \\ 1.58 \\ .71 \\ .40 \end{array}$ | $\begin{gathered} .129 \\ .130 \\ .209 \\ .362 \\ .450 \\ 1.22 \\ .451 \\ .363 \\ .542 \\ .885 \\ .400 \\ .235 \end{gathered}$ |
| October... <br> November.. <br> December. <br> January. . . <br> Febmuary . . <br> March.... <br> April..... <br> May....... <br> June. . . . . . <br> July 1-16. | $\begin{array}{r} 474 \\ 474 \\ 7,020 \\ 7,350 \\ 1,850 \\ 4,980 \\ 5,800 \\ 1,590 \\ 4,120 \\ 1,880 \end{array}$ | 350 <br> 378 <br> 425 <br> 1,250 <br> 622 <br> 652 <br> 1,400 <br> 670 <br> 610 <br> 705 | 417 425 1,476 2,283 957 2,233 2,393 1,049 1,464 1,139 | $\begin{array}{r} .255 \\ .259 \\ .901 \\ 1.39 \\ .584 \\ 1.36 \\ 1.46 \\ .640 \\ .894 \\ .695 \end{array}$ | $\begin{array}{r} .29 \\ .29 \\ 1.04 \\ 1.60 \\ .61 \\ 1.57 \\ 1.63 \\ .74 \\ 1.00 \\ .41 \end{array}$ | $\begin{aligned} & .165 \\ & .167 \\ & .582 \\ & .898 \\ & .377 \\ & .879 \\ & .944 \\ & .414 \\ & .578 \\ & .449 \end{aligned}$ |
| Sept ember 22-30... | 358 | 103 | 236 | -144 | . 05 | . 093 |

Monthly discharge of South Fork Shenandoah River near Front Royal, Va.--Continued

| Month | Discharge in second-feet |  |  |  | Runoffinchesinche | Dischar e in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1930-31 |  |  |  |  |  |  |
| October. | 327 | 118 | 225 | 0.137 | 0.16 | 0.088 |
| November. | 444 | 107 | 242 | . 148 | .17 | . 096 |
| December | 528 | 162 | 268 | . 164 | . 19 | . 106 |
| January. | 2,170 | 240 | 445 | . 272 | . 31 | . 176 |
| February. | 541 | 217 | 348 | . 212 | . 22 | . 137 |
| March... | - | 268 | 734 | . 448 | . 52 | . 290 |
| Apr13 | 3,710 | 752 | 1,920 | 1.17 | 1.30 | .756 |
| May. | 3,250 | 502 | 1,610 | . 983 | 1.13 | . 635 |
| June. | 1,830 | 338 | 1,020 | . 623 | . 70 | . 403 |
| July. | 3,170 | 374 | 903 | . 551 | -64 | . 356 |
| August. | 5,100 | 328 | 1,050 553 | . 641 | .74 .38 | .414 .218 |
| September |  |  |  |  |  |  |
| The year. | 5,100 | 107 | 778 | . 475 | 6.46 | .307 |
| October. | 455 | 188 | 314 | . 192 | . 22 | .124 |
| November. | 482 | 208 | 314 | . 192 | . 21 | . 124 |
| December. | 420 | 210 | 281 | . 172 | - 20 | . 1111 |
| January. | 1,260 | 346 | 689 | . 421 | . 49 | . 272 |
| Pebruary. | 5,780 | 294 | 1,180 | . 720 | . 78 | . 465 |
| March. | 9,490 | 502 | 2,390 | 1.46 | 1.68 | . 944 |
| April | 3,700 | 758 | 1,630 | . 995 | 1.11 | . 643 |
| May. | 11,300 | 876 | 2,770 | 1.69 | 1.95 | 1.09 |
| June | 899 | 335 | 663 | . 405 | . 45 | . 262 |
| July | 1,620 | 228 | 529 | . 323 | . 37 | . 209 |
| August. | 372 | 160 | 281 | . 172 | . 20 | -111 |
| September | 802 | 206 | 318 | . 194 | . 22 | .125 |
| The year | 11,300 | 160 | 947 | .578 | 7.88 | .374 |
| October....... | 11,100 | 208 | 1,540 | . 940 | 1.08 | . 608 |
| November. | 9,930 | 1,170 | 2,860 | 1.75 | 1.95 | 1.13 |
| December. | 6,260 | 627 | 1,490 | . 910 | 1.05 | . 588 |
| January. | 10,200 | 1,060 | 2,580 2,400 | 1.58 1.47 | 1.82 1.53 | $\begin{aligned} & 1.02 \\ & .950 \end{aligned}$ |
| February | 3,290 6,990 | 1,700 | 2,400 2,090 | 1.47 1.28 | 1.53 | $\begin{aligned} & .950 \\ & .827 \end{aligned}$ |
| March. | 6,990 17,100 | 1,090 | 2,090 4,730 | 1.28 2.89 | 1.48 | 1.87 |
| May | 3,360 | 1,280 | 1,900 | 1.16 | 1.34 | . 750 |
| June | 2,080 | 592 | 901 | . 550 | . 61 | .355 |
| July. | 5,410 | 476 | 1,220 | . 745 | . 86 | . 482 |
| Angust. | 7,320 1,490 | 550 516 | 1,490 787 | .910 .480 | 1.05 .54 | .588 .310 |
| The year | 17,100 | 208 | 1,990 | 1.21 | 16.53 | .782 |
| October. | 600 | 282 | 451 | . 275 | . 32 | .178 |
| November | 527 | 300 | 426 | . 260 | . 29 | . 168 |
| December. | 669 | 286 | 411 | . 251 | . 29 | .162 |
| January. | 532 | 170 | 408 | . 249 | . 29 | . 161 |
| February. | 544 | 256 | 392 | . 239 | . 25 | $.154$ |
| March. | 5,380 | 458 | 1,911 | 1.17 | 1.35 1.04 | . 756 |
| April.. | 2,820 1,300 | 710 | 1,513 | . 557 | 1.04 | . 360 |
| May. | 2,400 | 364 | 806 | . 492 | . 55 | . 318 |
| July. | 656 | 221 | 426 | . 260 | . 30 | . 168 |
| August. | 2,670 | 334 | 900 | . 549 | . 63 | . 355 |
| September | 6,740 | 343 | 1,177 | . 719 | . 80 | .465 |
| The year. | 6, 740 | 170 | 814 | .497 | 6.75 | .321 |
| October........... | 2,230 | 375 | 855 | . 522 | . 60 | . 337 |
| November | 4,590 | 351 | 713 | . 435 | . 49 | . 281 |
| December. | 43,700 | 1,000 | 4,120 | 2.52 | 2.90 | 1.63 |
| January. | 20,000 | 1,000 | 3,131 | 1.91 | 2.20 | 1.23 |
| February. | 6,310 | 1,900 | 3,190 | 1.95 | 2.03 | 1.26 |
| March... | 7,570 | 1,560 | 2,881 | 1.76 | 2.03 | 1.14 |
| April. | 8,620 | 1,640 | 4,353 | 2.66 | 2.97 | 1.772 |
| May..... | 3,080 | 1,050 | 1,512 | . 923 | 1.06 | . 597 |
| June. | 1,480 | 474 | 847 | . 537 | . 62 | -34 |
| July..... | 1,450 | 438 | 1,356 | . 828 | . 95 | . 535 |
| August.... September. | 19,500 | 618 | 2,780 | 1.70 | 1.90 | 1.10 |
| The year..... | 43,700 | 351 | 2,211 | 1.35 | 18.33 | .873 |

Monthly discharge of South Fork Shenandoeh River neer Front Royel, Ve.-=Continued

| Month | Discherge in second-feet |  |  |  | Runofis in inches | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Par squere m11a |  |  |
| 1935-36 |  |  |  |  |  |  |
| October. | 1,120 | 380 | 588 | 0.359 | 0.41 | 0.232 |
| November | 3,150 | 388 | 1,257 | +767 | . 86 | . 496 |
| December | 5,520 | 942 | 1,876 | 1.15 | 7.33 | . 743 |
| January. | 12,800 | 1,000 | 4,121 | 2.52 | 2.90 | 1.63 |
| Februery | 12,400 | 1,300 | 4,392 | 2.68 | 2.89 | 1.73 |
| March.... | 96,400 | 2,200 | 10,300 | 6.29 | 7.25 | 4.07 |
| Apr11. | 5,300 | 1,400 | 2,927 | 1.79 | 2.00 | 1.16 |
| Mey. . | 1,800 | 744 | 1,152 | . 703 | . 81 | . 454 |
| June | 1,100 | 470 | 708 | . 432 | . 48 | . 279 |
| July. | 1,400 | 488 | 666 | . 407 | . 47 | . 263 |
| August | 920 | 299 | 509 | . 311 | . 36 | . 201 |
| Septembe | 2,460 | 306 | 567 | . 346 | . 39 | . 224 |
| The year. | 96,400 | 299 | 2,422 | 1.48 | 20.15 | .957 |
| October. ..... | 8,860 | 354 | 1,122 | . 685 | . 79 | . 443 |
| November | 664 | 345 | - 501 | . 306 | . 34 | . 198 |
| December | 2,160 | 408 | 1,437 | . 877 | 1.01 | . 567 |
| January. | 19,000 | 1,790 | 4,758 | 2.90 | 3.34 | 1.87 |
| Pebruery. | 16,300 | 2,100 | 3,848 | 2.35 | 2.45 | 1.52 |
| Merch.... | 2,780 | 1,140 | 1,604 | . 979 | 1.13 | . 633 |
| Apr11. | 43,100 | 890 | 4,942 | 3.02 | 3.37 | 1.95 |
| May. | 4,900 | 1,060 | 1,932 | 1.18 | 1.36 | . 763 |
| Juna | 2,470 | 960 | 1,447 | - 883 | . 99 | . 571 |
| July | 1,540 | 558 | 867 | . 529 | . 61 | . 342 |
| August | 5,120 | 436 | 1,144 | . 698 | . 801 | . 451 |
| September | 5,000 | 592 | 1,575 | . 962 | 1.07 | . 622 |
| The yeer. | 43,100 | 345 | 2,084 | 1.27 | 17.26 | . 821 |
| October.. | 17,600 | 505 | 4,275 | 2.61 | 3.01 | 1.69 |
| November. | 6,420 | 1,380 | 2,645 | 1.61 | 1.80 | 1.04 |
| December. | 2,860 | 1,000 | 1,451 | . 886 | 1.02 | . 573 |
| Januery. | 2,680 | 860 | 1,212 | - 740 | . 85 | - 478 |
| February | 1,610 | 855 | 1,135 | . 693 | . 72 | . 448 |
| March. | 2,600 | 880 | 1,242 | . 758 | . 87 | . 490 |
| Apr11 | 1,600 | 830 | 1,146 | . 700 | . 78 | . 452 |
| May. | 1,600 | 580 | 863 | . 527 | . 61 | . 341 |
| June | 1,920 | 480 | 964 | . 589 | . 66 | . 381 |
| July. | 5,350 | 420 | 1,382 | . 844 | . 97 | . 545 |
| August | 5,280 | 364 | 1,616 | $.987$ | 1.14 | . 638 |
| September. | 1,130 | 380 | 539 | . 329 | . 37 | . 213 |
| The year | 17,600 | 364 | 1,545 | . 943 | 12.80 | . 609 |
| October. | 589 | 279 | 423 | . 258 | . 30 | . 167 |
| November. | 944 | 360 | 539 | . 329 | . 37 | . 213 |
| Dacambar | 4,500 | 476 | 1,234 | . 753 | . 87 | . 187 |
| Januery. | 6,970 | 662 | 1,070 | . 653 | . 75 | . 422 |
| Fobruary | 12,500 | 1,750 | 4,359 | 2.66 | 2.77 | 1.72 |
| March. | 5,080 | 1,250 | 2,653 | 1. 62 | 1.87 | 1.05 |
| April | 3,980 | 886 | 1,622 | . 990 | 1.10 | . 640 |
| May. | 2,130 | 674 | 1,050 | . 641 | . 74 | . 414 |
| Juna. | - 848 | 514 | . 650 | . 397 | . 44 | . 257 |
| July. | 7,620 | 446 | 1,114 | . 680 | . 78 | - 439 |
| August.. | 3,570 | 459 | 994 | . 607 | . 70 | . 392 |
| September | 624 | 280 | 414 | . 253 | . 28 | .164 |
| The year. | 12,500 | 279 | 1,324 | . 808 | 10.97 | . 522 |
| Octobar. . . . . | 740 | 300 | 424 | . 259 | . 30 | .167 |
| November. | 669 | 354 | 494 | . 302 | . 34 | . 195 |
| Decomber. | 685 | 352 | 466 | . 284 | . 33 | . 184 |
| Jenuery.. | 1,600 | 310 | 588 | . 359 | . 41 | . 232 |
| Februery. | 4,710 | 380 | 1,631 | . 996 | 1.07 | . 644 |
| Merch... | 2,180 | 720 | 1,179 | . 720 | . 83 | . 465 |
| April. | 5,180 | 894 | 2,026 | 1.24 | 1.38 | . 801 |
| May.. | 3,920 | 678 | 1,307 | . 798 | . 92 | . 516 |
| June. | 6,670 | 990 | 2,959 | 1.81 | 2.02 | 1.17 |
| July.. | 1,270 | 590 | -855 | 2. 522 | . 60 | 1.337 |
| August... | 31,200 | 516 | 3,933 | $2.40$ | 2.77 .90 | $1.55$ |
| Saptember. | 4,660 | 669 | 1,450 | . 885 |  | . 572 |
| Tha yaar... | 31,200 | 300 | 1,438 | .878 | 11.96 | .567 |

Monthly discharge of South Fork Shenendoah River neer Front Royal, Va.--Continued


Yoarly discharge of South Fork Shenandoah River near Front Royal, Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in second-feet |  | Runoff in inches | Discharge in million çallons per dey per square mile | Discherge in second-feet |  | Runoff <br> in <br> Inches | $\begin{aligned} & \text { Disciarge } \\ & \text { in million } \\ & \text { callors per } \\ & \text { day per } \\ & \text { square mile } \end{aligned}$ |
|  | Mean | Per square mile |  |  | Mean | Per squere mile |  |  |
| 11900. | 1,465 | 0.894 | 12.13 | 0.578 | 1,535 | 0.937 | 12.71 | 0.606 |
| 1901 | 2,947 | 1.80 | 24.43 | 1.16 | 3,392 | 2.07 | 28.12 | 1.34 |
| 1902 | 3,084 | 1.88 | 25.56 | 1.22 | 2,726 | 1.66 | 22.59 | 1.07 |
| 1903 | 2.720 | 1.66 | 22.55 | 1.07 | 2,520 | 1.54 | 20.80 | .995 |
| 1904. | 1,158 | . 707 | 9.62 | . 457 | 1,057 | . 645 | 8.78 | . 417 |
| 1931. | 778 | . 475 | 6.46 | .307 | 793 | . 484 | 6.57 | .313 |
| 1932. | $94^{7}$ | . 578 | 7.88 | . 374 | 1,360 | . 830 | 11.33 | . 536 |
| 1933 | 1,990 | 1.21 | 16.53 | .782 | 1,610 | -982 | 13.35 | . 635 |
| 193 | - 814 | . 4.47 | 6.75 | . 321 | 1,186 | . 724 | 9.84 | . 468 |
| 1935. | 2,211 | 1.35 | 18.33 | . 873 | 2,042 | 1.25 | 16.94 | . 808 |

Yearly discharee of South Fork Shenandoah River near Front Royal, Va.--Continued

| Year | Year ending Sopt. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Run off in inches | Discharge in million Eallons per day per squars mile | Discharge in second-feet |  | Runoff in inches | Discharge In million Eallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per square mile |  |  |
| 1936 | 2,422 | 1.48 | 20.15 | 0.957 | 2,368 | 1.45 | 19.69 | 0.937 |
| 1937. | 2,084 | 1.27 | 17.26 | . 821 | 2,529 | 1.54 | 20.95 | . 995 |
| 1938 | 1,545 | . 943 | 12.80 | . 609 | 1,026 | . 626 | 8.51 | . 405 |
| 1939 | 1,324 | . 808 | 10.97 | . 522 | 1,256 | . 767 | 10.40 | . 496 |
| 1940 | 1,438 | . 878 | 11.96 | . 567 | 1,641 | 1.00 | 13.63 | . 646 |
| 1941. | 1,103 | . 673 | 9.14 | . 435 | 873 | . 533 | 7.24 | .344 |
| 1942. | 1,091 | . 666 | 9.04 | . 430 | 2,024 | 1.24 | 16.77 | . 801 |
| 1943. | 2,470 | 1.51 | 20.47 | .976 |  | - | - | - |
| H1 ghest | 3,084 | 1.88 | 25.56 | 1.22 | 3,392 | 2.07 | 28.12 | 1.34 |
| Average | 1,755 | 1.07 | 14.56 | . 692 | 1,761 | 1.08 | 14.61 | . 698 |
| Lowest. | 778 | . 475 | 6.46 | .307 | 793 | . 484 | 6.57 | . 313 |

Shenandoah River at Millville, W. Va.
 from Cattall Run, and 1 mlle upstream from Millville, Jefferson County. Datum or gace is 293.00 feet above mean sea level, adjustment of 1912. Prior to August 1928, staff are three-quarters of a mile downstream; datum 293.32 feet above mean sea level, adjustment of 1912.
Draina area.- 3,040 square miles.
Kecords avallable.- April 1895 to March 1909; Aucust 1928 to September 1943.
Extromes:- Maxirum discharee, 230,000 second-feet oct. 16, 1942 (gare helght, 32.4 feet, from floodmarks); minimum, about 59 second-feet Oct. 4, 1930 (ra ee helght, 0.39 foot); minimur daily, 194 second-feet July 24, 1930.

Eloods of 1870 and Mar. 18, 1936 reached practically same stame, gage height, 26.4 feet (discharge, 151,000 second-feet).

Remaris.- Regulation by hydroelactric plants, particularly that of Potbmac Edison Company, half a mile above station.

Monthly discharge of Shenandoah River at Millville, W. Va

| Month | Discharge in second-feet |  |  |  | Runoff in <br> inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1895 |  |  |  |  |  |  |
| April 15-30. | 4,600 | 1,870 | 2,904 | 0.955 | 0.57 | 0.617 |
| May... | 20,800 | 2,560 | 5,570 | 1.83 | 2.11 | 1.18 |
| June | 3,130 | 980 | 1,613 | . 531 | . 59 | . 343 |
| July. | 7,260 | 980 | 1,880 | . 618 | . 71 | . 399 |
| August. | 1,590 | 540 | 806 | . 265 | . 31 | . 171 |
| Sertember | 1,320 | 610 | 722 | . 238 | . 27 | .154 |
| October 1895-96 |  |  |  |  |  |  |
| November | 610 | 540 | 537 | . 177 | . 20 | 114 |
| December | 1,450 | 610 | 754 | . 248 | . 29 | . 160 |
| January. | 11,400 | 880 | 2,434 | . 801 | . 92 | . 518 |
| February | 12,600 | 1,450 | 3,817 | 1.26 | 1.36 | . 814 |
| March. | 12,200 | 1,450 | 3,842 | 1.26 | 1.45 | . 814 |
| April | 8,860 | 1,450 | 2,807 | . 923 | 1.03 | . 597 |
| May. | 4,370 | 1,090 | 2,127 | . 700 | . 81 | . 452 |
| June | 3,940 | 780 | 2,056 | . 676 | . 75 | . 437 |
| July | 9,030 | 1,320 | 2,858 | . 940 | 1.08 | . 608 |
| August | 1,870 | 780 | 1,150 | . 378 | . 44 | . 244 |
| September | 13,200 | 540 | 1,042 | .343 | . 38 | . 222 |
| The year. | 13,200 | 480 | 1,998 | . 657 | 8.94 | . 425 |
| October. | 140,000 | 880 | 7,768 | 2.56 | 2.95 | 1.65. |
| November | 4,840 | 880 | 1,835 | . 604 | . 67 | . 390 |
| December | 6,380 | 1,450 | 2,296 | . 755 | . 87 | . 488 |
| January. | 1,720 | 980 | 1,220 | . 401 | . 46 | . 259 |
| February 1-6, 10 | 37,900 | 1,090 | 11,680 | 3.84 | 3.57 | 2.48 |
| March. | 6,760 | 2,590 | 4,946 | 1.63 | 1.88 | 1.05 |
| April | 3,350 | 1,620 | 2,671 | . 879 | . 98 | . 568 |
| May. | 30,600 | 1,760 | 6,243 | 2.05 | 2.36 | 1.32 |
| June. | 2,410 | 1,010 | 1,632 | . 537 | . 60 | . 347 |
| July. | 3,770 | 910 | 1,426 | . 469 | .54 | . 303 |
| Aigust. | 1,760 | 730 | 987 | . 325 | .37 | . 210 |
| September. | 1,350 | 580 | 664 | . 218 | . 24 | . 141 |
| The year.. | 140,000 | 580 | - | - | - | - |

Monthly discharge of Shenendoah River at Millville, W. Ve.-mContinued

| Month | Diecherge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inchee } \end{gathered}$ | Discherge in million gellons por day per oquare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Meen | Per squere m110 |  |  |
| 1897-98 |  |  |  |  |  |  |
| October...... | 1,010 | 550 | 692 859 | 0.228 | $0.26$ | $0.147$ |
| November. | 1,620 | 820 | 1,619 | . 533 | . 61 | 344 |
| December | 6,180 | 1,010 | 2,435 | . 801 | . 92 | . 518 |
| January. | 2,770 | 1,010 | 1,612 | . 530 | . 55 | .343 |
| Merch. | 5,650 | 1,010 | 2,227 | . 733 | . 85 | . 474 |
| April | 13,100 | 2,070 | 4,353 | 1.43 | 1.60 | . 924 |
| May. | 29,200 | 2,070 | 5,711 | 1.88 | 2.17 | 1.22 |
| June | 2,410 | 1,120 | 1,647 | . 542 | . 60 | .350 |
| July. | 3,770 | 820 | 1,249 | . 411 | .47 | . 266 |
| August. | 50,900 | 1,350 | 8,164 | 2.69 | 3.10 | 1.74 |
| Sȩtember. | 1,840 | 1,120 | 1,360 | . 447 | . 50 | . 289 |
| The yeer | 50,900 | 550 | 2,676 | . 880 | 21.95 | . 569 |
| October...... | 30,500 | 1,010 | 5,684 | 1.87 | 2.16 | 1.21 |
| November. | 4,210 | 2,070 | 2,827 | . .930 | 1.04 | . 601 |
| December | 14,800 | 2,410 | 4,498 | 1.48 | 1.71 | 957 |
| Jenuary. | 17,800 | 2,770 | 5,116 | 1.68 | . 94 | . 09 |
| February 1-21 | 7,380 | 2,070 | 3,675 | 1.21 | . 94 | . 782 |
| March 10-31. | 12,700 | 4,440 | 7,065 | 2.32 | 1.90 | 1.50 |
| April. | 4,910 | 2,070 | 3,289 | 1.08 | 1.20 | . 698 |
| May. | 4,910 | 1,480 | 2,533 | . 834 | . 96 | . 539 |
| June | 4,670 | 1,730 | 1,607 | . 298 | . 34 | . 193 |
| August | 1,910 | 650 | 992 | . 326 | . 38 | . 211 |
| September. | 1,760 | 730 | 989 | . 325 | . 36 | . 210 |
| October. | 910 | 650 | 785 | . 258 | . 30 | . 167 |
| November | 5,150 | 910 | 1,503 | . 494 | . 5.5 | . 319 |
| December | 4,440 | 820 | 1,398 | . 460 | . 53 | . 297 |
| January. | 14,800 | 1,230 | 2,970 | . 977 | 1.13 | . 631 |
| Fobruary | 14,400 | 1,350 | 3,833 | 1.26 | 1.31 | . 814 |
| March. | 17,000 | 2,590 | 5,863 | 1.93 | 2.22 | 1.25 |
| Apri1 | 4,670 | 1,840 | 2,803 | . 922 | 1.03 | . 596 |
| May. | 2,410 | 1,230 | 1,689 | . 556 | . 64 | . 359 |
| June | 9,020 | 1,010 | 2,249 | . 740 | . 83 | . 478 |
| July. | 4,210 | 775 | 1,374 | . 452 | . 52 | . 292 |
| Angust. | 1,290 | 690 | 829 | . 273 | . 31 | . 176 |
| Septembe | 1,230 | 580 | 696 | . 229 | . 26 | .148 |
| The year. | 17,000 | 580 | 2,156 | . 709 | 9.63 | . 458 |
| October..... | 2,770 | 650 | 947 | . 312 | . 36 | . 202 |
| November | 9,020 | 730 | 1,453 | . 478 | . 53 | . 309 |
| December | 10,100 | 1,010 | 2,232 | . 734 | . 85 | . 474 |
| Jeruary | 5,910 | 820 | 1,812 | . 596 | . 69 | . 385 |
| February | 3,150 | 730 | 1,315 | . 433 | . 45 | . 280 |
| Morch. | 20,600 | 820 | 3,376 | 1.11 | 1.28 | . 717 |
| April. | 50,000 | 2,500 | 12,840 | 4.22 | 4.71 | 2.73 |
| May. | 45,900 | 2,590 | 8,704 | 2.86 | 3.30 | 1.85 |
| June | 38,200 | 3,770 | 8,225 | 2.71 | 3.02 | 1.75 |
| July. | 13,900 | 1,290 | 4,437 | 1.46 | 1.68 | . 944 |
| August | 11,200 | 1,620 | 3,528 | 1.16 | 1.34 | . 750 |
| Septembe | 11,900 | 1,230 | 2,496 | . 821 | . 92 | . 531 |
| The yeor | 50,000 | 650 | 4,283 | 1.41 | 19.13 | . 911 |
| Octaber | 6,460 | 1,120 | 1,769 | . 582 | . 67 | .376 |
| November | 3,990 | 910 | 1,341 | . 441 | . 49 | . 285 |
| December | 50,000 | 1,350 | 8,124 | 2.67 | 3.01 | 1.73 |
| January. | 21,100 | 2,240 | 5,176 | 1.70 | 1.96 | 1.10 |
| Februery | 50,000 | 1,120 | 8,611 | 2.83 | 2.95 | 1.83 |
| March... | 77,900 | 4,100 | 13,880 | 4.57 | 5.27 | 2.95 |
| April | 20,100 | 2,960 | 6,785 | 2.23 | 2.49 | 1.44 |
| May. | 7,380 | 1,760 | 2,606 | . 857 | . 99 | - 554 |
| June | 1,910 | 1,120 | 1,402 | - 461 | . 51 | . 298 |
| July. | 1,620 | 865 | 1,097 | . 361 | - 42 | . 233 |
| August. | 2,410 | 775 | 1,062 | . 349 | . 40 | . 226 |
| September | 1,120 | 650 | 724 | . 238 | .27 | .154 |
| The jeer..... | 77,900 | 650 | 4,367 | 1.44 | 19.43 | . 931 |

Monthly discharge of Shenandoah River at Millville, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1902-3 |  |  |  |  |  |  |
| October. | 2,160 | 775 | 1,069 | 0.352 | 0.41 | 0.228 |
| November | 3,560 | 730 | 1,190 | . 391 | . 44 | . 253 |
| December. | 9,020 | 2,240 | 4,728 | 2.56 | 1.80 | 1.01 |
| January | 27,900 | 2,070 | 6,802 | 2.24 | 2.58 | 1.45 |
| February | 9,360 | 2,770 | 5,448 | 1.79 | 1.86 | 1.16 |
| March. | 22,100 | 3,560 | 7,907 | 2.60 | 3.00 | 1.68 |
| Apr11 | 23,100 | 3,660 | 7,880 | 2.59 | 2.89 | 1.67 |
| May. . | 3,560 | 1,760 | 2,321 | . 763 | . 88 | . 493 |
| June | 31,200 | 2,240 | 7,448 | 2.45 | 2.73 | 1.58 |
| July. | 9,530 | 1,420 | 3,453 | I. 14 | 1.31 | . 737 |
| August | 2,590 | 1,060 | 1,590 | .523 | . 60 | . 338 |
| September | 9,360 | 1,230 | 2,249 | .740 | . 83 | . 478 |
| The year | 31,200 | 730 | 4,327 | 1.42 | 19.33 | . 918 |
| October. | 2,770 | 1,060 | 1,454 | . 478 | . 55 | . 309 |
| November | 1,120 | , 730 | , 961 | . 316 | . 35 | . 204 |
| December. | 1,620 | 650 | 927 | . 305 | . 35 | . 197 |
| January l-24. | 3,770 | 910 | 1,428 | . 470 | . 42 | . 304 |
| February. |  | - | - |  |  |  |
| March 8-31 | 9,900 | 1,520 | 2,546 | . 838 | . 75 | . 542 |
| April. | 7,880 | 1,090 | 2,191 | . 721 | . 80 | . 466 |
| May. | 5,570 | 1,650 | 2,862 | . 947 | 1.08 | . 608 |
| June | 6,960 | 1,090 | 2,430 | . 799 | - 89 | . 516 |
| July. | 12,600 | 1,090 | 1,930 | . 635 | . 73 | . 410 |
| August | 2,030 | 575 | 1,096 | . 361 | . 42 | . 233 |
| September. | 880 | 510 | 620 | . 204 | .23 | .132 |
| October. | 610 | 480 | 521 | -171 | . 20 | .111 |
| November. | 610 | 480 | 528 | .174 | . 19 | . 112 |
| December. | 2,840 | 510 | 780 | . 257 | . 30 | .166 |
| January. | 4,150 | 830 | 2,065 | . 679 | . 78 | . 439 |
| February | 4,370 | 1,200 | 1,684 | . 554 | . 58 | . 358 |
| March. | 9,370 | 2,560 | 4,387 | 1.44 | 1.66 | . 931 |
| April | 3,230 | 1,200 | 1,945 | . 640 | . 71 | . 414 |
| May. | 2,940 | 880 | 1,382 | . 455 | . 52 | . 294 |
| June | 13,800 | 690 | 2,552 | . 839 | . 94 | . 542 |
| July. | 11,400 | 1,450 | 2,994 | . 985 | 1.14 | . 637 |
| August. | 4,840 | 930 | 1,557 | .512 | . 59 | . 331 |
| September | 1,140 | 575 | 810 | .266 | . 30 | . 172 |
| The year | 13,800 | 480 | 1,771 | . 583 | 7.91 | .377 |
| october...... |  |  |  |  |  |  |
| Novembe | 690 | 575 | 624 | . 205 | . 23 | . 132 |
| December | 11,400 | 610 | 2,336 | . 768 | . 88 | . 496 |
| Jenuary. | 11,400 | 2,030 | 3,719 | 1.22 | 1. 41 | . 789 |
| February | 2,940 | 1,090 | 1,643 | . 540 | . 56 | . 349 |
| March | 9,900 | 1,090 | 3,888 | 1.28 | 1.48 | . 827 |
| April | 9,370 | 2,380 | 4,464 | 1.47 | 1.64 | . 950 |
| May. | 2,940 | 1,090 | 1,803 | . 593 | . 68 | . 383 |
| June | 9,540 | 1,200 | 2,895 | . 952 | 1.06 | . 615 |
| July. | 2,660 | 1,200 | 1,578 | . 520 | . 60 | .336 |
| August | 11,800 | 1,320 | 5,220 | 1.72 | 1.98 |  |
| September | 6,380 | 1,090 | 1,980 | . 651 | . 73 | . 421 |
| The year. | 11,800 | 540 | 2,574 | . 847 | 11.49 | . 547 |
| October. | 60,800 |  |  |  |  |  |
| November. | 7,880 | 1,720 | 3,020 | 2.993 | 1.11 | . 642 |
| December | 8,520 | 1,450 | 3,050 | 1.00 | 1.15 | . 646 |
| January. | 11,400 | 2,940 | 4,710 | 1.55 | 1.79 | 1.00 |
| February | 3,940 | 2,120 | 2,990 | . 984 | 1.02 | . 636 |
| March. | 6,980 | 2,380 | 3,840 | 1.26 | 1.45 | . 814 |
| April. | - | - | 4,600 | 1.51 | 1.68 | .976 |
| May. | - | - | 3,400 | 1.12 | 1.29 | . 724 |
| June | - | - | 7,200 | 2.37 | 2.64 | 1.53 |
| July. | 2,750 | 1,260 | 1,700 | . 559 | . 64 | . 361 |
| August | 2,750 | 980 | 1,300 | . 428 | . 49 | . 277 |
| September | 17,800 | 980 | 2,605 | . 857 | . 96 | . 554 |
| The year.. | - | 980 | 3,890 | 1.28 | 17.34 | .827 |

Monthly discnarge of Shenandoah River at Millville, W. Va.--Continued

| Month | Discharge in second-feot |  |  |  | Runoff <br> in <br> inches | D1scharge in million Eallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
|  | $\begin{array}{r} 2,660 \\ 8,860 \\ 17,800 \\ 53,500 \\ 37,500 \\ 8,520 \\ 3,230 \\ 33,200 \\ 6,960 \\ 4,150 \\ 8,200 \\ 3,330 \\ \hline \end{array}$ | 980 980 1,800 2,750 2,380 2,840 1,580 1,520 1,580 980 930 830 | 1,300 <br> 2,100 <br> 4,880 <br> 7,550 <br> 6,640 <br> 4,880 2,290 <br> 2,290 7,070 <br> 3,240 <br> 1,740 <br> 1,330 | $\begin{aligned} & 0.428 \\ & .691 \\ & 1.61 \\ & 2.48 \\ & 2.18 \\ & 1.61 \\ & .753 \\ & 2.33 \\ & 1.07 \\ & .572 \\ & .697 \\ & .438 \end{aligned}$ | $\begin{array}{r} 0.49 \\ . .77 \\ 1.86 \\ 2.86 \\ 2.35 \\ 1.86 \\ .84 \\ 2.67 \\ 1.19 \\ .66 \\ .80 \\ .49 \end{array}$ | $\begin{gathered} 0.277 \\ .447 \\ 1.04 \\ 1.60 \\ 1.41 \\ 1.04 \\ .487 \\ 1.51 \\ .692 \\ .370 \\ .450 \\ .283 \end{gathered}$ |
| The year. | 53,500 | 830 | 3,760 | 1.24 | 16.84 | . 801 |
| October. . November. December. january.. <br> February. March.... | $\begin{array}{r} 5,830 \\ 3,940 \\ 1,320 \\ 10,600 \\ 8,520 \\ 4,600 \end{array}$ | $\begin{array}{r} 780 \\ 1,090 \\ 1,980 \\ 2,580 \\ 1,030 \end{array}$ | $\begin{aligned} & 1,530 \\ & 1,550 \\ & 1,080 \\ & 3,630 \\ & 3,930 \\ & 3,010 \end{aligned}$ | $\begin{gathered} .503 \\ .510 \\ .355 \\ 1.19 \\ 1.29 \\ .990 \end{gathered}$ | $\begin{array}{r} .58 \\ .57 \\ . .41 \\ 1.37 \\ 1.34 \\ 1.14 \end{array}$ | . 325 <br> .330 <br> - 229 <br> .769 <br> .834 <br> .640 |
| August 23-31..... <br> September......... | $\begin{aligned} & 3,330 \\ & 9,200 \end{aligned}$ | $\begin{aligned} & 2,520 \\ & 1,430 \end{aligned}$ | $\begin{aligned} & 2,910 \\ & 2,990 \end{aligned}$ | $\begin{array}{r} .957 \\ .983 \\ \hline \end{array}$ | $\begin{array}{r} .32 \\ 1.10 \end{array}$ | $\begin{array}{r} .619 \\ .635 \end{array}$ |
| October... November.. December.. January.. February. March. April. May.... June . . . . . July..... . August.... Soptember. | $\begin{array}{r} 1,880 \\ 1,160 \\ 1,940 \\ 3,120 \\ 9,210 \\ 18,000 \\ 31,600 \\ 15,800 \\ 3,780 \\ 5,280 \\ 1,200 \\ 1,190 \end{array}$ | $\begin{array}{r} 916 \\ 695 \\ 862 \\ 1,010 \\ 1,290 \\ 2,260 \\ 1,760 \\ 2,180 \\ 1,580 \\ 921 \\ 338 \\ 551 \end{array}$ | $\begin{array}{r} 1,280 \\ 940 \\ 1,210 \\ 1,880 \\ 2,200 \\ 6,350 \\ 6,200 \\ 4,700 \\ 2,240 \\ 1,960 \\ 843 \\ 670 \end{array}$ | $\begin{aligned} & .421 \\ & .309 \\ & .398 \\ & .618 \\ & .724 \\ & 2.09 \\ & 2.04 \\ & 1.55 \\ & .737 \\ & .645 \\ & .277 \\ & .220 \end{aligned}$ | $\begin{array}{r} .49 \\ .34 \\ .46 \\ .71 \\ .75 \\ 2.41 \\ 2.28 \\ 1.79 \\ .82 \\ .74 \\ .32 \\ .25 \end{array}$ | $\begin{gathered} .278 \\ .200 \\ .257 \\ .399 \\ .468 \\ 1.35 \\ 1.32 \\ 1.00 \\ .476 \\ .417 \\ .179 \\ .148 \end{gathered}$ |
| The year | 31,600 | 338 | 2,540 | . 836 | 11.36 | . 540 |
| October... November. December. January.. February. March. Apr11 $\qquad$ May. June. July. August... Soptember | $\begin{array}{r} 18,000 \\ 11,800 \\ 5,120 \\ 4,380 \\ 7,710 \\ 8,220 \\ 2,930 \\ 1,410 \\ 1,470 \\ 801 \\ 501 \\ 865 \\ \hline \end{array}$ | $\begin{array}{r} 751 \\ 1,670 \\ - \\ 1,300 \\ 1,430 \\ 1,210 \\ 628 \\ 328 \\ 194 \\ 266 \\ 268 \end{array}$ | 3,850 3,580 1,920 1,910 2,790 2,890 1,800 1,030 787 481 388 417 | $\begin{aligned} & 1.27 \\ & 1.18 \\ & .632 \\ & .628 \\ & .918 \\ & .951 \\ & .592 \\ & .339 \\ & .259 \\ & .158 \\ & .128 \\ & .137 \end{aligned}$ | $\begin{array}{r} 1.46 \\ 1.32 \\ .73 \\ .72 \\ .96 \\ 1.10 \\ .66 \\ .39 \\ .29 \\ .18 \\ .15 \\ .15 \end{array}$ | .821 .763 .408 .406 .593 .615 .383 .219 .167 .102 .083 .088 |
| The yoar. | 18,000 | 194 | 1,810 | . 595 | 8.11 | .385 |
| 1930-31 |  |  |  |  |  |  |
| October.. | 427 | 200 | 340 | .113 | -13 | . 073 |
|  |  |  |  |  |  |  |
| December | 904 | 300 | 479 | . 158 | . 18 | . 102 |
| January. | 2,900 | 433 | 790 | . 260 | .30 | . 168 |
| Febmuary | 715 | 380 | 542 | . 178 | . 19 | . 115 |
| March. | 2,540 | 544 | 929 | . 306 | . 35 | . 198 |
| April | 4,890 | 1,140 | 2,900 | . 954 | 1.06 | . 617 |
|  | 4,600 | 993 | 2,510 | . 826 | . 95 | . 534 |
| June. | 3,160 | 832 | 1,660 | . 546 | . 61 | . 353 |
| July. | 3,560 | 514 | 1,340 | . 441 | . 51 | . 285 |
| August.. | 6,160 1,500 | $\begin{aligned} & 593 \\ & 436 \end{aligned}$ | 1,600 822 | $\begin{aligned} & .526 \\ & .270 \end{aligned}$ | .61 .30 | $\begin{array}{r} .340 \\ .175 \\ \hline \end{array}$ |
| The year...... | 6,160 | 200 | 1,200 | .395 | 5.34 | .255 |

Monthly discharge of Shenandoah River at Miliville, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallors per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1931-32 |  |  |  |  |  |  |
| October | 749 | 252 | 435 | 0.143 | 0.16 | 0.092 |
| November. | 678 | 225 | 388 | . 128 | . 1.4 | . 083 |
| December. | 600 | 341 | 415 | . 137 | . 26 | . 088 |
| January | 1,740 | 495 | 973 | . 320 | .37 | . 207 |
| February | 9,220 | 551 | 2,000 | . 658 | . 71 | . 425 |
| March. . | 14,300 | 723 | 3,990 | 1.31 | 1.51 | . 847 |
| April | 6,990 | 1,450 | 3,000 | . 987 | 1.10 | . 638 |
| May | 31,900 | 1,620 | 5,810 | 1.91 | 2.20 | 1.23 |
| June | 1,750 | 746 | 1,140 | . 375 | . 42 | . 242 |
| July. | 2,640 | 376 | 889 | . 292 | . 34 | . 189 |
| August | 720 | 336 | 453 | . 1.49 | .17 | . 096 |
| Sertember | 993 | 270 | 428 | .141 | . 16 |  |
| The year | 31,900 | 225 | 1,660 | .546 | 7.44 | . 353 |
| October | 18,000 | 307 | 2,360 | . 776 | . 89 |  |
| November | 18,800 | 1,940 | 5,020 | 1.65 | .89 1.94 | 1.07 |
| Eecember | 9,840 | 1,070 | 2,440 | . 803 | . 93 | . 519 |
| January. | 23,400 | 1,960 | 4,730 | 1.56 | 1.80 | 1.01 |
| February | 6,000 | 2,940 | 4,060 | 1.34 | 1.40 | . .866 |
| March. | 12,600 | 2,060 | 3,830 | 1.26 | 1.45 | . 814 |
| April | 37,100 | 2,670 | 9,020 | 2.97 | 3.31 | 1.92 |
| May. | 7,540 | 2,680 | 4,230 | 1.39 | 1.60 | . 998 |
| June | 3,620 | 986 | 1.720 | . 566 | .63 | . 366 |
| July | 6,520 | 946 | 1,840 | . 605 | . 70 | . 391 |
| August | 15,400 | 863 | 2,790 | . 918 | 1.06 | . 593 |
| Septembe | 5,900 | 1,080 | 1,810 | . 595 | . 66 | . 385 |
| The jear. | 37,100 | 307 | 3,640 | 1.20 | 16.27 | . 776 |
| October. | 1,120 | 608 | 869 | . 296 | . 33 | . 185 |
| November | 904 | 564 | 703 | . 231 | . 26 | . 149 |
| December. | 982 | 524 | 676 | . 222 | . 26 | . 143 |
| January. | 1,020 | 512 | 795 | . 262 | . 30 | . 169 |
| February | 953 | 458 | 719 | . 237 | . 25 | . 153 |
| March. | 8,340 | 818 | 2,890 | . 951 | 1.10 | . 615 |
| Apr 1 | 5,040 | 1,610 | 2,580 | . 849 | . 95 | . 549 |
| May | 2,400 | 1,150 | 1,560 | . 513 | . 59 | . 332 |
| June | 3,020 | 564 | 1,210 | . 399 | . 44 | . 257 |
| July. | 1,050 | 370 | , 643 | . 212 | .24 | . 137 |
| A Enist. | 2,640 | 445 | 1,220 | . 401 | . 46 | . 259 |
| September | 11,100 | 498 | 1,730 | . 569 | . 63 | . 368 |
| The year. | 11,100 | 370 | 1,300 | . 428 | 5.51 | .277 |
| October. | 2,640 | 648 | 1,296 | . 426 | . 49 | . 275 |
| November | 1,980 | 528 | 1,298 | . 289 | . 32 | . 187 |
| Decembe | 52,600 | 1,700 | 6,313 | 2.08 | 2.40 | 1.34 |
| January. | 26,000 | $\frac{1}{3}, 300$ | 4,745 | 1.56 | 1.90 | 1.01 |
| February | 12,000 | 3,100 | 5,992 | 1.97 | 2.05 | 1.27 |
| March | 11,600 | 2,860 | 4,725 | 1.55 | 1.79 | 1.00 |
| Apr1 | 16,500 | 2,860 | 7,928 | 2.61 | 2.91 | 1.69 |
| May. | 6,760 | 1,840 | 2,844 | . 936 | 1.08 | . 605 |
| June | 2,430 | 976 | 1,645 | . 541 | . 60 | . 350 |
| July. | 1,950 | 994 | 1,380 | . 454 | . 52 | . 293 |
| August | 6,120 | 610 | 1,725 | . 567 | . 65 | . 366 |
| September | 29,300 | 936 | 3,758 | 1.24 | 1.38 | . 901 |
| The year | 52,600 | 528 | 3,584 | 1.18 | 15.99 | .763 |
| October........... |  |  |  |  |  |  |
| November. | 5,130 | 697 | 2,127 | .700 | . 78 | . .452 |
| December. | 7,490 | 1,300 | 2,653 | . 873 | 1.01 | . 564 |
| January. | 17,400 | 1,500 | 6,210 | 2.04 | 2.35 | 1.32 |
| February. | 26,700 | 2,200 | 7,283 | 2.40 | 2.59 | 1.55 |
| March. | 109,000 | 4,220 | 17,540 | 5.77 | 6.65 | 3.73 |
| Apr11. | 8,030 | 2,720 | 5,105 | 1.68 | 1.87 | 1.09 |
| May. | 3,020 | 1,420 | 2,106 | . 693 | . 80 | . 148 |
| June | 1,950 | 950 | 1,307 | . 430 | . 48 | . 278 |
| July. | 1,800 | 678 | 1,109 | . 365 | . 42 | .236 |
| August. . . | 1,470 | 550 | 842 | $.278$ | . 32 | $.180$ |
| September | 2,430 | 546 | 845 | . 278 | . 31 | . 180 |
| The year. | 109,000 | 546 | 4,003 | 1.32 | 17.92 | .853 |

Monthly discharge of Shenandoah River at Millville, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { In } \\ \text { Inches } \end{gathered}$ | Discharge in million gallons per day per square mlle |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1936-37 |  |  |  |  |  |  |
| October.. | 8,770 | 675 666 | 1,716 825 | 0.564 .271 | 0.65 .30 | $\begin{array}{r} 0.365 \\ .175 \end{array}$ |
| November. | 1,010 | 666 687 | 2,318 | . 762 | . 88 | . 492 |
| December. | 27,700 | 2,890 | 7,551 | 2.48 | 2.86 | 1.60 |
| February. | 31,200 | 3,780 | 6,926 | 2.28 | 2.37 | 1.47 |
| March.... | 4,950 | 2,120 | 2,930 | . 964 | 1.11 | . 623 |
| April | 80,400 | 1,720 | 8,385 | 2.76 | 3.08 | 1.78 |
| May. | 9,890 | 2,040 | 3,540 | 1.16 | 1.34 | . 750 |
| June | 3,310 | 1,590 | 2,154 | . 709 | - 79 | . 458 |
| July. | 2,640 | 830 | 1,459 | - 480 | . 55 | . 310 |
| August | 14,300 7,000 | 686 1,020 | 2,454 2,670 | . 878 | . 98 | . 567 |
| The year.................... | 80,400 | 666 | 3,551 | 1.17 | 15.84 | . 756 |
| October. . . . . . . . | 30, 100 | 1,340 | 7,133 | $\begin{aligned} & 2.35 \\ & 1.48 \end{aligned}$ | $\begin{aligned} & 2.71 \\ & 1.65 \end{aligned}$ | 1.52 |
| November | 9,770 | 2,430 | 4,507 |  |  | .957 |
| Decembe | 4,500 | 1,7001,500 | 2,455 | $\begin{aligned} & 1.48 \\ & .808 \end{aligned}$ | -. .93 |  |
| January. |  |  | 1,947 | . 640 | . 74 | $.414$ |
| February. | 2,590 | 1,580 | 2,003 | . 659 | . 69 | $.426$ |
| March. | 4,210 | 1,580 | 2,222 | . 731 | . 84 |  |
| April. | 2,3605,000 | 1,680 | 2,203 | . 725 | . 81 | . 462 |
| May.. |  |  | 1,846 | . 509 | . 57 | . 392 |
| June | 2,400 | -,950 |  |  |  | . 329 |
| July. | 7,620 | 649 | 1,744 | . 574 | . 66 | $\begin{aligned} & .371 \\ & .504 \end{aligned}$ |
| August. | 6,880 | $\begin{aligned} & 650 \\ & 578 \end{aligned}$ | 2,372 801 | $\begin{aligned} & .780 \\ & .263 \end{aligned}$ | $\begin{aligned} & .90 \\ & .29 \end{aligned}$ | $\begin{aligned} & .504 \\ & .170 \end{aligned}$ |
| The yee |  |  |  |  |  |  |
|  | 30,100 | 578 | 2,573 | . 846 | 11.49 | .547 |
| 1938-39 | 7881,290 | 499 | 640 | . 211 | $\begin{array}{r} .24 \\ .30 \end{array}$ | .136 |
| November |  | 542 | $\begin{array}{r} 808 \\ 2,329 \end{array}$ | $\begin{aligned} & .266 \\ & .766 \end{aligned}$ |  | $\begin{array}{r} .172 \\ .495 \end{array}$ |
| December | 11,300 | 7661,160 |  |  | . 88 |  |
| January. | 13,400 |  | 1,964 | $2.648$ | $\begin{array}{r} .74 \\ 2.90 \end{array}$ | . 418 |
| February | 27,200 | 3,300 | 8,4394,486 |  |  | $\begin{array}{r} 1.80 \\ .957 \end{array}$ |
| March. | 9,330 | 2,2401,660 |  | 1.48 | $1.71$ |  |
| April |  |  | 3,155 | 1.04 | 1.16 | . 672 |
| May.. | 3,310 | 1,380 | 2,008 | . 661 | .76.39 | $.228$ |
| June | 1,440 | 769668 | 1,070 |  |  |  |
| July. | 14,600 |  | 2,153 | . 708 | . 82 | . 458 |
| August. | 9,170 | 780494 | 1,938710 | $\begin{aligned} & .638 \\ & .234 \end{aligned}$ | $\begin{array}{r} .74 \\ .26 \end{array}$ | $\begin{array}{r} .412 \\ .151 \end{array}$ |
| September. . . . . . . . . . . . . . . . . | 1,070 |  |  |  |  |  |
| The | 27,200 | 494 | 2,437 | . 802 | 10.90 | . 518 |
| 1939-40 | 1,670 | 512 | 774 | . 255 | . 29 | .165.222 |
| November | 1,740 | 690 | 1,044 | . 343 | .38 |  |
| Decembe | 1,6603,280 | 620469 | $\begin{aligned} & 891 \\ & 974 \end{aligned}$ | .293.320 | $\begin{array}{r} .34 \\ .37 \end{array}$ | . 189 |
| January |  |  |  |  |  | $\begin{array}{r} .207 \\ .639 \end{array}$ |
| February | 8,7804,360 | $\begin{array}{r} 759 \\ 1,480 \end{array}$ | 3,0042,430 | . 988 | 1.07 |  |
| March. |  |  |  | . 799 | . .92 | $1.516$ |
| April | 12,3007,000 | 1,690 | 4,8012,599 | 1.58 <br> .855 | 1.76 |  |
| May. |  |  |  |  | . 99 | $\begin{array}{r} 1.02 \\ .553 \end{array}$ |
| June | 12,300 | 1,630 | 5,120 | 1.68 <br> 1.451 | 1.87 | 1.09 |
| July | 1,800 | 1,020892 | $\begin{aligned} & 4,613 \\ & 2,360 \end{aligned}$ |  | . 52 |  |
| August. | 36,100 |  |  | $\begin{array}{r} 1.52 \\ .776 \end{array}$ | 1.75.87 | $\begin{array}{r} .982 \\ .502 \end{array}$ |
| September | 7,810 | 910 |  |  |  |  |
| The y | 36,100 | 469 | 2,498 | . 822 | 11.13 | .531 |
| October. . . . . . . . 4 . | 1,760 | 860 | 1,145 | . 377 | . 43 | . 244 |
| November. | 7,240 | 936 | 2,461 | . 810 | . 90 | . 524 |
| December. | 9,890 | 1,530 | 3,053 | 1.00 | 1.16 | -646 |
| January. | 7,490 | 2,230 | 3,409 | 1.12 | 1.29 | . 724 |
| February | 2,860 | 1,350 | 1,952 | . 642 | . 67 | . 415 |
| March. . | 5,100 | 1,320 | 2,650 | . 872 | 1.01 | . 564 |
| April. | 15,600 | 1,750 | 3,952 | 1.30 | 1.45 | . 840 |
| May. . | 1,690 | 827 | 1,192 | .392 | . 45 | . 253 |
| June. | 1,910 | 748 | 1,052 | . 346 | . 39 | . 224 |
| July. | 5,890 | 796 | 1,985 | . 653 | . 75 | - 422 |
| August. | 1,810 | 576 | 830 | . 273 | .31 | . 176 |
| September. | 916 | 428 | 597 | .196 | . 22 | . 127 |
| The year | 15,600 | 428 | 2,024 | . 666 | 9.03 | . 430 |

Monthly discharge of Shenandoah River at M1llville, W. Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Run off } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| October. | 572 | 406 | 470 | 0.155 | 0.18 | 0.100 |
| November | 616 | 396 | 505 | . 166 | . 19 | . 107 |
| December. | 1,480 | 405 | 787 | . 259 | . 30 | . 167 |
| January. | 978 | 560 | 747 | . 246 | . 28 | . 159 |
| February | 1,980 | 578 | 1,164 | . 383 | . 40 | .248 |
| March... | 8,060 | 812 | 2,404 | . 791 | . 91 | . 511 |
| April. | 4,900 | 978 | 2,046 | . 673 | . 75 | . 435 |
| May. | 40,400 | 676 | 5,942 | 1.95 | 2.25 | 1.26 |
| June | 2,800 | 1,150 | 1,913 | . 629 | . 70 | . 407 |
| July. | 1,540 | 500 | 896 | . 295 | . 34 | . 191 |
| August. | 13,000 | 634 | 3,352 | 1.10 | 1.27 | . 711 |
| Sestembe | 4,200 | 800 | 1,425 | . 469 | . 52 | . 303 |
| The yoar. | 40,400 | 396 | 1,813 | . 596 | 8.09 | .385 |
| October. | 192,000 | 900 | 16,250 | 5.35 | 6.16 | 3.46 |
| November | 4,100 | 1,860 | 2,608 | . 858 | . 96 | . 555 |
| December | 25,300 | 1,400 | 3,207 | 1.05 | 1.22 | . 679 |
| January. | 18,700 | 2,510 | 4,154 | 1.37 | 1.58 | . 885 |
| Februery | 13,500 | 2,600 | 5,662 | 1.86 | 1.94 | 1.20 |
| March | 14,400 | 2,170 | 5,578 | 1.83 | 2.12 | 1.18 |
| Apr11 | 18,600 | 2,170 | 4,645 | 1.53 | 1.70 | . 989 |
| May. | 11,800 | 2,100 | 4,271 | 1.40 | 1.62 | . 905 |
| June | 3,940 | 1,300 | 2,359 | . 776 | . 87 | . 502 |
| July. | 5,420 | 1,040 | 1,829 | . 602 | . 69 | . 389 |
| August. . . . . . . . . . . . . . . . . . . . . . . | 1,210 | 634 | 851 | $.280$ | . 32 | . 181 |
| September. . . . . . . . . . . . . . . . . | 812 | 394 | 605 | . 199 | . 22 | . 129 |
| The year.................... | 192,000 | 394 | 4,344 | 1.43 | 19.40 | . 924 |

Yearly discharge of Shenandoah River at Millvillo, W. Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| 1896. | 1,998 | 0.657 | 8.94 | 0.425 | 2,841 | 0.935 | 12.71 | 0.604 |
| 1898. | 2,676 | . 880 | 11.95 | . 569 | 3,506 | 1.15 | 15.67 | . 743 |
| 1900 | 2,156 | . 709 | 9.63 | . 458 | 2,231 | . 734 | 9.99 | . 474 |
| 1901. | 4,283 | 1.41 | 19.13 | . 911 | 4,844 | 1.59 | 21.56 | 1.03 |
| 1902. | 4,367 | 1.44 | 19.43 | . 931 | 4,006 | 1.32 | 17.91 | . 853 |
| 1903. | 4,327 | 1.42 | 19.33 | . 918 | 4,019 | 1.32 | 17.93 | . 953 |
| 1905. | 1,771 | . 583 | 7.91 | . 377 | 1,921 | . 632 | 8.57 | . 408 |
| 1906 | 2,574 | . 847 | 11.49 | . 547 | 3,478 | 1.14 | 15.52 | . 737 |
| 1907 | 3,892 | 1.28 | 17.34 | . 827 | 3,381 | 1.11 | 15.08 | . 717 |
| 1908 | 3,760 | 1.24 | 16.84 | . 801 | 3,416 | 1.12 | 15.28 | . 724 |
| 1929. | 2,540 | . 836 | 11.36 | . 540 | 3,038 | 1.00 | 13.58 | . 646 |
| 1930 | 1,810 | . 595 | 8.11 | . 385 | 1,134 | . 373 | 5.06 | . 241 |
| 1931 | 1,200 | . 395 | 5.34 | . 255 | 1,197 | . 394 | 5.34 | . 255 |
| 1932 | 1,660 | . 546 | 7.44 | . 353 | 2,380 | . 783 | 10.64 | . 506 |
| 1933 | 3,640 | 1.20 | 16.27 | . 776 | 3,011 | . 990 | 13.46 | . 640 |
| 1934. | 1,300 | . 428 | 5.81 | . 277 | 1,830 | . 602 | 8.17 | . 389 |
| 1935 | 3,584 | 1.18 | 15.39 | . 763 | 3,342 | 1.10 | 14.91 | .711 |
| 193 | 4,003 | 1.32 | 17.92 | . 853 | 3,937 | 1.30 | 17.62 | . 840 |
| 1937 | 3,551 | 1.17 | 15.84 | . 756 | 4,325 | 1.42 | 19.30 | .918 |
| 1938 | 2,573 | . 846 | 11.49 | . 54.7 | 1,707 | . 562 | 7.62 | . 363 |
| 1939. | 2,437 | . 802 | 10.90 | . 518 | 2,346 | . 772 | 10.49 | . 499 |
| 1940. | 2,498 | . 822 | 11.13 | . 531 | 2,817 | . 927 | 12.61 | . 599 |
| 1941 | 2,024 | . 666 | 9.03 | . 430 | 1,613 | . 531 | 7.21 | .343 |
| 1942 | 1,813 | . 596 | 8.09 | . 385 | 3,532 | 1.16 | 15.76 | . 750 |
| 1943 | 4,344 | 1.43 | 19.40 | . 924 | - | - | - | - |
| H1 chest. | 4,367 | 1.44 | 19.43 | . 931 | 4,844 | 1.59 | 21.56 | 1.03 |
| Avorago. | 2,831 | . 931 | 12.64 | . 602 | 2,910 | . 957 | 13.00 | . 619 |
| Lowest | 1,200 | . 395 | 5.34 | . 255 | 1,134 | .373 | 5.06 | .241 |

Cooks Creek at Mount Crawford, Va.
Location.- Chain gage, lat. $38^{\circ} 21^{\prime \prime 33^{\prime \prime}}$, long. $78^{\circ} 55^{\prime} 53^{n}$, at upper highway bridge, threequarters of a mile east of Mount Crawford, Rockingham County, and 2 milee upstream from mouth.
Drainage area.- 42 square mile日.
Recorde avaliable. - July 1905 to July 1906.
Extremes. - Maxlmum diecharge observed, 346 second-feet July 5, 1905 (gage he1ght, 5.5 feet, from reting curve extended above 32 second-fest; minimum, 10 second-feet at times during period September to December 1905

| Month | Discharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inchee } \end{aligned}$ | Discharge <br> in million <br> gallons per <br> day per <br> equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mile |  |  |
| 1905 |  |  |  |  |  |  |
| July. | 346 27 | 19 | 43.8 | 1.04 |  | 0.672 .303 |
| August. | 27 16 | 13 | 19.7 12.7 | . 469 | .54 .34 | .303 .195 |
| Septembe |  |  |  |  |  |  |
| 1905-6 |  |  |  |  |  |  |
| October.... | 18 | 10 | 11.4 | .271 | . 30 | .175 |
| Nevember.. | 64 | 10 | 18.7 | .445 | . 51 | . 288 |
| January. | 71 | 21 | 27.5 | . 655 | . 76 | . 423 |
| February. | 23 | 13 | 18.5 | . 440 | . 46 | .284 |
| March.... | 46 | 19 | 30.6 | . 729 | . 84 | . 471 |
| Apr11.. | 41 | 23 | 28.7 | . 683 | . 76 | - 441 |
| May.... | 27 | 16 | 20.6 | . 490 | . 56 | . 317 |
| June. | 71 | 13 | 21.0 | . 500 | . 56 | . 323 |
| July 1-15. | 71 | 19 | 23.8 | . 567 | . 32 | . 366 |

Middle RIver near Grottoes, Va.
Location. - Water-stage recorder, lat. $38^{\circ} 16^{\prime}$, long. $78^{\circ} 52^{\prime}$, at highway bridge at Mount Meridian, Augusta county, li miles upetream from mouth and 3 milee weet of Grottoes, Rockingham County. Datum of gage $1 \mathrm{e} 1,061.2$ feet above mean eea levsl, unadjusted. Prior to Sept. 1, 1938, chain gage at same site and datm.
Drainage area. - 360 square milee.
Records avallable.- February 1925 to Septomber 1943.
Extremes - Maximum djscharge, 24,500 second-feet Mar. 18, 1936 (gage helght, 28.57 feet, fom 1 loodmarks), from rating curve extended above 10,000 second-feet; minimum observed, 22 second-feet Sept. 21, Oct. 3, 12, 1930 (gage helght, 1.90 feet). Remarks. - Low flow regulated by mills above station.

Monthly discharge of Middle River near Grottoee, Va.

| Month | Discharge in second-feet |  |  |  | Runoff in inches | D1scharga in million gallone per day par square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mile |  |  |
| 1925 |  |  |  |  |  |  |
| February 17-28. | 602 | 410 | 488 | 1.36 | 0.61 |  |
| March...... | 410 | 234 | 299 | . 831 | .96 | . 537 |
| April. | 1,020 | 141 | 240 | . 667 | . 74 | . 431 |
| May.... | 720 | 74 | 257 | . 714 | . 82 | . 461 |
| June. | 532 | 34 | 114 | . 317 | . 35 | . 205 |
| July. | 330 | 35 | 166 | . 461 | . 53 | . 298 |
| August. | 132 | 31 | 76.2 | .212 .236 | .24 .26 | .137 .153 |
| Seftember.. | 111 | 54 | 84.8 | .236 | . 26 |  |
|  |  |  |  |  |  |  |
| October. | 98 | 56 | 80.3 | .223 | . 26 | . 144 |
| November. | - | 58 | 83.4 | . 232 | . 26 | . 160 |
| December. | - | - | 193 | .536 | . 62 | . 346 |
| January. | 2,250 | - | 372 | 1.03 | 1.19 | . 666 |
| February. | 2,200 | 317 | 627 | 1.74 | 1.81 | 1.12 |
| March... | 468 | 223 | 346 | . 961 | 1.11 | . 621 |
| April. | 410 | 268 | 345 | . 958 | 1.07 | . 619 |
| May. . | - | 86 | 164 | . 456 | . 53 | . 295 |
| June. | 160 | 38 | 107 | . 287 | . 33 | . 192 |
| July. | 280 | 30 | 96.1 | . 267 | . 31 | . 173 |
| August. | - | 70 |  | . 608 | . 70 | . 393 |
| September.... | 124 | - | 91.0 | .253 | . 28 | . 164 |
| The jear. | 2,250 | - | 224 | . 622 | 8.47 | . 402 |
| April 4-30. | 2,400 | 410 | 849 | 2.36 | 2.37 | 1.53 |
| May.. | 800 | 170 | 331 | . 919 | 1.06 | . 594 |
| June. | 410 | 115 | 204 | . 567 | . 63 | . 366 |
| July. | 280 | 99 | 140 | . 389 | . 45 | . 251 |
| August | 304 | 99 | 160 | . 444 | . 51 | - 287 |
| September.... | 99 | 70 | 88.8 | .247 | .28 | .160 |

Monthly discherge of Middle River near Grottoes, Ve.--Continued

| Month | Diecherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discherge in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per square mile |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| The y | 3,820 | 67 | 364 | 1.01 | 13.77 | . 653 |
| October...... | 344 | 161 | 209 | . 581 | . 67 | . 376 |
| November. | 180 | 112 | 140 | . 389 | . 43 | . 251 |
| December. | 290 | 120 | 162 | . 450 | . 52 | . 291 |
| Jenuery. | 566 | 152 | 275 | .764 | . 88 | . 494 |
| Februery | 2,110 | 180 | 366 | 1.02 | 1.06 | . 659 |
| Merch. | 2,060 | 290 | 704 | 1.96 | 2.26 | 1.27 |
| Apr11 | 3,230 | 200 | 557 | 1.55 | 1.73 | 1.00 |
| May. | 1,520 | 220 | 404 | 1.12 | 1.29 | . 724 |
| June | 840 | 180 | 292 | . 811 | . 90 | . 524 |
| July. | 1,120 | 143 | 313 | . 869 | 1.00 | . 562 |
| August. | 170 | 83 | 120 | .3331 | . 38 | . 215 |
| Soptembe | 330 | 64 | 109 | . 303 | . 34 | .196 |
| The year. . . . . . . . . . . . . . . | 3,230, | 64 | 304 | . 844 | 11.46 | .545 |
| October 1929-30 |  |  |  |  |  |  |
| November. | 1,520 | 97 | 235 | . 653 | . 75 | . 422 |
| December. | 1,040 880 | 112 | 253 | . 703 | . 78 | . 454 |
| Januery. | 432 | 127 | 204 | . 567 | . .65 | . 374 |
| February. | I,620 | 180 | 373 | 1.04 | 1.08 | . 672 |
| March. | 1,300 | 143 | 262 | . 728 | . 84 | . 471 |
| April | 220 | 112 | 143 | . 357 | . 44 | . 257 |
| May.. | 143 | 61 | 104 | . 289 | . 33 | .187 |
| June. | 266 | 65 | 104 | . 289 | . 32 | . 187 |
| July.. | 85 | 37 | 59.9 | . 166 | . 19 | . 107 |
| August. | 85 | 34 | 59.8 | . 166 | . 19 | .107 |
| September | 190 | 36 | 64.6 | . 179 | . 20 | . 116 |
| The yeer. . . . . . . . . . . . . . . | 1,620 | 34 | 176 | . 488 | 6.62 | .316 |
| October.. | 97 | 34 | 66.4 |  |  |  |
| November. | 110 | 28 | 58.9 | . 164 | .18 | . 106 |
| December | 225 | 45 | 73.5 | . 204 | . 24 | . 132 |
| January. | 600 | 54 | 96.0 | . 267 | . 31 | .173 |
| February | 139 | 42 | 91.3 | . 254 | . 26 | . 164 |
| March.. | 600 | 97 | 162 | . 450 | . 52 | . 291 |
|  | 960 1,210 | 132 | 358 | . 994 | 1.11 | . 642 |
| June | -,920 | 104 | 290 | . 806 | . 93 | . 521 |
| July. | 562 | 97 | 221 | . 614 | . 71 | . 397 |
| August.. | I,620 | 71 | 236 | . 656 | . 76 | . 424 |
| September. | - 422 | 73 | 114 | .317 | .35 | . 205 |
| The year | 1,620 | 28 | 165 | . 458 | 6.22 | . 296 |
| October. . . . . . . . |  |  |  | 1931-32 |  |  |
| November. . | 116 | 50 | 81.0 | . 225 | . 26 | . 145 |
| December. | 95 | 48 | 73.5 | . 204 | .23 | . 132 |
| Januery. | 730 | 88 | 191 | . 190 | . 22 | . 123 |
| Februery | 1,900 | 109 | 288 | . 800 | . 86 | . 517 |
| Merch. | 3,440 | 102 | 557 | 1.55 | 1.79 | 1.00 |
| April. | 580 | 162 | 284 | . 789 | . 88 | . 610 |
| May.. | 1,100 | 130 | 352 | . 978 | 1.13 | . 632 |
| June. | 130 | 78 | 105 | . 292 | . 33 | . 189 |
| July.... | 254 | 59 | 100 | . 278 | . 32 | . 180 |
| Auguet. . | 88 | 44 | 60.3 | . 168 | . 19 | . 109 |
| Soptembe | 210 | 44 | 64.4 | . 178 | . 20 | . 116 |
| The yeer. | 3,440 | 41 | 186 | . 517 | 7.02 | . 334 |



| Month | Discherge in second-feet |  |  |  | $\left.\begin{gathered} \text { Runoff } \\ \text { inchee } \end{gathered} \right\rvert\,$ | Discharge in million gellone per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per squere m11e |  |  |
| 1937-38 |  |  |  |  |  |  |
| October | 7,590 | 146 | 1,077 | 2.99 | 3.45 | 1.93 |
| November | 1,320 | 273 | 487 | 1.35 | 1.51 | . 873 |
| December. | 494 | 228 | 295 | . 819 | . 94 | . 529 |
| Jenuary. | 930 | 209 | 302 | . 839 | . 97 | . 542 |
| Februery | 323 | 197 | 235 | . 653 | . 68 | . 422 |
| Merch. | 310 | 182 | 226 | . 628 | . 72 | . 406 |
| April. | 362 | 166 | 213 | . 592 | . 66 | . 383 |
| Mey... | 362 | 126 | 178 | . 494 | . 57 | . 319 |
| June. | 430 | 106 | 202 | . 561 | . 63 | . 363 |
| July. | 770 | 91 | 198 | . 550 | . 63 | . 355 |
| August. | 1,940 | 100 | 307 | . 853 | . 98 | . 551 |
| September | 487 | 90 | 116 | . 322 | . 36 | . 208 |
| The year. | 7,590 | 90 | 321 | . 892 | 12.10 | .577 |
| October..... | 100 | 82 | 88.6 | .246 |  |  |
| November. | 153 | 85 | 98.1 | . 272 | . 30 | . 176 |
| December. | 830 | 100 | 166 | . 461 | . 53 | . 298 |
| January. | 1,820 | 105 | 250 | . 694 | . 80 | . 449 |
| Februery. | 3,590 | 328 | 839 | 2.33 | 2.43 | 1.51 |
| Merch. | 1,190 | 260 | 546 | 1.52 | 1.75 | . 982 |
| Apr11. | 1,150 | 191 | 344 | . 956 | 1.07 | . 618 |
| Mey. . | 229 | 147 | 183 | . 508 | . 59 | . 328 |
| June. | 267 | 112 | 140 | . 389 | . 43 | . 251 |
| July. | 364 | 97 | 163 | . 453 | . 52 | . 293 |
| August. | 710 | 98 | 154 | . 428 | . 49 | . 277 |
| Septeraber | 106 | 69 | 82.8 | .230 | . 26 | .149 |
| The jeer | 3,590 | 69 | 251 | . 697 | 9.45 | . 450 |
| October....... | 102 | 66 |  |  |  |  |
| November. | 134 | 77 | 99.3 | . 2176 | . 25 | .140 |
| December. | 110 | 78 | 90.7 | . 252 | . 29 | . 163 |
| Jonuary. | 354 | 76 | 121 | .336 | . 39 | . 217 |
| Februery | 1,080 | 95 | 389 | 1.08 | 1.17 | . 698 |
| March. | 397 | 132 | 199 | . 553 | . 64 | . 357 |
| April. | 750 | 135 | 282 | . 783 | .87 | . 506 |
| May... | 1,680 | 109 | 249 | . 692 | . 80 | . 447 |
| June. | 1,460 | 178 | 544 | 1.51 | 1.69 | . 976 |
| July... | 955 | 155 | 246 | . 683 | . 79 | . 441 |
| August. | 9,160 | 143 | 1,017 | 2.82 | 3.25 | 1.82 |
| September | 1,320 | 176 | 332 | . 922 | 1.03 | . 596 |
| The yeer | 9,160 | 66 | 303 | . 842 | 11.48 | .544 |
| October. | 241 | 128 | 164 | . 456 | . 53 | . 295 |
| November | 1,120, | 144 | 275 | . 764 | . 85 | . 494 |
| December | 1,690 | 168 | 415 | 1.15 | 1.33 | . 743 |
| Jenuary. | 616 | 254 | 379 | 1.05 | 1.21 | . 679 |
| February. | 327 | 170 | 221 | . 614 | . 64 | . 397 |
| March. | 954 | 155 | 298 | . 828 | . 95 | . 535 |
| April. | 1,640 | 192 | 414 | 1.15 | 1.28 | . 743 |
| Mey... | 188 | 108 | 142 | . 394 | . 45 | . 255 |
| June. | 271 | 103 | 137 | . 381 | . 43 | . 246 |
| July. | 504 | 117 | 210 | . 583 | . 67 | . 377 |
| August. | 120 | 78 | 92.1 | . 256 | . 30 | . 165 |
| September | 81 | 58 | 71.6 | .199 | . 22 | .129 |
| The year. | 1,690 | 58 | 235 | . 653 | 8.86 | . 422 |
| October...... | 81 |  |  |  |  |  |
| November. | 93 | 63 | 71.0 | . 197 | . 22 | . 122 |
| December. | 154 | 69 | 90.5 | .251 | . 29 | . 162 |
| Januery. | 114 | 80 | 91.6 | .254 | . 29 | . 164 |
| February | 258 | 90 | 132 | .367 | . 38 | . 237 |
| Merch. | 730 | 97 | 212 | . 589 | . 68 | . 381 |
| April. | 235 | 86 | 136 | . 378 | . 42 | . 244 |
| Mey. | 7,840 | 66 | 675 | 1.88 | 2.17 | 1.22 |
| June. | 2,170 | 159 | 380 | 1.06 | 1.18 | . 685 |
| July. | 264 | 104 | 156 | . 433 | . 50 | . 280 |
| August. | 1,710 | 100 | 458 | 1.27 | 1.46 | . 821 |
| September. | 448 | 111 | 165 | . 458 | . 51 | . 296 |
| The yeer. | 7,840 | 60 | 221 | .614 . | 8.32 | .397 |

Monthly discharge of Middie Rivsr near Orottoee, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Diecharge in million gallone per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. . . . . . . . . . . . . . . . . . . | 10,400 | 125 | 1,098 | 3.05 | 3.52 | 1.97 |
| November. | 494 | 218 | 300 | . 833 | . 93 | . 538 |
| December. | 4,300 | 156 | 498 | 1.38 | 1.59 | . 892 |
| January. | 1,140 | 314 | 476 | 1.32 | 1.52 | . 853 |
| February. | 1,610 | 301 | 669 | 1.86 | 1.94 | 1.20 |
| March. | 2,110 | 258 | 666 | 1.85 | 2.13 | 1.20 |
| April. | 1,760 | 262 | 444 | 1.23 | 1.37 | . 795 |
| May. . . | 828 | 240 | 386 | 1.07 | 1.23 | . 692 |
| June. | 779 | 172 | 343 | . 953 | 1.06 | . 616 |
| July..... | 1,710 | 156 | 316 | . 878 | 1.01 | . 567 |
| August. | 162 | 108 | 127 | . 353 | . 41 | . 228 |
| September. | 128 | 87 | 98.4 | .273 | . 30 | .176 |
| The year.................... | 10,400 | 87 | 452 | 1.26 | 17.01 | .814 |

Yearly discharge of Middie River near Grottoss, va.

| Year | Yaar ending Sept. 30 |  |  |  | Calsndar jasar |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\left\lvert\, \begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inche } \end{aligned}\right.$ | D1scharge in million gallons per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inchee } \end{aligned}$ | Diecharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Psr equare mils |  |  |
| 1926. | 224 | 0.622 | 8.47 | 0.402 | - | - | - | - |
| 1928 | 364 | 1.01 | 13.77 | . 653 | 321 | 0.892 | 12.15 | 0.577 |
| 1929 | 304 | . 844 | 11.46 | . 545 | 324 | . 900 | 12.22 | . 582 |
| 1930. | 176 | . 489 | 6.62 | .316 | 129 | . 358 | 4.87 | . 231 |
| 1931. | 165 | . 458 | 6.22 | . 296 | 167 | . 464 | 6.30 | .300 |
| 1932. | 186 | . 517 | 7.02 | . 334 | 271 | . 753 | 10.27 | . 487 |
| 1933. | 395 | 1.10 | 14.90 | . 711 | 310 | . 861 | 11.71 | . 556 |
| 1934. | 152 | . 422 | 5.71 | .273 | 226 | . 628 | 8.53 | . 406 |
| 1935 | 490 | 1.36 | 18.48 | . 879 | 461 | 1.28 | 17.37 | . 827 |
| 1936. | 520 | 1.44 | 19.66 | . 931 | 621 | 1.45 | 19.68 | . 937 |
| 1937. | 428 | 1.19 | 16.16 | . 769 | 519 | 1.44 | 19.56 |  |
| 1938. | 321 | . 892 | 12.10 | . 577 | 194 | . 539 | 7.31 | . 348 |
| 1939. | 251 | . 687 | 9.45 | . 450 | 243 | . 675 | 9.19 | . 436 |
| 1940. | 303 | . 842 | 11.48 | . 544 | 352 | . 978 | 13.34 | . 632 |
| 1941. | 235 | . 653 | 8.86 | . 422 | 183 | . 508 | 6.88 | . 328 |
| 1942. | 221 | . 614 | 8.32 | . 397 | 362 | 1.01 | 13.63 | . 653 |
| 1943. | 452 | 1.26 | 17.01 | . 814 | - | - | - | - |
| Highest. | 520 | 1.44 | 19.66 | . 931 | 521 | 1.45 | 19.68 | . 937 |
| Average. | 305 | . 8477 | 11.51 | . 547 | 306 | . 850 | 11.53 | . 549 |
| Lowest. | 152 | . 422 | 5.71 | .273 | 129 | . 358 | 4.87 | . 231 |

## Lew1s Creek near staunton, Va .

Location.- Staff gage, lat. $38^{\circ} 09^{\prime 3} 3^{\prime \prime}$, long. $79^{\circ} 02^{19} 7^{\prime \prime}$, at private bridge 1.7 miles upatrear from poague Run and about' 2 miles northeast of Staunton, Augusta County. Dralnage area.- 18 square miles.
Recorcs avallable.- July 1905 to July 1906.
Extremes.- Maximum diecharge observed, 92 second-feet June 25, 1906 (gage he1ght, 1. 94 feet , from rating curve extended above 13 second-feet; minimum observed, 1.2 second-
feet May 17, 1906.

| Month | Discharge in second-feet |  |  |  | Runoff in <br> Inchee | D1scharge in million gallone per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Par square mile |  |  |
| 1905 |  |  |  |  |  |  |
| August.... <br> September. | 23.5 | 1.9 | 5.98 | 0.332 | 0.38 | 0.215 |
|  | 5.5 | 1.4 | 3.15 | . 175 | . 20 | . 113 |
|  | 5.5 | 1.9 | 2.76 | .153 | . 17 | . 099 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| November. | 9.7 6.8 | 1.4 | 3.46 | . 192 | . 21 | - 124 |
| January.. | 6.8 44.9 | 1.9 2.3 | 3.34 | . 186 | .21 | . 120 |
| February. | 4.9 5.5 | 2.3 | 6.58 3.61 | . 366 | . 42 | . 237 |
| March. | 31.4 | 4.0 | 9.70 | .539 | . 62 | . 130 |
| April. | 12.7 | 2.3 | 6.06 | . 337 | . 38 | . 218 |
| May.. | 6.6 | 1.2 | 7.41 | . 412 | . 48 | . 266 |
| June...... | 9.2 | 3.8 | 12.3 | . 683 | . 76 | . 441 |
| July 1-15. | 9.1 | 3.8 | 6.17 | .343 | . 19 | . 222 |

## South River at Wayneeboro, Va.

Location.- Water-atage recorder, lat. $38^{\circ} 03^{\prime \prime} 40^{\prime \prime}$, Iong. $78^{\circ} 53^{\prime \prime} 50^{\prime \prime}$, at highway bridge Just upstream from Baker Spring, in Waynesboro, Augueta County, and 4 miles downstream from Back Creek. Datum of gage $1 \mathrm{~s} 1,277.13$ feet above mean sea level, datum of 1929, supplementary adjuetment of 1943.
Drainage area.- 144 square milee.
Fecorcs evallable.- July 1928 to September 1943.
Extremea.- Maximum discharge, 12,000 second-feet Oct. 15, 1942 (gage height, 14.8 feet) from rating curve extended above 5,000 second-feet by logarithmic plotting; minimum da11y, 21 second-feet oct. 6, 1939.
Remarks:- Records of discharge from Oct. 1, 1933 to Sept. 30, 1943 Include diversion by F. I. du Pont de Nemours \& Co., which started to divert water Aug. 17, 1929. Records do not include water diverted from a spring by city of waynesboro about 3 miles above station. Flow regulated by mill above station. Records of water diverted can be obtained from E. I. du Pont de Nemours \& Co., Waynesboro, and from city of Wayneeboro.

Monthly discharge of South River at Wayneeboro, Va.

| Month | Discharge in eecond-feet |  |  |  | Runoff in <br> inchee | Discharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1nimum | Mean | Per equare mile |  |  |
| August. . . . 1928 September . . . . | $\begin{array}{r} 868 \\ 3,730 \end{array}$ | $\begin{array}{r} 51 \\ 106 \end{array}$ | $\begin{aligned} & 177 \\ & 458 \end{aligned}$ |  |  |  |
| October. . . . . . . . |  |  |  |  |  |  |
| November. . | 121 91 | 86 70 | $\begin{array}{r} 120 \\ 78.5 \end{array}$ |  |  |  |
| December. | 124 | 65 | 80.2 |  |  |  |
| January.. | 642 | 71 | 159 |  |  |  |
| February. | 518 | 100 | 157 |  |  |  |
| March. | 694 | 157 | 297 |  |  |  |
| April. May... | 1,640 | 110 | 321 |  |  |  |
| May.. | 1,600 226 | 148 | 347 |  |  |  |
| July. | 227 | 74 | 115 |  |  |  |
| August.. | 79 | 47 | 58.7 |  |  |  |
| September | 54 | 45 | 47.1 |  |  |  |
| The jear. | 1,640 | 45 | 161 |  |  |  |
| October....... | 1,450 |  |  |  |  |  |
| November. . | 1, 261 | 84 | 126 |  |  |  |
| December... | 236 | 84 | 112 |  |  |  |
| February.... | 185 | 90 | 118 |  |  |  |
| March.. | 1,240 | 83 | 204 |  |  |  |
| April. | 171 | 58 | 85.2 |  |  |  |
| May.. | 63. | 28 | 45.8 |  |  |  |
| June. | 93 | 28 | 42.0 |  |  |  |
| July... | 63 | 24 | 27.8 |  |  |  |
| August.. | 36 | 23 | 26.5 |  |  |  |
| September | 36 | 27 | 30.7 |  |  |  |
| The year. | 1,450 | 23 | 101 |  |  |  |

Monthly discharge of South River at Waynesboro, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | MinImum | Mean | Per square mile |  |  |
|  | $\begin{array}{r} 35 \\ 46 \\ 54 \\ 101 \\ 49 \\ 394 \\ 530 \\ 286 \\ 278 \\ 124 \\ 1,090 \\ 176 \\ \hline \end{array}$ | $\begin{aligned} & 30 \\ & 32 \\ & 22 \\ & 31 \\ & 31 \\ & 50 \\ & 86 \\ & 66 \\ & 47 \\ & 37 \\ & 31 \\ & 42 \\ & \hline \end{aligned}$ | $\begin{gathered} 32.4 \\ 37.0 \\ 31.8 \\ 39.5 \\ 38.6 \\ 102 \\ 206 \\ 153 \\ 112 \\ 58.9 \\ 138 \\ 64.9 \end{gathered}$ |  |  |  |
| The year.. | 1,090 | 22 | 84.7 |  |  |  |
| October. <br> Novambar. <br> December <br> Jenuary. <br> Pebruary <br> March. <br> April. <br> May. <br> June <br> July. <br> August. <br> Septamber | $\begin{array}{r} 51 \\ 42 \\ 46 \\ 356 \\ 297 \\ 724 \\ 340 \\ 426 \\ 67 \\ 46 \\ 32 \\ 43 \\ \hline \end{array}$ | 36 37 37 70 64 60 76 63 32 29 23 22 | $\begin{array}{r} 39.5 \\ 38.8 \\ 40.2 \\ 142 \\ 110 \\ 239 \\ 175 \\ 160 \\ 46.0 \\ 32.8 \\ 27.0 \\ 24.5 \\ \hline \end{array}$ |  |  |  |
| Tha year. | 724 | 22 | 89.6 |  |  |  |
| october.... November Dacember January. Fobmuary March. Apri1. May Juna. July. August. Soptember | $\begin{array}{r} 2,100 \\ 944 \\ 451 \\ 863 \\ 395 \\ 530 \\ 2,040 \\ 332 \\ 202 \\ 186 \\ 61 \\ 38 \end{array}$ | 25 121 70 98 162 124 154 122 55 42 31 25 | $\begin{aligned} & 185 \\ & 291 \\ & 131 \\ & 201 \\ & 238 \\ & 221 \\ & 561 \\ & 207 \\ & 86.8 \\ & 64.7 \\ & 38.5 \\ & 30.6 \end{aligned}$ |  |  |  |
| The year. | 2,100 | 25 | 287 |  |  |  |
| October 1933-34 Novamber. <br> December $\qquad$ $\qquad$ <br> January. <br> February. $\qquad$ <br> March. $\qquad$ <br> April. $\qquad$ <br> May. <br> June $\qquad$ <br> July <br> August. <br> Septamber. | 36 40 52 47 36 445 285 132 505 61 54 798 | 30 35 32 29 30 31 80 48 37 30 29 29 | $\begin{array}{r} 34.2 \\ 38.3 \\ 37.8 \\ 36.3 \\ 32.9 \\ 143 \\ 128 \\ 68.9 \\ 87.7 \\ 39.1 \\ 36.8 \\ 112 \end{array}$ |  |  |  |
| Tha year.... | 798 | 29 | 66.2 |  |  |  |
| October. <br> Novembar <br> December <br> January <br> Febmary <br> Narch. <br> April. <br> May. <br> Juna . <br> July. <br> August. <br> Saptember | 130 803 2,800 1,420 366 597 857 153 126 82 229 1,740 | 40 44 102 89 162 137 159 83 60 52 53 64 | $\begin{gathered} 56.1 \\ 109 \\ 325 \\ 243 \\ 228 \\ 248 \\ 434 \\ 117 \\ 82.6 \\ 68.1 \\ 92.1 \\ 239 \end{gathered}$ |  |  |  |
|  | 2,800 | 40 | 286 |  |  |  |


| Month | Discharge in second-feet |  |  |  | RunoffIninches | Discharge in million gallone per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum - | Mean | Per square mile |  |  |
| 1935-36 |  |  |  |  |  |  |
| October... | 155 | 52 | 63.3 |  |  |  |
| November. . | 332 | 55 | 150 |  |  |  |
| December. | 746 | 114 | 231 |  |  |  |
| Jamuary. | 1,380 | 120 | 475 |  |  |  |
| February. | 1,150 | 141 | 410 |  |  |  |
| March.... | 5,670 | 181 | 829 |  |  |  |
| April. | 516 | 141 | 291 |  |  |  |
| May...... | 305 | 74 | 133 |  |  |  |
| June. . . . . | 98 | 49 | 68.6 |  |  |  |
| July. | 91 | 53 | 59.1 |  |  |  |
| August. | 123 | 44 | 57.5 |  |  |  |
| September. | 96 | 37 | 47.6 |  |  |  |
| The year. | 5,670 | 37 | 235 |  |  |  |
| 1936-37 |  |  |  |  |  |  |
| October... November. | 1,410 | 46 | 139 |  |  |  |
| December. |  | 69 | $\begin{aligned} & 66.6 \\ & 162 \end{aligned}$ |  |  |  |
| January. | 1,510 | 212 | 470 |  |  |  |
| Pebruary. | 2,220 | 235 | 423 |  |  |  |
| March. | 310 | 145 | 205 |  |  |  |
| April. | 4,390 | 132 | 497 |  |  |  |
| May..... | 404 | 117 | 209 |  |  |  |
| June. | 165 | 83 | 110 |  |  |  |
| July. | 246 | 77 | 124 |  |  |  |
| August. | 499 | 62 | 129 |  |  |  |
| Soptember | 282 | 83 | 142 |  |  |  |
| The yea | 4,390 | 46 | 222 |  |  |  |
| October........... |  |  |  |  |  |  |
| November.. | 1,060 | 167 | 303 |  |  |  |
| December. . | - 256 | 118 | 158 |  |  |  |
| January... | 298 | 104 | 135 |  |  |  |
| February. | 136 | 92 | 110 |  |  |  |
| March. | 178 | 95 | 127 |  |  |  |
| April. | 185 | 80 | 119 |  |  |  |
| May. | 107 | 67 | 79.5 |  |  |  |
| June | 220 | 51 | 90.7 |  |  |  |
| July. | 589 | 48 | 126 |  |  |  |
| August. | 230 | 58 | 108 |  |  |  |
| September. | 74 | 49 | 56.2 |  |  |  |
| The year. | 1,360 | 48 | 155 |  |  |  |
| October. | 53 | 47 | 49.5 |  |  |  |
| November. | 142 | 49 | 69.9 |  |  |  |
| December. | 343 | 65 | 127 |  |  |  |
| January. . | 575 | 81 | 128 |  |  |  |
| Fobruary.. | 708 | 172 | 330 |  |  |  |
| March. | 529 | 133 | 235 |  |  |  |
| April. | 208 | 91 | 132 |  |  |  |
| May. | 159 | 70 | 94.3 |  |  |  |
| June | 125 | 42 | 61.3 |  |  |  |
| July.. | 105 | 40 | 54.2 |  |  |  |
| August. | 567 | 34 | 84.9 |  |  |  |
| September. | 54 | 25 | 33.9 |  |  |  |
| The year. | 708 | 25 | 115 |  |  |  |
| 1939-40 |  |  |  |  |  |  |
| November. | 63 | 40 | 49.5 |  |  |  |
| December. | 57 | 40 | 46.3 |  |  |  |
| January.. | 355 | 35 | 69.8 |  |  |  |
| February. | 410 | 40 | 176 |  |  |  |
| March. . | 204 | 76 | 116 |  |  |  |
| April. | 343 | 82 | 159 |  |  |  |
| May... | 569 | 63 | 107 |  |  |  |
| June.. | 427 | 65 | 141 |  |  |  |
| July... | 100 | 48 | 58.8 |  |  |  |
| August..... | 7,080 | 42 | 731 |  |  |  |
| September....... | 356 | 76 | 135 |  |  |  |
| The year. | 7,080 | 21 | 152 |  |  |  |

Monthly discharge of South River at Waynesboro, Va.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff <br> in <br> inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | $\left\lvert\, \begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}\right.$ |  |  |
| 1940-41 |  |  |  |  |  |  |
| October. | 95 | 45 | 61.8 |  |  |  |
| November. | 281 | 55 | 97.0 |  |  |  |
| December. | 844 | 63 | 165 |  |  |  |
| January.. | 304 | 114 | 170 |  |  |  |
| February. | 146 | 70 | 99.2 |  |  |  |
| March. .. | 175 | 70 | 107 |  |  |  |
| April. | 678 | 101 | 197 |  |  |  |
| May... | 100 | 47 | 67.9 |  |  |  |
| June. | 88 | 40 | 50.9 |  |  |  |
| July.. | 99 | 38 | 53.2 |  |  |  |
| August. | $\begin{array}{r}39 \\ 35 \\ \hline\end{array}$ | 25 26 | 35.1 31.7 |  |  |  |
| September. |  |  |  |  |  |  |
| The joar. | 844 | 25 | 94.6 |  |  |  |
| October........... | 33 |  | 30.7 |  |  |  |
| November.. | 32 | 26 | 28.6 |  |  |  |
| December. | 160 | 27 | 42.3 |  |  |  |
| January. | 72 | 32 | 43.3 |  |  |  |
| February. | 125 | 47 | 69.1 |  |  |  |
| March.... | 604 | 44 | 111 |  |  |  |
| April | 107 | 40 | 64.1 |  |  |  |
| May. | 3,020 | 41 | $\begin{aligned} & 449 \\ & 108 \end{aligned}$ |  |  |  |
| June. | $\begin{array}{r}166 \\ \hline\end{array}$ | 37 | 108.6 |  |  |  |
| August. | 247 | 34 | 118 |  |  |  |
| September | 174 | 37 | 61.5 |  |  |  |
| The year. | 3,020 | 26 | 98.3 |  |  |  |
| October. . . . . . | 6,920 |  | 603 |  |  |  |
| November. | , 168 | 94 | 121 |  |  |  |
| December. | 1,240 | 80 | 177 |  |  |  |
| January. | 477 | 120 | 179 |  |  |  |
| February. | 560 | 134 | 251 |  |  |  |
| March.... | 415 | 110 | 218 |  |  |  |
| Apr11. | 1,240 | 116 | 252 |  |  |  |
| May... | 759 | 112 | 193 |  |  |  |
| June. | 216 | 68 | 113 |  |  |  |
| July. | 105 | 48 | 66.2 |  |  |  |
| August... | 53 46 | 42 34 | $\begin{aligned} & 45.5 \\ & 38.6 \end{aligned}$ |  |  |  |
| The year. | 6,920 | 34 | 188 |  |  |  |

Yearly discharge of South River at Waynesboro, Va

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runoffininches | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square m118 |  |  |
| 1829.. | 161 |  |  |  | 178 |  |  |  |
| 1930. | 101 |  |  |  | 69.9 |  |  |  |
| 1931. | 84.7 |  |  |  | 86.1 |  |  |  |
| 1932. | 89.6 |  |  |  | 130 |  |  |  |
| 1933.. | 187 |  |  |  | 144 |  |  |  |
| 1934. | 66.2 |  |  |  | 98.3 |  |  |  |
| 1935. | 186 |  |  |  | 182 |  |  |  |
| 1936. | 235 |  |  |  | 228 |  |  |  |
| 1937. | 222 |  |  |  | 266 |  |  |  |
| 1938. | 155 |  |  |  | 99.8 |  |  |  |
| 1939. | 115 |  |  |  | 106 |  |  |  |
| 1940. | 152 |  |  |  | 168 |  |  |  |
| 1941. | 94.6 |  |  |  | 76.0 |  |  |  |
| 1942. | 98.3 |  |  |  | 166 |  |  |  |
| 1943. | 188 |  |  |  | - |  |  |  |

## South River at Basic City, Va.

Location.- Chain gage, lat. $38^{\circ} 04^{\prime} 48^{\prime \prime}$, long. $78^{\circ} 52,30^{\prime \prime}$, at highway bridee l mile downstrean from Chesapeake \& Ohio Rallway bridge at Besic City and half a mile northeast of Waynesboro, Augusta County.
Drainage area.- 152 square miles.
Fecords available.- July 1905 to July 1906.
Extremes.- Maximum discharge observed, 972 second-feet Dec. 21, 1905 (gage height, 5.5 feet), from rating curve extended above 220 second-feet; minimum, 7 second-feet Nov. 28, 1905.
Remarks.- Flow regulated by mill above station.

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Dlecharge in million gallone per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | Per square m11e |  |  |
| 1905 |  |  |  |  |  |  |
| July............ | 786 | 41 | 159 | 1.05 | 1.21 |  |
| August <br> Sertember. | 135 | 29 | 70.9 | . 466 | . 54 | 0.679 .301 |
|  | 208 | 19 | 58.2 | . 383 | . 43 | .248 |
| 1905-6 |  |  |  |  |  |  |
| November. . . | 91 | 12 7 | 42.2 23.4 |  | . 32 | . 180 |
| December... | 972 | 19 | ${ }_{160}{ }^{23} 4$ | 1.154 | . 17 | . 100 |
| January. | 750 | 91 | 160 | 1.05 | 1.21 | . 679 |
| February.. | 261 | 91 | 141 | -. .828 | 1.96 |  |
| March... | 897 | 112 | 276 | 1.828 | .97 2.10 | .600 1.18 |
| April. | 607 | 135 | 241 | 1.59 | 1.77 | 1.18 |
| May..... | 159 | 55 | 106 | -. .700 | 1.77 | 1.03 |
| June.... . | 953 | 41 | 154 | 1.01 | 1.13 | . 455 |
| July 1-15.. | 91 | 29 | 62.5 | 1.411 | -. 23 |  |

South RIver at Harrieton, Va.
Location. - Water-stage recorder, lat. $38^{\circ 13^{1}} 0^{\prime \prime \prime}$, long. $78^{\circ} 50^{\prime} 1^{\prime \prime \prime}$, at highway bridge at Harriston, Augusta County, half a mile downstream from Still Run and 7 milee up-
stream from confluepce with North River. Datum of gage is 1, 127.29 feet above mean sea level, datum of 1929. Prior to Sept. 1, 1938, chain gage at same site and datum.
Drainage area.- 222 square miles.
Records avallable. - February 1925 to September 1943.
Fxtremes:- Moximum discharge, 23, 100 second-foet oct. 15, 1942 (gage height, 17.2 feet), from rating curve extended above 6,000 second-feet by logarithmic ploting minimum, 17 second-feet Nov. 14, 1941; minimum dally, 25 second-feet Aug. $24,1930$.
Remarks.- Low flow regulated by $m 111$ above station.

| Month | Diecharge in second-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mile |  |  |
| 1925 |  | , |  |  |  |  |
| February 15-28. | 623 | 257 | 400 | 1.80 | 0.94 | 1.16 |
| March. | 257 | 145 | 191 | . 860 | . 99 | . 556 |
| April. | 366 | 106 | 140 | . 630 | . 70 | . 407 |
| May. | 416 | 104 | 180 | . 811 | .94 | . 524 |
| June | 209 | 73 | 103 | . 464 | . 52 | . 300 |
| July. | 136 | 58 | - 80.9 | . 364 | . 42 | . 235 |
| August. | 78 | 45 | 62.5 | . 282 | . 38 | . 182 |
| September. | 113 | 44 | 56.3 | .254 | .23 | .164 |
| October....... |  |  |  |  |  |  |
| November. | 128 | 48 | 54.7 | . 246 | . 28 | 159 |
| December. |  | 48 | 60.0 | . 270 | . 30 | . 175 |
| January. | 1,230 | - | 195 | 1.856 | .99 1.31 | . 553 |
| February. | 1,230 | 253 | 511 | 2.30 | 2.40 | 1.49 |
| March. | 416 | 160 | 223 | 1.00 | 1.15 | . 646 |
| April. | 608 | 145 | 301 | 1.36 | 1.52 | . 879 |
| May. | 148 | 84 | 119 | . 536 | . 62 | . 346 |
| June. | 106 | 50 | 77.1 | . 347 | . 39 | . 224 |
| July. | 174 | 45 | 69.8 | . 314 | . 36 | . 203 |
| August | 270 | 41 | 77.2 | . 348 | . 40 | . 225 |
| September | 92 | 50 | 68.7 | . 309 | . 34 | . 200 |
| The year | 1,410 | - | 165 | .743 | 10.06 | . 480 |


| Month | Discharga in sacond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallona per day par aquare mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Maan | $\begin{aligned} & \text { Par } \\ & \text { square } \\ & \mathrm{mfla} \end{aligned}$ |  |  |
| 1926-27 |  |  |  |  |  |  |
| October. | 86 | 54 | 64.4 | 0.290 | 0.33 | 0.187 |
| Novambar | 1,960 | 49 | 337 | 1.52 | 1.70 | . 982 |
| Dacember | 1,350 | 110 | 299 | 1.35 | 1.56 | . 873 |
| January. | - 416 | 124 | 187 | . 842 | . 97 | .544 |
| February. | 1,410 | 133 | 408 | 1.84 | 1.92 | 1.19 |
| March.... | 497 | 108 | 229 | 1.03 | 1.19 | . 666 |
| April... | 2,340 | 205 | 523 | 2.36 | 2.63 | 1.53 |
| May. . . . | 524 | 119 | 245 | 1.10 | 1.27 | .711 |
| June.. | 163 | 67 | 105 | .473 | . 53 | . 306 |
| July.. | 155 | 68 | 88.5 | . 399 | . 46 | . 258 |
| August. | 185 84 | 65 60 | $\begin{gathered} 104 \\ 72.3 \end{gathered}$ | . 468 | .54 .36 | . 302 |
| Tha yaar................... | 2,340 | 49 | 220 | . 991 | 13.46 | . 641 |
| Octobar.......... | 2,300 | 68 | 462 | 2.08 | 2.40 | 1.34 |
| November | 1,160 | 119 | 253 | 1.14 | 1.27 | .737 |
| December | 2,370 | 160 | 476 | 2.14 | 2.47 | 1.38 |
| January. | 295 | 110 | 173 | . 779 | . 90 | . 503 |
| Fabruary. | 616 | 146 | 271 | 1.22 | 1.32 | . 789 |
| March. | 270 | 131 | 184 | .829 | . 96 | . 536 |
| April. | 1,640 | 141 | 387 | 1.74 | 1.94 | 1.12 |
| May. | 1,780 | 133 | 408 | 1.84 | 2.12 | 1.19 |
| Juna. | 274 | 96 | 129 | . 581 | . 65 | .376 |
| July. | 266 | 72 | 122 | . 550 | . 63 | . 355 |
| August. | 1,570 | 67 | 269 | 1.22 | 1.41 | . 789 |
| Saptembar. | 7,270 | 172 | 700 | 3.15 | 3.51 | .204 |
| The y | 7,270 | 67 | 319 | 1.44 | 19.58 | .931 |
| Octobar........... | 338 | 114 | 170 | . 766 | . 88 | . 495 |
| Novamber. | 166 | 88 | 105 | .473 | . 53 | . 306 |
| December. | 158. | 78 | 111 | .500 | . 58 | .323 |
| January. | 1,290 | 91 | 258 | 1.16 | 1. 34 | . 750 |
| February. | 970 | 144 | 262 | 1.18 | 1.23 | .763 |
| March. | 1,290 | 234 | 491 | 2.21 | 2.55 | 1.43 |
| April. | 4,890 | 166 | 682 | 2.62 | 2.92 | 1.69 |
| May... | 3,350 | 209 | 497 | 2.24 | 2.58 | 1.45 |
| Juna | 383 | 131 | 198 | -892 | 1.00 | .677 |
| July.. | 360 | 83 | 143 | -644 | . 74 | . 416 |
| Auguat. | 91 86 | 56 54 | 72.1 68.2 | .325 .307 | .38 .34 | . 210 |
| Saptembar. | 86 | 54 |  | . 307 | . 34 | . 198 |
| The | 4,890 | 54 | 246 | 1.11 | 15.07 | . 717 |
| Octobar........... | $4,480$ | 78 | 460 | 2.07 | 2.39 | 1.34 |
| November |  | 116 | 208 | .937 | 1.05 | . 606 |
| Decembar | 406 | 110 | 176 | . 793 | . 91 | . 513 |
| January. | 316 | 124 | 183 | . 824 | . 95 | . 533 |
| February | 674 | 149 | 253 | 1.14 | 1.19 | . 737 |
| March.. | 2,140 | 124 | 334 | 1.50 | 1.73 | . 969 |
| Apr11.. | 266 | 96 | 150 | . 676 | -75 | . 437 |
| May... | 124 | 52 | 83.2 | . 375 | . 43 | . 242 |
| Juna. | 149 | 47 | 67.8 | . 305 | . 34 | . 197 |
| July. | 59 | 35 | 47.3 | . 213 | . 25 | . 138 |
| August. Saptamba | 66 <br> 52 | 25 29 | 42.1 41.0 | . 195 | . 21 | . 120 |
| The ye | 4,480 | 25 | 170 | .766 | 10.42 | . 495 |
| Octobar.......... | 70 | 32 | 46.5 | . 209 | . 24 | .135.157 |
| Novembar. | 8381 | - | 64.0 | . 243 | . 27 |  |
| Decambar. |  | 40 | 56.9 | . 256 | . 30 | . 165 |
| January. | 242 | 43 | 65.4 | . 295 | . 34 | . 191 |
| Fabruary | 72 | 32 | 67.0 | . 257 | . 27 | . 166 |
| March.. | 645 | 72 | 162 | . 730 | . 84 | . 472 |
| April... | 970 | 151 | 334 | 1.50 | 1.67 | . 969 |
| May...... | 410 | 112 | 242 | 1.09 | 1.26 | . 704 |
| June.... | 348 |  | 165 | . 743 | . 83 | - 480 |
| July. | 180 | 74 | 99.5 | . 448 | . 52 | . 290 |
| Saptembar...................... | 2,000211 | 59 | 240 | 1.08 | 1.24 | . 698 |
|  |  |  | 87.7 | .395 | - 44 | . 255 |
| The jear | 2,000 | 32 | 134 | . 604 | 8.22 | . 390 |

Monthly discharge of South River at Harriston, Va.--Continued

| Month | Discharge in second-feet |  |  |  | kunoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | $\left\|\begin{array}{c} \text { Per } \\ \text { equare } \\ \text { mile } \end{array}\right\|$ |  |  |
| 1931-32 |  |  |  |  |  |  |
| October.. | 87 | 38 | 56.5 | 0.255 | 0.29 | 0.165 |
| November. | 67 | 43 | 55.8 | . 251 | . 28 | . 162 |
| December. | 69 | 40 | 53.8 | .242 | . 28 | . 156 |
| Jamuary.. | 454 | 90 | 191 | . 860 | . 99 | . 656 |
| February. | 430 | 90 | 162 | . 730 | . 79 | . 472 |
| March... | 1,360 | 79 | 395 | 1.78 | 2.05 | 1.15 |
| April | 533 | 128 | 277 | 1.25 | 1.40 | . 808 |
| May. | 910 | 107 | 286 | 1.29 | 1.49 | . 834 |
| June. | 122 | 50 | 81.5 | .367 | . 41 | .237 |
| July.. | 86 | 36 | 57.2 | . 258 | . 30 | .167 |
| August... | 68 | 36 | 45.6 | . 205 | . 24 | .132 |
| September | 73 | 35 | 44.9 | . 202 | . 23 | .131 |
| The year | 1,360 | 35 | 142 | . 640 | 8.75 | . 414 |
| October. . . . . . . | 2,070 | 33 | 266 | 1.15 | 1.33 |  |
| November. | 1,850 | 189 | 452 | 2.04 | 2.28 | . 32 |
| December. | -860 | 120 | 229 | 1.03 | 1.19 | . 666 |
| January.. | 2,000 | 161 | 377 | 1.70 | 1.96 | 1.10 |
| Febmuary. | 535 | 259 | 370 | 1.67 | 1.74 | 1.08 |
| March. | 970 | 195 | 359 | 1.62 | 1.87 | 1.05 |
| April | 4,610 | 226 | 916 | 4.13 | 4.61 | 2.67 |
| May. | 509 | 178 | 311 | 1.40 | 1.61 | . 905 |
| June. | 318 | 79 | 139 | . 626 | . 70 | . 405 |
| July. | 535 | 84 | 164 | . 739 | . 85 | . 478 |
| August. | 609 | 84 | 148 | . 667 | .77 | . 431 |
| Soptembe | 132 | 77 |  | . 436 | .49 | . 288 |
| The jear | 4,610 | 33 | 317 | 1.43 | 19.40 | . 924 |
| October. . . . . . . . . |  |  |  |  |  |  |
| November. | 88 96 | 70 60 | 78.3 | . 363 | . 41 | . 228 |
| December. | 106 | 50 | 72.2 | . 325 | . 37 | . 215 |
| January. | 92 | 44 | 69.9 | . 315 | . 36 | . 204 |
| Fobruary. | 77 | 50 | 61.6 | . 277 | . 29 | . 179 |
| March. | 910 | 50 | 272 | 1.23 | 1.42 | . 795 |
| April | 532 | 142 | 232 | 1.05 | 1.17 | . 679 |
| May. | 242 | 82 | 133 | -. 599 | . 69 | . 387 |
| June | 970 | 73 | 159 | . 716 | . 80 | . 463 |
| July. | 104 | 49 | 69.5 | . 313 | . 36 | . 202 |
| Auguet. . | 131 | 50 | 68.8 | . 310 | . 36 | . 200 |
| September | 1,160 | 47 | 164 | . 739 | . 82 | . 478 |
| The year | 1,160 | 44 | 121 | . 545 | 7.42 | . 352 |
| October | 214 | 66 | 103 | . 464 | . 53 |  |
| November. | 1,460 | 70 | 182 | . 820 | . 91 | . 530 |
| December | 7,250 | 174 | 628 | 2.83 | 3.26 | 1.83 |
| January. | 3,110 | 140 | 426 | 1.92 | 2.21 | 1.24 |
| February. | 618 | 274 | 388 | 1.75 | 1.82 | 1.13 |
| March. | 1,020 | 214 | 411 | 1.85 | 2.13 | 1.20 |
| April | 1,540 | 243 | 709 | 3.19 | 3.56 | 2.06 |
| May. | 243 | 145 | 191 | . 860 | . 99 | . 556 |
| June | 1,020 | 100 | 178 | . 802 | . 89 | . 518 |
| July. | 228 | 96 | 138 | . 622 | . 72 | . 402 |
| August. | 760 | 96 | 237 | 1.07 | 1.23 | . 692 |
| September | 4,250 | 111 | 468 | 2.11 | 2.35 | 1.36 |
| The jear. | 7,250 | 66 | 337 | 1.52 | 20.60 | . 982 |
| October..... | 228 | 80 | 110 |  | 57 |  |
| November. | 515 | 111 | 264 |  | . 31 | . 320 |
| December. | 1,790 | 187 | 409 | 1.19 1.84 | 1.32 | - 1.769 |
| January. | 3,230 | 214 | 825 | 3.72 | 4.29 | 2.40 |
| February. | 1,700 | 228 | 602 | 2.71 | 2.92 | 1.75 |
| March. | 9,330 | 290 | 1,407 | 6.34 | 7.31 | 4.10 |
| April | 880 | 267 | 496 | 2.23 | 2.49 | 1.44 |
| May. | 595 | 142 | 241 | 1.09 | 1.26 | . 704 |
| June. | 700 | 92 | 163 | . 689 | . 77 | . 445 |
| July.. | 210 | 82 | 107 | . 482 | . 56 | . 312 |
| August. | 183 | 66 | 92.4 | . 416 | . 48 | . 269 |
| September. | 170 | 59 | 77.4 | . 349 | . 39 | . 226 |
| The year. | 9,330 | 59 | 399 | 1.80 | 24.49 | 1.16 |


| Month | Discharge in second-feet |  |  |  | Runoff in inchea | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}$ |  |  |
| 1936-37 |  |  |  |  |  |  |
| October.. | 3,230 102 | 69 62 | $249$ | $1.12$ | $\begin{array}{r} 1.29 \\ .43 \end{array}$ | 0.724 <br> .247 |
| November. | 403 | 80 | 260 | 1.17 | 1.35 | . 756 |
| January. | 2,990 | 348 | 820 | 3.69 | 4.25 | 2.38 |
| February. | 5,110 | 381 | 720 | 3.24 | 3.37 | 2.09 |
| March. | 453 | 213 | 313 | 1.41 | 1.63 | . 911 |
| April. | 10,100 | 200 | 869 | 3.91 | 4.36 | 2.53 |
| May... | 645 | 183 | 306 | 1.38 | 1.59 | . 892 |
| June | 238 | 102 | 153 | . 689 | . 77 | . 445 |
| July. | 282 | 100 | 156 | . 703 | . 81 | - 454 |
| August.. | 730 422 | 80 102 | 167 197 | .752 .887 | .87 .99 | .486 <br> .573 |
| The | 10,100 | 62. | 355 | 1.60 | 21.71 | 1.03 |
| October.......... | 2,720 | 124 | 705 | 3.18 | 3.67 | 2.06 |
| November | 2,250 | 256 | 473 | 2.13 | 2.38 | 1.38 |
| December | 388 | 170 | 229 | 1.03 | 1.19 | . 666 |
| January. | 44. | 152 | 207 | . 932 | 1.07 | . 502 |
| February | 250 | 166 | 205 | . 923 | . 96 | . 597 |
| March. | 361 | 178 | 232 | 1.05 | 1.21 | . 679 |
| April. | 294 | 153 | 207 | .932 | 1.04 | . 602 |
| May. | 180 | 117 | 138 | . 622 | . 72 | . 402 |
| June | 294 | 96 | 155 | . 698 | . 78 | . 451 |
| July. | 880 | 80 | 195 | . 878 | 1.01 | . 567 |
| August. | 351 | 78 | 164 | . 739 | . 85 | . 478 |
| September | 155 | 80 | 89.4 | .403 | . 45 | . 260 |
| The year.................... | 2,720 | 78 | 250 | 1.13 | 15.33 | . 730 |
| October........... | 89 | 73 | 78.9 | . 355 | . 41 | . 229 |
| November | 258 | 76 | 114 | . 514 | . 57 | . 332 |
| December. | 564 | 104 | 205 | . 923 | 1.06 | . 597 |
| January. | 896 | 134 | 200 | . 901 | 1.04 | . 582 |
| February. | 1,090 | 264 | 474 | 2.14 | 2.23 | 1.38 |
| March.... | 842 | 208 | 358 | 1.61 | 1.86 | 1.04 |
| April | 341 | 159 | 218 | . 982 | 1.10 | . 635 |
| May. | 213 | 120 | 155 | . 698 | . 80 | . 451 |
| June. | 160 | 92 | 109 | . 491 | . 55 | . 317 |
| July. | 176 | 83 | 112 | . 505 | . 58 | . 326 |
| Ausust. | 798 110 | 80 63 |  | . 680 | .78 .39 | .439 .227 |
| The year.................... | 1,090 | 63 | 186 | . 838 | 11.37 | . 542 |
| October. 1939-40 | 98 | 50 | 70.8 | . 319 | . 37 | . 206 |
| November | 104 | 70 | 89.2 | . 402 | . 45 | . 260 |
| December. | 113 | 72 | 84.9 | . 382 | . 44 | . 247 |
| January. | 512 | 60 | 114 | . 514 | . 59 | . 332 |
| Fobruary. | 664 | 66 | 267 | 1.20 | 1.29 | . 776 |
| March.. | 220 | 117 | 173 | . 779 | . 90 | . 503 |
| April. | 586 | 134 | 251 | 1.13 | 1.26 | . 730 |
| May.. | 707 | 108 | 167 | . 752 | . 87 | . 486 |
| June. | 651 | 116 | 226 | 1.02 | 1.14 | . 659 |
| July. | 146 | 86 | 104 | . 468 | . 54 | . 302 |
| August. | 8,490 | 79 127 | 925 197 | 4.17 | 4.80 .99 | 2.70 .573 |
| September | 430 | 127 | 197 | . 887 | . 99 | .573 |
| The year. | 8,490 | 50 | 222 | 1.00 | 13.64 | . 646 |
| October.......... | 150 | 86 | 109 | . 491 | . 57 | . 317 |
| November. | 403 | 87 | 148 | . 667 | . 74 | . 431 |
| December. | 1,160 | 100 | 243 | 1.09 | 1.26 | . 704 |
| January. | 450 | 188 | 255 | 1.15 | 1.33 | . 743 |
| February. | 202 | 121 | 152 | . 685 | . 71 | . 443 |
| March.... | 282 | 112 | 178 | . 802 | . 92 | . 518 |
| April. | 1,120 | 165 | 31.3 | 1.41 | 1.57 | .911 |
| May... | 165 | 85 | 117 | . 527 | . 61 | . 341 |
| June. | 132 | 69 | 89.4 | . 403 | . 45 | . 260 |
| July. | 144 | 73 | 94.7 | . 427 | . 49 | . 276 |
| August. | 76 | 56 52 | 68.1 61.6 | .307 .277 | .35 .31 | . 198 |
| September. | 70 | 52 | 61.6 | .277 | . 31 | . 179 |
| The year. | 1,160 | 52 | 152 | . 685 | 9.31 | . 443 |

Monthly diecharge of South River at Harriston, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MaxImum | M1n1mum | Mean | Per square mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| Octaber.. | 66 | 51 | 59.5 | 0.268 | 0.31 | 0.173 |
| November. | 73 | 48 | 56.4 | . 254 | . 28 | . 164 |
| December. | 194 | 53 | 76.8 | .346 | . 40 | .224 |
| January. | 100 | 58 | 72.7 | . 327 | . 38 | . 211 |
| February. | 194 | 86 | 112 | . 505 | . 53 | . 326 |
| March. | 844 | 83 | 177 | . 797 | . 92 | . 515 |
| April. | 167 | 76 | 106 | . 477 | . 53 | . 308 |
| May. | 3,260 | 60 | 595 | 2.68 | 3.09 | 1.73 |
| June | 317 | 102 | 179 | . 806 | . 90 | . 521 |
| Juiy. | 127 | 68 | 89.4 | . 403 | . 46 | . 260 |
| August. . | 356 | 62 | 181 | . 815 | . 94 | .527 |
| September | 314 | 66 | 101 | . 455 | . 51 | . 294 |
| The jear | 3,260 | 48 | 151 | . 680 | 9.25 | .439 |
| October... | 12,600 | 75 | 1,048 | 4.72 |  |  |
| November. | 304 | 149 | 195 | . 878 | . 98 | . 567 |
| December. | 1,900 | 129 | 262 | 1.18 | 1.36 | . 763 |
| January. | 782 | 204 | 286 | 1.29 | 1.49 | . 834 |
| February. | 918 | 204 | 379 | 1.71 | 1.78 | 1.11 |
| March.... | 692 | 174 | 335 | 1.51 | 1.74 | . 976 |
| April | 2,340 | 179 | 404 | 1.82 | 2.03 | 1.18 |
| May. | 1,240 | 189 | 321 | 1.45 | 1.67 | . .937 |
| June | 399 | 122 | 203 | . 914 | 1.02 | . 591 |
| July. | 216 | 92 | 120 | . 541 | . 62 | .350 |
| August. | 88 | 73 | 79.6 | . 359 | . 41 | . 232 |
| September | 78 | 62 | 70.0 | . 315 | . 35 | .204 |
| The year... | 12,600 | 62 | 309 | 1.38 | 18.89 | . 898 |

Yearly diecharge of South River at Harrieton, Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in eecond-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Diecharge in million gallons per day per square milo | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per square m11. |  |  |
| 1926. | 165 | 0.743 | 10.06 | 0.480 | 197 | 0.887 | 12.08 | 0.573 |
| 1927. | 220 | . 991 | 13.46 | . 641 | 262 | 1.18 | 16.01 | . 763 |
| 1928. | 329 | 1.44 | 19.58 | . 931 | 251 | 1.13 | 15.43 | . 730 |
| 1929. | 246 | 1.11 | 15.07 | .717 | 285 | 1.28 | 17.43 | . 827 |
| 1930. | 170 | . 766 | 10.42 | . 495 | 113 | . 509 | 6.88 | . 329 |
| $1931 .$ | 134 | . 604 | 8.22 | . 390 | 135 | . 608 | 8.26 | . 393 |
| 1932. | 142 | . 640 | 8.75 | . 414 | 207 | . 932 | 12.70 | . 602 |
| 1933. | 317 | 1.43 | 19.40 | . 924 | 257 | 1.16 | 15.75 | . 750 |
| 1934. | 121 | . 545 | 7.42 | . 352 | 179 | . 806 | 10.97 | . 521 |
| 1935. | 337 | 1.52 | 20.60 | . 982 | 326 | 1.47 | 19.92 | . 950 |
| 1936 | 399 | 1.80 | 24.49 | 1.16 | 384 | 1.73 | 23.54 | 1.12 |
| 1937 | 355 | 1.60 | 21.71 | 1.03 | 423 | 1.91 | 25.38 | 1.23 |
| 1938 | 250 | 1.13 | 15.33 | . 730 | 166 | . 748 | 10.13 | -. 483 |
| 1939 | 186 | . 838 | 11.37 | . 542 | 173 | . 779 | 10.59 | . 503 |
| 1940. | 222 | 1.00 | 13.64 | . 646 | 244 | 1.10 | 14.95 | . 711 |
| 1941. | 152 | . 685 | 9.31 | . 443 | 127 | . 572 | 7.73 | . 370 |
| 1942. | 151 | . 680 | 9.25 | .439 | 262 | 1.18 | 16.04 | . 763 |
| 1943 | 309 | 1.39 | 18.89 | . 898 |  | . 18 | 16.04 | -763 |
| Highest. | 399 | 1.80 | 24.49 | 1.16 | 423 | 1.91 | 25.88 | 1.23 |
| Average. | 233 | 1.05 | 14.28 | . 679 | 235 | 1.06 | 14.37 | 1.685 |
| Loweet.. | 121 | . 545 | 7.42 | . 352 | 113 | . 509 | 6.88 | . 329 |

South River at Port Republic, Va.
Location.- Staff gage, lat. $38^{\circ} 17^{\prime \prime} 55^{\prime \prime}$, long. $78^{\circ} 48^{\prime 3} 9^{\prime \prime}$, on county bridge just east of Port Ropublic, Rockingham County, and 300 feet upstream from North River.
Drainage area.- 248 square miles.
Records avallable.- Auguet 1895 to March 1899.
Extremes:- Marimum diocharge observed, 9,200 second-feet Sept. 30, 1896 (gage helght, I7. O feet), from rating curve extended above 1,600 second-feet; minimum discharge, 70 second-feet Aug. 24, 1895.
Remarks.- Flow regulated by power plant above station.


| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runoff in inches | D1scharge in million gallons per dey per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1896. | 290 | 1.17 | 14.41 | 0.756 | 343 | 1.38 | 17.31 | 0.892 |
| 1897. | 336 | 1.35 | 18.43 | . 873 | 297 | 1.20 | 16.26 | . 776 |
| 1898. | 257 | 1.04 | 14.03 | . 672 | 352 | 1.42 | 19.25 | . 918 |

Elk Run at Elkton, Va .
Locetion.- Chain gage, lat. $38^{\circ} 24^{\prime} 1^{\prime \prime}$, long. $78^{\circ} 3^{\prime \prime} 726^{\prime \prime}$, at highway bridge 100 feet downetream from railroad bridge, 500 feet south of the railroad etation at Elkton, Rockingham County, and half a mile upstream from mouth.
Drainage area.- 17 square miles.
Records avaliable.- July 1905 to July 1906.
Extremes.- Maximum discharge observed, 132 second-feet Apr. 15, 1906 (gage height, 4.5 feet), from rating curve extended above 17 second-feet; minimum, 5.5 second-feet at times during September 1905.

| Montr | Discharge in second-feet |  |  |  | Runoff in inches | Diecharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por square mile |  |  |
| 1905 |  |  |  |  |  |  |
| July... | 57 | 7 | 1.19 | 0.700 | 0.81 | 0.452 |
| August... | 85 | 7 | 1.41 | . 829 | . 96 | . 536 |
| Soptember | 15 | 5.5 | 6.73 | . 396 | . 44 | . 256 |
| October.. |  |  |  |  |  |  |
| November. | 27 | 6 | 9.39 | . 552 | -64 | . 357 |
| December.. | 46 | 8.5 7.5 | 9.40 11.8 | . 553 | . 62 | .357 |
| January... | 29 | $10^{\circ}$ | 15.8 | . .924 | 1.07 | . 449 |
| February. | 18 | 11 | 13.5 | .794 | . 83 | . 513 |
| March.... | 42 | 11 | 19.3 | 1.14 | 1.31 | . 737 |
| April.. | 132 | 15 | 27.0 | 1.59 | 1.77 | 1.03 |
| May. | 20 | 6.5 | 11.5 | . 676 | . 78 | . 437 |
| June...... | 54 | 5.5 | 9.90 | . 582 | . 65 | . 376 |
| July 1-15.. | 44 | 6 | 10.7 | . 629 | . 35 | . 407 |

Hawksbill Creek near Luray, Va.
Location.- Staff gage, lat. $38^{\circ} 41^{\prime} 09^{\prime \prime}$, long. $78^{\circ}{ }^{\circ} 7^{\prime 2} 24^{\prime \prime}, 400$ feet upstream from Dry Run and It miles north of Luray, Page County.
Drainage area.- 52 square miles.
Records qvailable.- June 1905 to July 1906.
Extremes:- Maximum discharge, 430 second-feet Apr. 15, 1906 (estimated gage height, 3.35 feet), from rating curve extended above 75 eecond-feet; minimum, 24 secondfeet, at times during September 1905.

Highest known stage, 19.55 feet, from well defined floodmarks, Oct. $13,1893$.
Monthly discharge of Hawkebill Creek near Juray, Va.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1905 |  |  |  |  |  |  |
| July... | 46 | 30 | 36.1 | 0.694 | 0.80 | 0.449 |
| August.. | 63 | 27 | 32.6 | . 627 | . 72 | . .405 |
| Septembe | 37 | 24 | 27.5 | . 529 | . 59 | . 342 |
| October... 1905-6 |  |  |  |  |  |  |
| November. | 46 | 27 | 30.0 | .577 | . 66 | . 373 |
| December. | 34 298 | 27 30 | 30.0 | . 577 | . 64 | . 373 |
| January.. | 298 | 30 52 | 81.7 | 1.57 | 1.81 | 1.01 |
| February. | 414 83 | 52 37 | 100 53.9 | 1.92 | 2.21 | 1.24 |
| March. | 173 | 42 | 85 | 1.04 | 1.08 | . 672 |
| April. | 430 | 69 |  | 1.64 2.37 | 1.89 | 1.06 |
| May. | 83 | 37 | 53.6 | 1.64 1.03 | 2.64 | 1.53 |
| June ${ }^{\text {July }} 1.15$ | 232 | 37 | 68.8 | 1.03 1.32 | 1.19 | . 666 |
| July 1-15. | 69 | 37 | 42.7 | 1.821 |  |  |

## North Fork Shenandoah River at Cootes Store, Va.

Location. - Water-stage recorder, lat. $38^{0} 38^{\prime \prime}$, long. $78^{0} 51^{1}$, at highway bridge at Cootee Store, Rockingham County, 1 mile downstream from Brocks Gap and $3 \frac{l}{\text { a }} \mathrm{mil}$ lee upetream from Linvilie Creok. Datum of gage is l,05l. 8 feat abovemean sea level forps of Ragineers, U. S. Army, bonch mark). Prior to Nov. 15, 1937, chain pare at aame aite and datum.
Drainage area.- 215 square miles
Recorces avallable - Febmaxy 2925 to September 1943
Fxtremes. - Maximurs discharge, 50,000 gecond-feet Oct. 15, 1942 (gage helght, 25.3 feot, from floodmark), from rating curve extended above 9,000 second-feet by logarithmic lotting and on basis of contracted opening determination at gage height 25.3 feet; minimum, 0.4 second-foot Oct. 1, 1929, Aug. 22 to Sept. 3, 1930.

Monthly discharge of North Fork Shanandoah River at Cootes Store, Va.

| Month | Diacharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1925 |  |  |  |  |  |  |
| March. | 2,060 | 48 | 224 | 1.04 |  |  |
| April | 1,840 | 37 | 209 | . 972 | $\begin{aligned} & 1.08 \\ & 1.05 \end{aligned}$ | $.628$ |
| May. | 1,620 | 26 | 196 | . 912 | 1.05 | $.589$ |
| June. | 191 | 14. | 30.2 24.3 | . 140 | . 16 | $.090$ |
| September | 2.1 | 1.5 | 1.77 | . 008 | . 01 | . 0052 |
| October........... | 5.3 | 1.5 | 2.47 | . 011 | . 01 | . 0071 |
| November. | 156 | 4.6 | 29.9 | . 139 | . 16 | . 090 |
| December. | 304 | - | 68.4 | . 318 | .37 | . 206 |
| January. | 800 | 14 | 118 | . 549 | . 63 | . 355 |
| February. | 1,410 | 170 | 520 | 2.42 | 2.52 | 1.56 |
| March.... | 304 | 39 | 105 | . 438 | . 56 | . 315 |
| April | 655 | 104 | 249 | 1.16 | 1.29 | . 750 |
| May. | 420 | 35 | 106 | . 493 | . 57 | . 319 |
| June | 37 | 10 | 22.2 | . 103 | . 11 | . 067 |
| July.. | 156 | 3.9 | 25.3 | . 118 | . 14 | . 076 |
| Auguet. | 3,670 655 | 18 |  | 1.50 .389 | 1.73 .43 |  |
| The yea | 3,670 | 1.5 | 135 | . 628 | 8.52 | . 406 |
| October. . . . . . . | 268 | 28 | 89.9 | . 418 | . 48 | . 270 |
| November. | 5,840 | 36 | 524 | 2.44 | 2.72 | 1.58 |
| December | 2,630 | 97 | 376 | 1.75 | 2.02 | 1.13 |
| January. | 251 | - | 89 | . 414 | . 48 | . 268 |
| Fobruary | 1,830 | 75 | 489 | 2.27 | 2.36 | 1.47 |
| March... | 440 | 71 | 173 | . 805 | . 93 | . 520 |
| April. | 2,470 | 179 | 705 | 3.28 | 3.66 | 2.12 |
| May. | 1,270 | 41 | 196 | . 912 | 1.05 | . 589 |
| June | 185 | 17 | 45.8 | . 213 | . 24 | . 138 |
| July.. | 48 | 12 | 22.3 | . 104 | -12 | . 067 |
| August. . . |  | 15 3.5 | 22.6 | . 1041 | . 12 | . 028 |
| September..... | 14 | 3.5 | 8.85 | . 041 |  |  |
| The year................. | 5,840 | 3.5 | 225 | 1.05 | 14.23 | . 679 |
| October........... | 1,550 | 3.5 | 268 | 1.25 | 1.44 | . 808 |
| November. | , 565 | 19 | 128 | . 595 | . 66 | .385 |
| December. | 1,690 | 34 | 265 | 1.23 | 1.42 | .795 |
| January. | 542 | 30 | 150 | . 698 | . 80 | . 451 |
| Fobruary. | 610 | 78 | 175 | . 814 | . 88 | . 526 |
| March.. | 1,140 | 57 | 233 | 1.08 | 1.24 | . 698 |
| April. | 3,910 | 104 | 553 | 2.57 | 2.87 | . 66 |
| May.. | 2,480 | 86 | 299 | 1.39 | 1.60 | . 898 |
| June. | 490 | 56 | 184 | . 856 | . 96 | . 553 |
| July. | 119 | 7.8 | 40.5 | . 188 | - 22 | -122 |
| August. | 935 | $15^{7} 8$ | 125 | . 581 | . 674 |  |
| September | 600 | 15 | 84.1 | . 391 | $\cdot 44$ | . 253 |
| The year. | 3,910 | 3.5 | 209 | . 972 | 13.20 | . 628 |

Monthly discharge of North Fork Shenandoah River at Cootes Store, Va.--Continued

| Month | Discharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| $1928-29$ <br> October. ........... <br> November. <br> December. <br> January. <br> February. <br> March. <br> April <br> May. <br> June <br> July. <br> August. <br> September. | $\begin{array}{r} 40 \\ 24 \\ 155 \\ 216 \\ 2,260 \\ 1,770 \\ 13,600 \\ 1,770 \\ 935 \\ 178 \\ 9.2 \\ 2.8 \end{array}$ | $\begin{aligned} & 14 \\ & 14 \\ & 18 \\ & 32 \\ & 44 \\ & 77 \\ & 76 \\ & 56 \\ & 40 \\ & 9.6 \\ & 1.8 \\ & .6 \end{aligned}$ | $\begin{gathered} 20.6 \\ 21.3 \\ 59.2 \\ 103 \\ 222 \\ 485 \\ 813 \\ 273 \\ 168 \\ 61.2 \\ 4.75 \\ 1.73 \end{gathered}$ | $\begin{gathered} 0.096 \\ .099 \\ .275 \\ .479 \\ 1.03 \\ 2.26 \\ 3.78 \\ 1.27 \\ .781 \\ .285 \\ .022 \\ .0080 \end{gathered}$ | $\begin{array}{r} 0.11 \\ .11 \\ .32 \\ .55 \\ 1.07 \\ 2.61 \\ 4.22 \\ 1.46 \\ .87 \\ .33 \\ .03 \\ .009 \end{array}$ | $\begin{gathered} 0.062 \\ .064 \\ .176 \\ .310 \\ .666 \\ 1.46 \\ 2.44 \\ .821 \\ .505 \\ .184 \\ .014 \\ .0052 \end{gathered}$ |
| The jear | 13,600 | . 6 | 185 | . 860 | 11.69 | . 556 |
| October.. November. December. January.. February. March.... April.... May. . . . . June..... . July..... August... September | $\begin{array}{r} 2,180 \\ 2,880 \\ 640 \\ 270 \\ 640 \\ 980 \\ 144 \\ 42 \\ 178 \\ 12 \\ .9 \\ .9 \end{array}$ | 74 74 86 30 26 66 44 11 6.5 1.1 .4 .4 | $\begin{gathered} 304 \\ 351 \\ 202 \\ 90.5 \\ 158 \\ 204 \\ 70.0 \\ 30.4 \\ 46.0 \\ 3.73 \\ .52 \\ .66 \end{gathered}$ | $\begin{aligned} & 1.41 \\ & 1.63 \\ & .940 \\ & .421 \\ & .735 \\ & .949 \\ & .326 \\ & .141 \\ & .214 \\ & .017 \\ & .0024 \\ & .0031 \end{aligned}$ | $\begin{array}{r} 1.63 \\ 1.82 \\ 1.08 \\ .49 \\ .77 \\ 1.09 \\ .36 \\ .16 \\ .24 \\ .02 \\ .003 \\ .003 \end{array}$ | $\begin{gathered} .911 \\ 1.05 \\ .608 \\ .272 \\ .475 \\ .613 \\ .211 \\ .091 \\ .138 \\ .011 \\ .0016 \\ .0020 \end{gathered}$ |
| The year. | 2,880 | . 4 | 121 | . 563 | 7.67 | . 364 |
| October.. <br> November. <br> December <br> January. <br> February. <br> March.... <br> April. <br> May. <br> June. <br> July. <br> Avetust... <br> September. | 1.2 3.7 9.2 155 31 525 600 600 490 455 1,400 105 | $\begin{gathered} .7 \\ 1.2 \\ 2.9 \\ 6.5 \\ 6.5 \\ 33 \\ 57 \\ 56 \\ 13 \\ 16 \\ 11 \\ 13 \end{gathered}$ | $\begin{gathered} .76 \\ 3.26 \\ 4.82 \\ 28.3 \\ 13.8 \\ 97.7 \\ 293 \\ 181 \\ 125 \\ 86.1 \\ 216 \\ 29.5 \end{gathered}$ | .0035 .015 .022 .132 .064 .454 1.36 .842 .581 .400 1.00 .137 | $\begin{gathered} .004 \\ .02 \\ .03 \\ .15 \\ .07 \\ .52 \\ 1.52 \\ .97 \\ .65 \\ .46 \\ 1.15 \\ .15 \end{gathered}$ | $\begin{aligned} & .0023 \\ & .0097 \\ & .014 \\ & .085 \\ & .041 \\ & .293 \\ & .879 \\ & .544 \\ & .376 \\ & .259 \\ & .646 \\ & .088 \end{aligned}$ |
| The year | 1,400 | .7 | 90.3 | . 420 | 5.69 | . 271 |
| October. November. December. January. February. March. April. May. June. July. August September | 11 4.5 4.5 63 2,640 2,640 525 3,200 92 35 3.4 1.2 | 4.5 3.4 3.4 15 20 26 68 48 11 3.4 1.2 .9 | 5.96 3.84 4.07 29.3 220 480 155 569 29.9 10.2 1.50 1.10 | .028 .018 .019 .136 1.02 2.23 .721 2.65 .139 .047 .0070 .0051 | $\begin{array}{r} .03 \\ .02 \\ .02 \\ .16 \\ 1.10 \\ 2.57 \\ .80 \\ 3.06 \\ .16 \\ .05 \\ .008 \\ .006 \end{array}$ | $\begin{gathered} .018 \\ .012 \\ .012 \\ .088 \\ .659 \\ 1.44 \\ .466 \\ 1.71 \\ .090 \\ .030 \\ .0045 \\ .0033 \\ \hline \end{gathered}$ |
| The year. | 3,200 | . 9 | 126 | . 586 | 7.98 | .379 |
| October. ........ <br> November. . . . . . . . . <br> December <br> January. <br> February. <br> March. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September. . ...... | $\begin{array}{r} 2,880 \\ 2,040 \\ 800 \\ 2,640 \\ 490 \\ 1,840 \\ 5,160 \\ 1,340 \\ 216 \\ 270 \\ 1,970 \\ 190 \end{array}$ | .6 88 30 86 99 83 119 107 7.9 4.5 6.0 15 | $\begin{gathered} 320 \\ 353 \\ 145 \\ 323 \\ 201 \\ 340 \\ 946 \\ 329 \\ 58.7 \\ 41.1 \\ 144 \\ 58.8 \end{gathered}$ | $\begin{aligned} & 1.49 \\ & 1.64 \\ & .674 \\ & 1.50 \\ & .935 \\ & 1.58 \\ & 4.40 \\ & 1.53 \\ & .273 \\ & .191 \\ & .670 \\ & .273 \end{aligned}$ | $\begin{array}{r} 1.72 \\ 1.83 \\ .78 \\ 1.73 \\ .97 \\ 1.82 \\ 4.91 \\ 1.76 \\ .30 \\ .22 \\ .77 \\ .30 \end{array}$ | $\begin{gathered} .963 \\ 1.06 \\ .436 \\ .969 \\ .604 \\ 1.02 \\ 2.84 \\ .989 \\ .176 \\ .123 \\ .433 \\ .176 \end{gathered}$ |
| The year.. | 5,160 | . 6 | 271 | 1.26 | 17.11 | . 814 |

Monthly discharge of North Fork Shenandoah River at Cootes Store, Va..-Continued

| Month | Discharge in second-feet |  |  |  | Runorf in <br> inches | D1scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mear | Per square mile |  |  |
| 1933-34 |  |  |  |  |  |  |
| October. | 15 | 4.5 | 8.01 | 0.037 | 0.04 | 0.024 |
| November. | 9.4 | 4.5 | 6.14 | . 029 | . 03 | . 019 |
| December. | 20 | 4.5 | 8.91 | . 041 | . 05 | . 026 |
| January. | 53 | 8.3 | 25.4 | . 118 | . 14 | . 076 |
| February. | 19 | 8.3 | 11.3 | . 053 | . 06 | .034 |
| March. .. | 1,520 | 11 | 287 | 1.33 | 1.53 | . 860 |
| April | 325 | 46 | 129 | . 600 | . 67 | . 388 |
| May. | 116 | 32 | 61.2 | . 285 | . 33 | . 184 |
| June | 233 | 7.5 | 40.7 | . 189 | . 21 | . 122 |
| July. | 18 | 1.0 | 5.04 | . 023 | . 03 | . 015 |
| August. | 29 | 1.9 | 10.9 | . 051 | . 06 | . 033 |
| September | 1,460 | 2.8 | 101 | . 470 | . 52 | . 304 |
| The year. | 1,520 | 1.0 | 58.1 | . 270 | 3.67 | . 175 |
| October. | 116 | 10 | 36.5 | . 170 | . 20 | . 110 |
| November | 154 | 7 | 31.7 | .147 | . 16 | . 095 |
| December | 1,400 | 40 | 210 | . 877 | 1.13 | -631 |
| January. | 2,800 | 40 | 327 | 1.52 | 1.75 | . 982 |
| February | 2,110 | 134 | 530 | 2.47 | 2.57 | 1.60 |
| March. | 770 | 116 | 268 | 1.25 | 1.44 | . 808 |
| April. | 2,330 | 77 | 596 | 2.77 | 3.09 | 1.79 |
| May . | 1,640 | 62 | 199 | . 926 | 1.07 | . 598 |
| June | 390 | 22 | 93.7 | . 436 | . 49 | . 282 |
| July. | 174 | 7 | 31.5 | . 147 | . 17 | . 095 |
| August. | 233 | 8 | 37.0 | . 172 | . 20 | . 111 |
| September | 2,180 | 9 | 237 | 1.10 | 1.23 | . 711 |
| The year. | 2,800 | 7 | 214 | . 995 | 13.50 | .643 |
| October........... | 86 | 4 | 11.4 | . 053 | . 06 | . 034 |
| November. | 2,560 | 19 | 259 | 1.20 | 2.34 | . 776 |
| December. | , 525 | 52 | 153 | . 712 | . 82 | . 450 |
| Jatuary.. | 1,390 | 58 | 455 | 2.12 | 2.44 | 1.37 |
| February | 4,000 | 45 | 613 | 2.85 | 3.07 | 1.84 |
| March. | 14,900 | 179 | 1,536 | 7.14 | 8.23 | 4.61 .866 |
| April. | 990 420 | 25 17 | 288 67.5 | 1.34 .314 | 1.50 .36 | . 866 |
| June | 116 | 9 | 29.8 | . 139 | . 16 | . 090 |
| July | 28 | 4 | 10.1 | . 047 | . 05 | . 030 |
| Angust. | 5 5 | 1 | 2.6 3.2 | $\begin{array}{r} .012 \\ .015 \end{array}$ | . .01 | $.0078$ $.0097$ |
|  |  |  |  |  |  |  |
| The year. | 14,900 | 1 | 285 | 1.33 | 18.06 | . 860 |
| October. | 2,880 |  | 140 | . 651 | . 75 | . 421 |
| November. | 21 | 6 | 13.7 | . 064 | . 07 | . 041 |
| December. | 620 | 8 | 193 | \%.898 | 1.04 | . 580 |
| January | 2,960 | 200 | 656 | 3.05 | 3.52 | 1.97 |
| February. | 4,120 | 135 | 447 | 2.08 | 2.17 | 1.34 |
| March... | 225 | 43 | 100 | . 465 | . 54 | . 301 |
| April | 2,720 | 48 | $356$ | 1.66 | 1.85 | 1.07 |
| May.. | 420 | 57 | 143 | . 665 | . 77 | . 430 |
| June. | 420 | 26 | 89.9 | . 413 | . 46 | . 267 |
| July.. |  | 4 | 18.5 | . 086 | $\begin{array}{r} .10 \end{array}$ | $.056$ |
| August.. September | 3,880 1,060 | 2 17 | 284 221 | $\begin{aligned} & 1.32 \\ & 1.03 \end{aligned}$ | $\begin{aligned} & 1.52 \\ & 1.15 \end{aligned}$ | $\begin{array}{r} .853 \\ .666 \end{array}$ |
| The year. | 4,120 | 2 | 221 | 1.03 | 13.94 | . 666 |
| October........... | 3,800 | 15 | 518 | 2.41 | 2.78 | 1.56 |
| November. | 347 | 59 | 156 | . 726 | . 81 | . 469 |
| December. | 150 | 55 | 82.9 | . 386 | . 44 | . 249 |
| January . . | 331 | 44 | 91.3 | . 425 | . 49 | . 275 |
| February. | 15.3 | 60 | 104 | . 494 | . 50 | . 313 |
| March.. | 247 | 59 | 110 | . 553 | . 64 | . 357 |
| April. | 245 | 78 | 143 | . 665 | . 74 | . 430 |
| May.. | 1,200 | 29 | 136 | . 633 | . 73 | - 409 |
| June. | 132 | 26 | 67.3 | . 313 | . 35 | . 202 |
| July. | 651 | 13 | 103 | . 479 | . 55 | . 310 |
| August... | 700 | 8 | 147 | . 684 | . 79 | . 442 |
| September. | 25 | 4 | 7.9 | .037 | . 04 | . 024 |
| The year..... | 3,800 | 4 | 140 | . 651 | 8.86 | . 421 |



Yearly discharge of North Fork Shenandoah River at Cootee Store, Va.

| Year | Year ending Sopt. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inche } \end{aligned}$ | Discharge in million gallons per day per equare mile | Diacharge in eecond-reet |  | Runoff in <br> inches | Diacharge in million gallone per day per aquare mile |
|  | Mean | Fer square milo |  |  | Mean | Per aquare mile |  |  |
|  | $\begin{aligned} & 135 \\ & 225 \\ & 209 \\ & 185 \\ & 121 \end{aligned}$ | $\begin{gathered} 0.628 \\ 1.05 \\ .972 \\ .860 \\ .563 \end{gathered}$ | $\begin{array}{r} 8.52 \\ 14.23 \\ 13.20 \\ 11.69 \\ 7.67 \end{array}$ | $\begin{array}{r} 0.406 \\ .679 \\ .628 \\ .556 \\ .364 \end{array}$ | $\begin{aligned} & 209 \\ & 198 \\ & 161 \\ & 248 \\ & 50.4 \end{aligned}$ | $\begin{array}{r} 0.972 \\ .921 \\ .749 \\ 1.15 \\ .234 \end{array}$ | $\begin{array}{r} 13.20 \\ 12.53 \\ 10.22 \\ 15.68 \\ 3.19 \end{array}$ | $\begin{array}{r} 0.628 \\ .595 \\ .484 \\ .743 \\ .151 \end{array}$ |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1931.......... | $90.3$ | .420.586 | $\begin{aligned} & 5.69 \\ & 7.98 \end{aligned}$ | $\begin{aligned} & .271 \\ & .379 \end{aligned}$ | $\begin{gathered} 90.8 \\ 193 \end{gathered}$ | $\begin{array}{r} .422 \\ .898 \end{array}$ | $\begin{array}{r} 5.71 \\ 12.24 \end{array}$ | $\begin{aligned} & .273 \\ & .580 \end{aligned}$ |
| 1932. |  |  |  |  |  |  |  |  |
| 1933 | 271 | 1.26 | 17.11 | $.814$$.175$ | $\begin{aligned} & 205 \\ & 79.8 \end{aligned}$ | .953.371 | 12.90 | . 616 |
| 1934 | 58.1 |  | 3.6713.50 |  |  |  | 14.23 |  |
| 1935. | 214 | . 995 |  | . 643 | 225 | 1.05 |  | . 679 |
| 1936......... | 285 | 1.331.03 | 18.0613.94 | . 860 | 280255 | 1.301.19 | 17.7016.11 | .840.769 |
| 1937.... | 221 |  |  |  |  |  |  |  |
| 1938. | 140 | 1.03 | 8.86 | . 421 | 90.8 | $\begin{aligned} & .422 \\ & .902 \end{aligned}$ | 5.73 | . 2738 |
| 1939. 1940 | 201 | $\begin{array}{r} .935 \\ .763 \end{array}$ | 12.7110.37 | $\begin{array}{r} .604 \\ .493 \end{array}$ | 194 | $\begin{array}{r} .902 \\ .837 \end{array}$ | 12.26 | .541 |
| 1940 | 164 |  |  |  |  |  |  |  |
| 1941.......... | 101 | .470.795 | 6.3910.78 | $\begin{array}{r}.304 \\ .514 \\ \hline .03\end{array}$ | $\begin{array}{r} 81.1 \\ 331 \end{array}$ | $\begin{aligned} & .377 \\ & 1.54 \end{aligned}$ | $\begin{array}{r} 5.11 \\ 20.92 \end{array}$ | $\begin{aligned} & .244 \\ & .895 \end{aligned}$ |
| 1942.... | 171 |  |  |  |  |  |  |  |
| 1943. | 345 | 1.60 | 21.78 | 1.03 |  |  | - |  |
| Highes | 345 | $\begin{array}{r} 1.60 \\ .842 \\ .270 \\ \hline \end{array}$ | $\begin{array}{r} 21.78 \\ 11.45 \\ 3.67 \\ \hline \end{array}$ | $\begin{aligned} & 1.03 \\ & .544 \\ & .175 \end{aligned}$ | $\begin{array}{r} 331 \\ 181 \\ 50.4 \\ \hline \end{array}$ | $\begin{array}{r} 1.54 \\ .842 \\ .234 \\ \hline \end{array}$ | $\begin{array}{r} 20.92 \\ 11.42 \\ 3.19 \\ \hline \end{array}$ | $\begin{array}{r} .995 \\ .544 \\ .151 \\ \hline \end{array}$ |
| A verag | 181 |  |  |  |  |  |  |  |
| Lowest | 59.1 |  |  |  |  |  |  |  |

North Fork Shenandoah River near Strasburg, Va.
Location. - Water-etage recorder, lat. $38^{\circ} 58^{\prime}$, long. $78^{\circ} 20^{\prime}$, at highway bridge 2 mileo eaot of Strasburg, Shenandoah County, 2 miles upetream from Cedar Creek, and 10 milee upotroam from confluence with South Fork. Datum of gage io 493.85 feet above mean eea level, datum of 1929. Prior to October 1930 chain gage at eame aite and dat um.
Drainage area.-772 square mileo.
Records avallable. - March 1925 to Soptember 1943.
Extremea.- Maximum discharge 100,000 second-feet Oct. 16, 1942 (gage helght, 31.2 feet, from floodmark), from rating curve extended above 46,000 eecond-reet by. logarithmic plotting; minimum, 6 second-feat Feb. 9 , 1934 (gage height, 1.52 feet); minimum da11y, 41 second-feet Sept. 26, oct. 1, 1932.
Remarks.- Low flow regulated by power plante and mlle above atation.

| Month | Diecharge in eecond-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inche a } \end{gathered}$ | Dlecharge in million gallona per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare m11e |  |  |
| 1925 |  |  |  |  |  |  |
| March 8-31.. | 3,440 |  | 844 | 1.09 | 0.97 | 0.704 |
| April... | 2,760 | 265 | 750 | . 678 | 1.12 | . 628 |
| May..... | 4,430 | 227 171 | 226 | . 293 | 1.12 | . 189 |
| June. . . . | 1,640 | 103 | 381 | . 494 | . 57 | . 319 |
| July..... | 1,640 | +94 | 148 | . 192 | . 22 | . 124 |
| Auguet... Soptember. | 163 | 74 | 100 | . 130 | .14 | . 084 |
| 1925-26 |  |  |  |  |  |  |
| October. | 242 | 100 | 141 | . 183 | . 21 | . 118 |
| November | 438 | 94 | 186 | . 241 | .27 | . 156 |
| Decomber. | 730 | - | 230 | . 298 | .34 | . 193 |
| January. | 1,920 | $-$ | 363 | . 470 | . 54 | .304 |
| February | 3,500 | 474 | 1,370 | 1.77 | 1.84 | 1.14 |
| March... | 1,270 | 302 | 494 | . 640 | . 74 | . 414 |
| April. | 1,030 | 382 | 585 | . 758 | -85 | . 490 |
| May... | 1,190 | 211 | 379 | . 491 | . 57 | . .150 |
| June. | 242 | 124 | 179 | . 232 | . 26 | . 175 |
| July. | 1,190 | 152 | 774 | 1.00 | 1.15 | . 646 |
| August... | 2,370 | 200 | 521 | . 675 | . 75 | . 436 |
| The year. | 5,870 | 94 | 446 | .578 | 7.83 | . 374 |

Monthly discharge of North Fork Shenandoah River near Strasburg, Va.--Continued

| Month | Diacharge in second-reat |  |  |  | Runoff in inches | Discharga in million gallons per day per aquare mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por square mile |  |  |
| 1926-27 |  |  |  |  |  |  |
| Octobar.. | 600 | 216 | 352 | 0.456 | 0.53 | 0.295 |
| November. | 7,780 | 226 | 1,140 | 1.48 | 1.65 | . 957 |
| Dacember. | 3,900 | 375 | 1,040 | 1.35 | 2.56 | . 873 |
| Januery. | 1,190 | - | 512 | . 663 | . 76 | . 429 |
| Fabruary. | 4,400 | 396 | 1,380 | 1.79 | 1.86 | 1.16 |
| March.... | 2,280 | 417 | , 699 | . 905 | 1.04 | . 585 |
| April. | 5,870 | 474 | 1,820 | 2.36 | 2.63 | 1.53 |
| May... | 2,550 | 313 | 738 | . 956 | 1.10 | -.618 |
| Juns | 616 | 144 | 296 | . 383 | . 43 | . 248 |
| July. | 256 | 102 | 162 | . 210 | . 24 | . 136 |
| August. | 210 | 78 | 158 | . 205 | . 24 | . 132 |
| Septembar | 195 | 49 | 140 | .181 | . 20 | . 117 |
| The year | 7,780 | 49 | 697 | . 903 | 12.24 | . 584 |
| October.. | 2,960 | 130 | 664 |  |  |  |
| Novembar. | 1,890 | 175 | 451 | . 584 | . .65 | $\begin{aligned} & .556 \\ & .377 \end{aligned}$ |
| Decamber. | 3,140 | 281 | 730 | . 946 | 1.09 | . 611 |
| January. | 770 | - | 363 | . 470 | . 54 | . 304 |
| Pebruary. | 1,490 | 313 | 559 | . 724 | . 78 | . 468 |
| March. | 1,970 | 294 | 578 | . 749 | . 86 | . 484 |
| April | 7,940 | 373 | 1,090 | 1.41 | 1.57 | . 911 |
| May | 11,000 | 386 | 1,280 | 1.66 | 1.91 | 1.07 |
| Juna | 1,490 | 274 | 649 | . 841 | .e4 | . 544 |
| July | . 731 | 123 | 274 | . 355 | . 41 | . 229 |
| August. | 1,410 | 112 | 395 | . 512 | . 59 | . 331 |
| Soptamber | 731 | 96 | 257 | . 333 | . 37 |  |
| Tha yaar | 11,000 | 96 | 608 | .788 | 10.70 | . 509 |
| October. | 205 | 109 | 155 |  |  |  |
| Novamber. | 185 | 109 | 139 | . 180 | . 20 | . 116 |
| Dacember | 579 | 123 | 274 | . 355 | . 41 | . 229 |
| January. | 770 | 127 | 306 | . 396 | . 46 | . 256 |
| Fabruary. | 3,500 | 170 | 541 | . 701 | . 73 | . 453 |
| March. | 6,100 | 373 | 1,570 | 2.03 | 2.34 | 1.31 |
| April | 12,100 | 332 | 1,380 | 2.79 | 2.00 | 1.16 |
| May. | 3,320 | 359 | 835 | 1.08 | 1.24 | . 698 |
| June. | 3,600 | 287 | 689 | . 898 | 1.00 | . 577 |
| July. | 3,320 | 170 | 632 | . 819 | . 94 | . 529 |
| August. | 200 | 102 | 152 | . 197 | . 23 | .127 |
| September | 180 | 72 | 109 | .141 | . 16 | . 091 |
| The year | 12,100 | 72 | 565 | . 732 | 9.94 | . 473 |
| October. | 6,100 | 149 | 787 | 1.02 | 1.18 | . 659 |
| November. | 6,730 | 300 | 1,020 | 1.32 | 1.47 | . 853 |
| December | 1,570 | 326 | 472 | . 611 | . 70 | . 395 |
| January. | 1,010 | 268 | 458 | . 593 | . 68 | . 383 |
| February | 1,650 | 284 | 599 | . 776 | . 81 | . 502 |
| March. | 2,420 | 294 | 641 | . 830 | . 96 | . 536 |
| Apri | 470 | 186 | 316 | . 409 | . 46 | . 264 |
| May. | 232 | 89 | 159 | . 206 | . 24 | . 133 |
| June | 449 | 65 | 160 | . 207 | . 23 | . 134 |
| July. | 186 | 56 | 90.1 | . 117 | . 13 | . 076 |
| August. | 111 | 45 | 66.7 | . 086 | . 10 | . 056 |
| Saptamber | 192 | 41 | 72.8 | . 094 | .10 | . 061 |
| The jasr. | 6,730 | 41 | 402 | . 521 | 7.06 | .337 |
| Octobsr. . . . . . . . |  |  |  |  |  |  |
| November.. | 106 | 41 | 58.9 | . 076 | . 09 | . 049 |
| Decembar. | 106 | 48 | 75.8 | . 098 | . 11 | . 063 |
| Jamuary. | 746 | 65 | 151 | -117 | -13 | . 076 |
| Fabruary. | 166 | 60 | 94.0 | . 122 | . 23 | . 127 |
| March. . | 778 | 89 | 183 | . 237 | . 27 | . 153 |
| April | 1,290 | 203 | 620 | . 803 | . 90 | . 519 |
| May. | 877 | 176 | 368 | . 477 | . 55 | . 308 |
| Juns. | 1,200 | 110 | 307 | . 398 | . 44 | . 257 |
| July. | 827 | 69 | 247 | . 320 | . 37 | . 207 |
| August. | 1,880 | 70 | 416 | . 539 | . 62 | . 348 |
| September | 362 | 72 | 162 | . 210 | . 23 | . 136 |
| The year. | 1,880 | 41 | 232 | .301 | 4.07 | . 195 |

Monthly discharge of North Fork Shenandoah River near Strasburg, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min 1 mum | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| 1931-32 |  |  |  |  |  |  |
| October. | 135 | 59 | 79.6 | 0.103 | 0.12 |  |
| November. | 98 | 56 | 76.3 | . 099 | . 11 | $.064$ |
| December | 110 | 56 | 82.0 | - 106 | . 12 | $.068$ |
| January. | 239 | 88 | 144 | . 187 | . 22 | $.121$ |
| February. | 4,550 | 111 | $\begin{array}{r}1.030 \\ \hline\end{array}$ | 1.334 | 1.53 | $\begin{aligned} & .416 \\ & .860 \end{aligned}$ |
| March. | 1,620 | 260 | 1,542 | 1.702 | . 78 | $.454$ |
| May.. | 8,850 | 351 | 1,550 | 2.01 | 2.32 | 1.30 |
| June | 364 | 138 | 223 | . 289 | . 32 | .187 |
| July. | 514 | 66 | 152 | .197 | .23 | . 127 |
| August.. | 162 | 53 | 82.7 | .107 | . 12 | . 069 |
| September | 102 | 50 | 73.6 | .095 | . 11 | . 061 |
| The year. | 8,850 | 50 | 378 | . 490 | 6.67 | . 317 |
| October........... | 3,140 | 62 | 500 | . 648 | . 75 | . 419 |
| Siovember. | 3,810 | 250 | 960 | 1.24 | 1.38 | . 801 |
| December. | 2,430 | 230 | 500 | . 648 | . 75 | . 419 |
| January. | 5,450 | 365 | 1,040 | 1.35 | 1.56 | . 873 |
| February. | 1,310 | 474 | 756 | . 979 | 1.02 | . 633 |
| March. | 3,340 | 359 | . 823 | 1.07 | $\underline{1.23}$ | . 692 |
| April | 11,100 | 514 | 2,310 | 2.99 | 3.34 | 1.93 |
| May. | 2,880 | 577 | 1, 130 | 1.46 | 1.68 | . 944 |
| June | 528 | 149 | 247 | . 320 | . 37 | . 207 |
| August | 3,640 | 131 | 488 | . 632 | . 73 | . 408 |
| Septembor | 1,390 | 164 | 386 | .500 | . 56 | .323 |
| The jear | 11,100 | 62 | 790 | 1.02 | 13.91 | . 659 |
| October. | 251 | 57 | 155 | . 201 | . 23 | .130 |
| November | 158 | 116 | 137 | .177 | . 20 | . 114 |
| December. | 181 | 101 | 133 | .172 | . 20 | . 111 |
| January | 226 | 100 | 157 | .203 | . 23 | .131 |
| February | 163 | 78 | 121 | - 157 | . 16 | . 101 |
| March. | 2,430 | 122 | 587 | . 760 | . 88 | -491 |
| April | 877 | 230 | 410 | . 531 | . 59 | .343 |
| May. | 282 | 192 | 235 | . 304 | . 35 | .196 |
| June | 460 | 106 | 174 | . 225 | . 25 | . 145 |
| July. | 126 | 52 | 82.4 | . 107 | . 12 | . 069 |
| Aurust.. Septomber | 419 3,850 | 68 70 | 155 361 | . 201 | .23 .52 | . 1302 |
| The year | 3,850 | 52 | 226 | .293 | 3.96 | .289 |
| October. | 1,040 | 121 | 223 | . 289 | .33 | . 187 |
| November | 1,110 | 110 | 173 | . 224 | . 25 | . 145 |
| December | 11,700 | 239 | 1,116 | 1.45 | 1.67 | .937 |
| January. | 5,680 | 216 | 917 | 1.19 | 1.37 | . 769 |
| Februars. | 4,760 | 612 | 1,612 | 2.09 | 2.18 | 1.35 |
| March. | 2,620 | 554 | 1,039 | 1.35 | 1.56 | 1.873 |
| April. | 4,710 | 572 354 | 1,875 697 | 2.43 .903 | $\begin{aligned} & 2.71 \\ & 1.04 \end{aligned}$ | 1.57 |
| May.. | 2,850 1,020 | 354 229 | 497 | . .6305 | -1.04 | . 410 |
| July.. | 670 | 148 | 292 | . 378 | - 44 | . 244 |
| August. | 960 | 146 | 241 | . 312 | . 36 | . 202 |
| September. | 5,470 | 137 | 609 | . 789 | . 88 | . 510 |
| The year. | 11,700 | 110 | 767 | . 994 | 13.50 | . 642 |
| October. . . . . | 379 | 146 | 171 | . 222 | . 26 | . 143 |
| November. | 2,760 | 176 | 552 | . 715 | . 80 | . 462 |
| December. | 1,260 | 231 | 444 | . 575 | . 66 | .372 |
| January. | 4,320 | 250 | 1,286 | 1.67 | 1.92 | 1.08 |
| February. | 7,950 | 500 | 1,968 | 2.55 | 2.75 | 1.65 |
| March... | 56,500 | 969 | 5,017 | 6.50 | 7.49 | 4.20 |
| April. | 1,800 | 502 | 1,168 | 1.51 | 1.68 | .976 |
| May....... | 1,000 500 | 366 146 | 478 301 | .619 .390 | .71 .44 | .400 .252 |
| June. . . . . | 600 | r 96 | 195 | . 253 | .29 | . 164 |
| July...... | 189 | 92 | 120 | . 155 | . 18 | . 100 |
| September. | 379 | 84 | 117 | . 152 | . 17 | . 098 |
| The year... | 56,500 | 84 | 984 | 1.27 | 17.35 | . 821 |


| Month | Diecherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discherge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per equere mile |  |  |
| 1936-37 |  |  |  |  |  |  |
| October | 3,610 | 92 | 342 | 0.443 | 0.51 | 0.286 |
| November | 169 | 119 | 143 | . 185 | . 21 | . 120 |
| December | 1,030 | 119 | 498 | . 645 | . 74 | . 417 |
| Jenuary. | 6,240 | 640 | 1,743 | 2.26 | 2.61 | 1.46 |
| Februery | 6,740 | 697 | 1,551 | 2.01 | 2.09 | 1.30 |
| Merch. | 986 | 378 | - 556 | . 720 | . 83 | . 465 |
| April. | 15,400 | 277 | 1,390 | 1.80 | 2.01 | 1.16 |
| May... | 1,900 | 397 | - 692 | - 896 | 1.03 | . 578 |
| June. | 1,010 | 251 | 400 | . 518 | . 58 | . 335 |
| July. | 922 | 160 | 271 | . 351 | . 40 | . 227 |
| August | 5,430 | 134 | 731 | . 947 | 1.09 | . 612 |
| September | 1,920 | 237 | 648 | . 839 | . 94 | . 542 |
| The jeer. | 15,400 | 92 | 742 | . 961 | 13.04 | . 621 |
| October |  |  |  |  |  |  |
| November. | 1,840 | 510 | 1,884 806 | 1.78 | 2.06 1.16 | $\begin{aligned} & 1.16 \\ & .672 \end{aligned}$ |
| December. | 732 | 327 | 442 | -. 573 | . 66 | . 370 |
| Jeruery. | 774 | 270 | 368 | . 477 | . 55 | . 308 |
| Februery. | 492 | 295 | 370 | . 479 | . 50 | . 310 |
| March. | 732 | 295 | 412 | . 534 | . 62 | . 345 |
| April | 739 | 322 | 480 | . 622 | . 69 | . 402 |
| Mey. | 2,390 | 207 | 471 | . 610 | . 70 | .394 |
| June | , 372 | 153 | 245 | . 317 | .35 | . 205 |
| July. | 1,060 | 98 | 265 | . 343 | . 40 | . 222 |
| August. | 1,590 | 126 | 537 | . 696 | . 80 | . 450 |
| Septembe | 172 | 110 | 129 | .167 | . 19 |  |
| The yeer | 9,340 | 98 | 494 | . 640 | 8.68 | . 414 |
| October .......... |  |  |  |  |  |  |
| October. | 146 | 98 | 115 | . 149 | .17 | . 096 |
| November. | 168 | 110 | 128 | . 166 | . 19 | . 107 |
| December | 3,230 | 122 | 504 | . 653 | . 75 | . 422 |
| January. | 7,240 | 201 | 615 | . 797 | . 92 | . 515 |
| February | 11,200 | 698 | 2,093 | 2.71 | 2.82 | 1.75 |
| Merch. | 2,470 | 440 | 983 | 1.27 | 1.46 | . 821 |
| April | 2,550 | 287 | 693 | . 898 | 1.00 | . 580 |
| May. | 1,240 | 277 | 487 | . 631 | . 73 | . 408 |
| June | 319 | 150 | 210 | . 272 | . 30 | . 176 |
| July. | 6,310 | 126 | 959 | 1.24 | 1.43 | . 801 |
| August | 1,790 | 206 | 488 | . 632 | . 73 |  |
| September | 192 | 110 | 144 | .187 | . 21 | .121 |
| The year | 11,200 | 98 | 610 | . 790 | 10.71 | . 511 |
| October | 291 | 130 | 173 |  |  |  |
| November | 424 | 167 | 228 | . 295 | . 33 | . 191 |
| December | 350 | 144 | 195 | . 253 | . 29 | . 164 |
| January. | 1,350 | 150 | 267 | .346 | . 40 | . 224 |
| Februery | 1,760 | 180 | 642 | . 832 | . 90 | . 538 |
| March | 1,350 | 286 | 540 | . 699 | . 81 | . 452 |
| April | 4,300 | 424 | 1,474 | 1.91 | 2.13 | 1.23 |
| May. | 1,500 | 306 | , 565 | . 732 | . 84 | . 473 |
| June | 4,840 | 312 | 1,220 | 1.58 | 1.76 | 1.02 |
| July.. | 378 | 156 | 231 | . 289 | . 34 | . 193 |
| August. | 2,630 | 156 | 570 | . 738 | . 85 | . 477 |
| September | 2,230 | 192 | 476 | . 617 | . 69 | . 399 |
| The year. | 4,840 | 130 | 545 | . 706 | 9.60 | .456 |
| October. . . . . . . . . | 281 | 156 | 193 |  |  |  |
| November. | 1,950 | 174 | 500 | . 648 | . 29 | . 162 |
| December. | 2,230 | 286 | 615 | . 797 | . 92 | . 515 |
| Jenuery. | 1,170 | 406 | 655 | . 848 | . 98 | . 548 |
| Februery. | , 587 | 266 | 384 | . 497 | . 52 | . 321 |
| March... | 1,390 | 242 | 614 | . 795 | . 92 | . 514 |
| April | 5,640 | 344 | 886 | 1.15 | 1.28 | . 743 |
| Mey. . | 339 | 159 | 229 | . 297 | . 34 | . 192 |
| June. | 355 | 142 | 211 | . 273 | . 30 | .176 |
| July. | 3,000 | 166 | 569 | . 737 | . 85 | . 476 |
| August. | 639 | 98 | 176 | . 228 | . 26 | . 147 |
| September. | 242 | 80 | 129 | . 167 | . 19 | .108 |
| The year...... | 5,640 | 80 | 430 | . 557 | 7.57 | .360 |

Monthly discharge of North Fork Shenendoeh RIver near Straeburg, Va.--Continued

| Month | Discherge in second-feot |  |  |  | Runoff in inchee | Dlecharge in million gellons per day per square mille |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| October....................... | 116 | 88 | 98.4 | 0.127 | 0.15 | 0.082 |
| November.. | 126 | 94 | 110 | . 142 | .16 | .092 |
| December.. | 556 | 98 | 187 | . 242 | . 28 | .156 |
| Jenuery. . . . . . . . . . . . . . . . . . . | 206 | 80 | 147 | .190 | . 22 | . 123 |
| Februery................ | 839 | 150 | 282 | . 365 | . 38 | .236 |
| March. | 2,790 | 161 | 639 | . 828 | .95 | . 535 |
| April. | 1,130 | 219 | 500 | . 648 | . 72 | . 419 |
| May . . . . . . . . . . . . . . . . . . . . . . . . | 15,300 | 143 | 1,560 | 2.02 | 2.33 | 2.31 |
| June................................ | 517 | 197 | 355 | . 460 | . 51 | .297 |
| JulJ. . . . . . . . . . . . . . . . . . . . . . . . . . | 273 | 101 | 163 | . 211 | . 24 | . 236 |
| August. . . . . . . . . . . . . . . . . . . . . . | 6,300 | 116 | 1,072 | 1.39 | 1.60 | . 898 |
| September....................... | 1,060 | 202 | 388 | . 503 | .56 | .325 |
| The year.... | 15,300 | 80 | 461 | . 597 | 8.10 | .386 |
| October.... | 52,500 | 219 | 3,488 | 4.52 | 5.21 | 2.92 |
| November. . . . . . . . . . . . . . . . . . . | 7 900 | 430 | , 505 | . 784 | . 87 | . 507 |
| December. . . . . . . . . . . . . . . . . . | , 7,020 | 320 | 943 | 1.22 | 1. 41 | . 789 |
| January.. | 3,050 | 530 | - 866 | 1.12 | 1.29 | .724 |
| Februery... | 4,140 | 530 | 1,380 | 1.79 | 1.86 | 1.16 |
| Merch.... | 3,500 | 440 | 1,400 | 1.81 | 2.09 | 1.17 |
| April | 4,940 | 500 | 1,114 | 1.44 | 1.61 | .931 |
| Mey | 4,240 | 440 | 1,093 | 1.42 | 1. 64 | .918 |
| June | -752 | 213 | 420 360 | . 544 | . 61 | .352 |
| July . . . . . . . . . . . . . . . . . . . . . . . . . . | 1,000 | 210 | 360 | . 466 | . 54 | .301 |
| August. . . . . . . . . . . . . . . . . . . . . . . . | 216 | 131 | 160 | $.207$ | .24 | .134 |
| September. . . . . . . . . . . . . . . . . . . | 146 | 108 | 123 | .159 | . 18 | .103 |
| The jeer..................... | 52,500 | 108 | 998 | 1.29 | 17.55 | .834 |



North Fork Shenandoah Rivar near Riverton, Va
Location. - Staff eage, lat. $38^{\circ} 5^{\prime \prime} 7^{\prime \prime \prime}$, Iong. $78^{\circ}{ }^{\circ} 3^{\prime \prime} 15^{\prime \prime}, 2$ miles upstream from RIverton, Warren County and confluence with South Fork.
Drainage area.- 1,040 square miles.
Racords avallable. - June 1899 to February 1902; August 2902 to July 1906
Fxtremes. - Marimum zage height observed, 17.5 feet Apr. 21, 1901 (discharge not determined); maximum dally discharge, 21,600 aecond-feet Apr. 21, 1901 (gaga helght, 16.5 feet), from rating curve extended abova 2,900 aacond-feat; minimum, 90 secondfaet at times during August 1900

Monthly discharge of North Fork Shenandoah River near Riverton, Va.

| Month | Diacharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inchea } \end{aligned}$ | D1scharge in million gallons par day par aquare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1899 |  |  |  |  |  |  |
| June 26-30. | 307 | 255 | 293 | 0.282 | 0.05 | 0.182 |
| July. | 481 | 130 | 228 | . 220 | . 25 | . 142 |
| August. | 390 | 151 | 220 | . 212 | . 24 | . 137 |
| September | 355 | 140 | 227 | . 219 | . 24 |  |
| 1899-1 |  |  |  |  |  |  |
| October. | 225 | 140 | 185 | .178 | . 20 | . 115 |
| November | 545 | 168 | 238 | . 230 | . 26 | . 149 |
| December | 390 | 140 | 255 | . 246 | . 28 | . 159 |
| January | 4,330 | 255 | 702 | . 677 | . 78 | . 438 |
| February | 3,860 | 355 | 1,128 | 1.09 | 1.14 | . 704 |
| March... | 5,700 | 585 | 1,620 | 1.56 | 1.80 | 1.01 |
| April. | 1,760 | 465 | 765 | . 738 | . 82 | . 477 |
| May. | 585 | 225 | 324 | .312 | . 36 | . 202 |
| June | 2,200 | 195 | 504 | . 486 | . 54 | .314 |
| July | 1,620 | 140 | 294 | .284 | . 33 | . 184 |
| August | 207 | 90 | 128 | .123 | . 14 | . 080 |
| Septembar | 355 | 130 | 155 | .149 | .17 | . 096 |
| The yars | 5,700 | 90 | 521 | . 502 | 6.82 | . 324 |
| October....... |  |  |  |  |  |  |
| Notober. | 320 | 168 | 219 | . 211 | . 24 | .136 |
| Novamber. | 3,890 | 140 | 441 | . 425 | . 47 | . 275 |
| December. | 2,650 | 140 | 548 | . 528 | - 61 | . 341 |
| F'ebruary | 2,200 | 195 | 627 299 | . 605 | . 70 | .391 |
| March. | 11,000 | 195 | 1,391 | 1.34 | 1.54 | . 1866 |
| April | 21,600 | 693 | 4,034 | 3.89 | 4.34 | 2.51 |
| May. | 17,800 | 728 | 2,653 | 2.56 | 2.95 | 1.65 |
| June. | 12,700 | 990 | 2,842 | 2.74 | 3.06 | 1.77 |
| July... | 4,030 | 505 | 1,499 | 1.44 | 1.66 | . 931 |
| August... | 2,260 | 428 | 862 | . 831 | . 96 | . 537 |
| Saptamber | 2,390 | 168 |  | . 660 | . 74 | .427 |
| The jear. | 21,600 | 140 | 1,343 | 1.30 | 17.57 | . 840 |
| October. | 1,320 | 195 | 396 | . 382 |  |  |
| Novambar | 1,580 | 140 | 363 | . 350 | . 39 | . 2226 |
| December. | 14,600 | 268 | 3,091 | 2.98 | 3.44 | 1.93 |
| January...... | 3,960 | 545 | 1,304 | 1.26 | 1.45 | . 814 |
| February 1-25 August 16-31. | 6,660 | 1,090 | 1,969 | 1.90 | 1.77 | 1.23 |
| August 16-31. | 275 | 220 | 243 | . 234 | . 14 | . 151 |
| September.. | 318 | 165 | 211 | . 204 | . 23 | . 132 |
| October........... |  |  |  |  |  |  |
| November | 800 | 190 | 317 | . 250 | .29 .34 | -162 |
| December. | 3,890 | 495 | 1,228 | 1.18 | 1.36 | . 763 |
| January 1-28. | 8,390 | 495 | 2,225 | 2.15 | 2.24 | 1.39 |
| Fabruary 9-28. | 3,200 | 735 | 1,127 | 1.09 | . 81 | . 704 |
| March.. | 6,860 | 670 | 1,750 | 1.69 | 1.95 | 1.09 |
| April. | 6,600 | 735 | 1,848 | 1.78 | 1.99 | 1.15 |
| May. | 1,340 | 390 | 549 | . 529 | . 61 | . 342 |
| July. | 10,400 | 580 | 2,208 | 2.13 | 2.38 | 1.38 |
| Auguat. | 1,840 800 | 340 255 | 736 371 | . 710 | . 82 | . 459 |
| Saptambar. | 1,660 | 295 | 464 | . 447 | . 50 | . 289 |

Monthly discharge of North Fork Shenandoah River noar Riverton, Va. - Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { incheo } \end{aligned}$ | Discharge in million gallone por day per square mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | Por square mile |  |  |
| 1903-4 |  |  |  |  |  |  |
| October | 640 | 275 | 373 | 0.360 | 0.42 | 0.233 |
| Novamber | 295 | 255 | 265 | . 256 | . 29 | . 165 |
| December | 522 | 255 | 284 | . 274 | . 32 | . 177 |
| January 1-23 | 255 | 255 | 255 | . 246 | . 21 | . 159 |
| March 5-31. | 1,610 | 400 | 620 | . 598 | . 60 | . 386 |
| April. | 2,460 | 318 | 661 | . 637 | .71 | . 412 |
| May. | 1,840 | 440 | 718 | . 692 | . 80 | . 447 |
| June | 2,090 | 318 | 606 | . 584 | . 65 | . 377 |
| July. | 2,210 | 295 | 554 | . 534 | . 62 | .345 |
| August. | 550 | 125 | 255 | . 246 | . 28 | . 159 |
| September. | 172 | 96 | 124 | . 120 | .13 | . 078 |
| October. | 125 | 90 | 110 | . 106 | . 12 | . 068 |
| November. . | 125 | 100 | 112 | . 108 | . 12 | . 070 |
| Decembar. | 350 | 105 | 225 | . 217 | . 25 | . 140 |
| January 1-7, 21-31 | 1,160 | 155 | 759 | . 732 | . 44 | . 473 |
| Fabruary.... | . 855 | 855 | 855 | . 824 | . 86 | . 533 |
| March. | 2,900 | 785 | 1,335 | 1.29 | 1.49 | . 834 |
| Apri1 | 1,080 | 375 | 596 | . 575 | . 64 | . 372 |
| May. | 1,360 | 230 | 406 | . 392 | . 45 | . 253 |
| June | 7,450 | 155 | 1,042 | 1.00 | 1.12 | . 646 |
| July. | 2,270 | 400 | 908 | . 876 | 1.01 | . 566 |
| August | 1,320 | 198 | 417 | . 402 | . 46 | . 260 |
| September. | 252 | 140 | 192 | . 185 | . 21 | . 120 |
| October. |  |  |  |  |  |  |
| November. | 230 | 125 | 172 | . 166 | . 18 | . 107 |
| Docombar. | 5,580 | 140 | 889 | . 857 | . 99 | . 554 |
| January. | 4,160 | 565 | 1,036 | . 996 | 1.15 | . 644 |
| February. | 720 | 285 | 418 | . 402 | . 42 | . 260 |
| March. | 5,350 | 275 | 1,421 | 1.37 | 1.58 | . 885 |
| Apr11 | 3,210 | 655 | 1,324 | 1.27 | 1.42 | . 821 |
| May. | 962 | 285 | 545 | . 524 | . 60 | . 339 |
| June | 2,440 | 285 | 787 | . 757 | . 84 | . 489 |
| JuIy 1-14 | 1,340 | 325 | 523 | . 503 | . 26 | . 325 |

Cedar Craak near Winchester, Va.
Location. - Water-stage racordar, lat. $39^{904} 4^{\prime} 50^{\prime \prime}$, long. $78^{\circ} 199^{\prime \prime} 45^{\prime \prime}$, a quarter of a mila upstream from Fawcetts Run, 0.3 mila upstream from concrete highway bridge at
Marlboro and 10 miles southwest of Winchastar, Frederick County. Datum of gage is 647.09 faet above maan sea leval, datum of 1929.

Drainage area. - 101 square miles.
Records available. - June 1937 to September 1943.
Extremes. - Maximum discharga, 22,000 second-feet Oct - 15, 1942 (gaga he1ght, 27.0 feat, from floodmarke), from rating curve extended above 15,000 second-feat by logarithmic plotting; minimum, not determined; minimum daily, 5.0 second-feet Aug. 24-31, Sept. 6, 1938, July 19-23, 1942.

Flood of Mar. I7, 1936 reachad a atage of about 25 feat, from information by local residante (discharge, about 18,000 second-feet).

Monthly discharga of Cedar Creek naar Wincheeter, Va.

| Month | Discharga in second-feet |  |  |  | Runoff in Inches | Discharga in million gallons per day par squara mila |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{aligned} & \text { Par } \\ & \text { squara } \\ & \text { mile } \end{aligned}$ |  |  |
| 1937 |  |  |  |  |  |  |
| Juna 18-30.. | 34 | 21 | 25.9 | 0.256 | 0.12 | 0.165 |
| July....... | 220 | 15 | 35.6 | . 352 | . 41 | . 228 |
| August. | 1,410 | 13 | 127 | 1.26 | 1.45 | . 814 |
| September.. | 64 | 11 | 26.9 | . 266 | .30 | .172 |


| Month | Diecherge in eecond-feet |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { inches } \end{gathered}$ | Discharge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1937-38 |  |  |  |  |  |  |
| October | 2,580 | 13 | 279 | 2.76 | 3.18 | 1.78 |
| November | 349 | 52 | 109 | 1.08 | 1.20 | . 698 |
| December | 59 | 31 | 42.5 | . 421 | . 49 | . 272 |
| Jenuery. | 102 | 25 | 46.0 | .455 | . 52 | . 294 |
| Fobruery. | 61 | 37 | 46.8 | . 463 | . 48 | . 299 |
| Merch... | 387 | 39 | 96.8 | . 958 | 1.10 | . 619 |
| April. | 126 | 44 | 77.8 | . 770 | . 86 | . 498 |
| Mey.. | 911 | 30 | 108 | 1.07 | 1.23 | . 692 |
| June | 144 | 17 | 48.1 | .476 | . 53 | . 308 |
| July. | 35 | 6 | 11.7 | . 116 | . 13 | . 075 |
| August. | 43 | 5 | 11.3 | .112 | . 13 | . 072 |
| Soptember | 23 | 5 | 8.77 | . 087 | . 10 | . 056 |
| The yeer | 2,580 | 5 | 74.2 | . 735 | 9.95 | .475 |
| October. | 19 | 7 | 9.45 | . 094 | . 11 | . 061 |
| November. | 23 | 10 | 14.0 | . 139 | . 16 | . 090 |
| December. | 959 | 18 | 72.2 | .715 | . 82 | . 462 |
| Jenuery. | 1,240 | 23 | 102 | 1.01 | 1.16 | . 653 |
| February | 1,460 | 78 | 260 | 2.57 | 2.68 | 1.66 |
| Merch. | 581 | 50 | 123 | 1.22 | 1.41 | . 789 |
| April. | 690 | 40 | 151 | 1.50 | 1.67 | . 969 |
| Mey. | 172 | 32 | 75.3 | . 746 | . 86 | . 482 |
| Juno. | 59 | 8 | 20.8 | - 206 | . 23 | . 133 |
| July. | 253 | 6 | 33.4 | . 331 | . 38 | . 214 |
| August. | 96 | 8 | 24.5 | . 243 | . 28 | .157 |
| September | 23 | 6 | 8.07 | . 080 | . 09 | . 052 |
| The jear | 1,460 | 6 | 73.2 | .725 | 9.85 | .469 |
| October........... | 194 | 10 | 24.3 | . 241 |  |  |
| November. | 157 | 15 | 45.2 | . 448 | . 50 | . 290 |
| December | 156 | 18 | 37.3 | . 369 | . 43 | . 238 |
| Januery. | 482 | 18 | 65.3 | . 647 | . 75 | . 418 |
| February | 611 | 35 | 167 | 1.65 | 1.78 | 1.07 |
| March. | 418 | 50 | 116 | 1.15 | 1.33 | .743 |
| April | 1,340 | 77 | 332 | 3.29 | 3.67 | 2.13 |
| Mey. | 598 | 37 | 109 | 1.08 | 1.24 | . 698 |
| June | 1,340 | 29 | 175 | 1.73 | 1.93 | 1.12 |
| July. | 108 | 10 | 25.1 | . 249 | . 29 | . 161 |
| August. | 190 | 8 | 34.0 | . 337 | . 39 | . 218 |
| September. | 189 | 11 | 34.9 | . 346 | . 39 | .224 |
| The year | 1,340 | 8 | 96.2 | . 952 | 12.98 | . 615 |
| October....... | 56 | 16 |  |  |  |  |
| November | 731 | 20 | 106 | 1.05 | 1.17 | . 679 |
| December. | 370 | 42 | 98.8 | . 978 | 1.13 | . 632 |
| Jenuary. | 148 | 50 | 90.0 | . 891 | 1.03 | . 576 |
| February | 98 | 28 | 51.1 | . 506 | . 53 | . 327 |
| Merch. | 357 | 26 | 114 | 1.13 | 1.30 | . 730 |
| April. | 1,150 | 46 | 147 | 1.46 | 1.63 | . 944 |
| Mey... | 43 | 14 | 26.8 | . 265 | . 31 | . 171 |
| June. | 104 | 12 | 25.7 | . 254 | . 28 | . 164 |
| July.. | 515 | 14 | 110 | 1.09 | 1.26 | . 704 |
| August. | 92 | 15 | 28.7 | . 284 | . 33 | . 184 |
| September. | 17 | 6.4 | 9.27 | . 092 | . 10 | . 060 |
| The jeer | 1,150 | 6.4 | 69.3 | . 686 | 9.32 | .443 |
| 1941-42 |  |  |  |  |  |  |
| October.. | 12 | 6 | 9.0 | . 089 | . 10 | . 058 |
| November. | 27 | 9 | 12.2 | . 121 | . 14 | . 078 |
| December. | 232 | 11 | 34.2 | .339 | . 39 | . 219 |
| January. . | $\begin{array}{r}66 \\ \hline 229\end{array}$ | 14 | 28.1 | . 278 | . 32 | . 180 |
| Februery. | 229 | 26 | 52.5 | . 520 | . 54 | . 336 |
| March. | 517 | 24 | 145 | 1.44 | 1.66 | . 931 |
| April. | 317 | 39 | 120 | 1.19 | 1.33 | . 769 |
| May.. | 1,830 | 22 | 161 | 1.59 | 1.83 | 1.03 |
| June. | 82 | 17 | 36.7 | . 363 | . 40 | . 235 |
| July.. | 40 3 | 5 | 11.3 | . 112 | . 13 | . 072 |
| Auguet. | 334 | 9 | 56.7 | . 561 | . 65 | . 363 |
| September. . . . . . | 40 | 8. | 15.6 | . 154 | .17 | . 100 |
| The yoer. | 1,830 | 5 | 57.0 | . 564 | 7.66 | .365 |

Monthly discharge of Cedar Creek near Wincheeter, Va.--Continued

| Month | Diecharge in second-feet |  |  |  | Runoff in <br> Inchas | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{array}{\|c\|} \text { Per } \\ \text { square } \\ \text { mile } \end{array}$ |  |  |
| 1942-43 |  |  |  |  |  |  |
| October. | 13,900 | 10 | 777 | 7.68 | 8.87 | 4.97 |
| November. | 171 | 44 | 82.0 | . 812 | . 91 | . 525 |
| December. | 1,720 | 32 | 180 | 1.78 | 2.05 | 1.15 |
| January. | 431 | 68 | 149 | 1.48 | 1.71 | . 957 |
| Fobruary | 764 | 66 | 239 | 2.37 | 2.47 | 1.53 |
| March. | 526 | 47 | 206 | 2.04 | 2.35 | 1.32 |
| April. | 764 | 54 | 174 | 1.72 | 1.92 | 1.11 |
| May. | 414 | 59 | 111 | 1.10 | 1.27 | . 711 |
| June. | 123 | 14 | 36.7 | . 363 | . 40 | . 235 |
| July. | 29 | 9.4 | 15.5 | . 153 | . 18 | . 099 |
| August. | 64 | 6.7 | 12.0 | . 119 | . 14 | . 077 |
| September. | 12 | 6.7 | 7.97 | . 079 | . 09 | . 051 |
| The year...... | 13,900 | 6.7 | 166 | 1.64 | 22.36 | 1.06 |

Yearly diacharge of Codar Creok near Wincheator, Va.

| Year | Year ending Sept. 30 |  |  |  | Calender year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | D1scharga in oecond-feet |  | $\begin{aligned} & \text { Runofs } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in eecond-feet |  | Runoff In Inches | Discharga in million gallons per day per square mile |
|  | Mean | Per squere mile |  |  | Mean | Per square mile |  |  |
| 1938. | 74.2 | 0.735 | 9.95 | 0.475 | 46.0 | 0.455 | 6.17 | 0.294 |
| 1939 | 73.2 | . 725 | 9.85 | . 469 | 74.1 | . 734 | 9.97 | . 474 |
| 1940 | 96.2 | . 952 | 12.98 | . 615 | 106 | 1.05 | 14.32 | . 679 |
| 1941 | 69.3 | . 686 | 9.32 | . 443 | 54.9 | . 544 | 7.40 | . 352 |
| 1942. | 57.0 | . 564 | 7.66 | . 365 | 140 | 1.39 | 18.86 | . 898 |
| 1943. | 166 | 1.64 | 22.36 | 1.06 | - | - | - | - |

Passaga Creak at Buckton, Va.
Location.- Watar-staga racordar, lat. $38^{\circ} 57^{\prime}$, long. $78^{\circ} 16^{\prime}$, 350 fat upatraam from bridge on Riverton-straeburg highway, 1 mile south of Buckton, Warren County, and 1t milas upetraam from mouth. Datum of gage is 525.14 feet above mean eaa level, daturn of 1929. Prior to Oct. 8, 1937, chain gaga at highway bridga at diffarant datum.
Drainage area.- 87 equare miles.
Racords avallable.- April 1932 to September 1843; October 1805 to July 1906 (gage helghts only) at siga 1 mile downstream.
Extremas.- 1932-43: Maximum diacharga, 21,000 second-fest Oct. 15, 1942 lgage height, 15.5 feet), from reting curve ext ended above 5,500 second-feet by logarithmic plotting; minimum obeerved, 0.1 second-foot Aug. 5, 1932 (gage height, 1.38 feet, site and datum then in use).
Ramarks.- Low flow regulated by ifish hatchery above station.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inchee } \end{aligned}$ | Discharge in million gallons per day per equare mlle |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Meen | Per equere mile |  |  |
| 1932 |  |  |  |  |  |  |
| April 4-30. | 272 | 32 | 87.1 | 1.00 | 1.00 | 0.646 |
| May... | 2,250 | 15 | 278 | 3.20 | 3.69 | 2.07 |
| June. | 74 | 4.5 | 17.1 | . 197 | . 22 | . 127 |
| July. | 128 | 1.2 | 15.9 | . 183 | . 21 | . 118 |
| August. | 20 | . 2 | 2.06 | . 024 | . 03 | . 016 |
| Saptember. | 23 | 1.5 | 2.71 | . 031 | . 03 | . 020 |

Monthly discharge of Passage Creek at Buckton, Va.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | D1scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por square mıle |  |  |
| 1932-33 |  |  |  |  |  |  |
| October | 135 | 2.0 | 19.0 | 0.218 | 0.25 | 0.141 |
| November | 821 | 5.1 | 73.9 | . 849 | . 95 | . 549 |
| December. | 258 | 8.0 | 38.2 | . 439 | . 51 | . 294 |
| January. | 2,350 | 25 | 196 | 2.25 | 2.59 | 1.45 |
| February. | 166 | 46 | 88.4 | 1.02 | 1.06 | . 659 |
| March. | 643 | 34 | 108 | 1.24 | 1.43 | . 801 |
| Apr11 | 1,750 | 62 | 322 | 3.70 | 4.13 | 2.39 |
| May. | 643 | 43 | 156 | 1.79 | 2.06 | 1.16 |
| June | 44 | 3.2 | 14.8 | . 170 | . 19 | . 110 |
| July. | 43 | 3.8 | 9.87 | .113 | . 13 | . 073 |
| August. | 471 | 3.4 | 28.2 | .324 | .37 | . 209 |
| September | 245 | 3.4 | 34.7 | .399 | .45 | . 258 |
| The jear. | 2,350 | 2.0 | 90.5 | 1.04 | 14.12 | .6,72 |
| October. | 16 | 4.2 | 7.15 | . 082 | . 09 | . 053 |
| November. | 11 | 5.1 | 7.68 | . 088 | . 10 | . 057 |
| December. | 21 | 6.0 | 8.07 | . 093 | . 11 | . 060 |
| Jenuary. | 26 | 3.8 | 12.6 | . 145 | . 17 | . 094 |
| February. | 7.9 | 3.0 | 5.79 | . 067 | . 07 | . 043 |
| March... | 186 | 5.0 | 73.3 | . 843 | . 97 | . 545 |
| April | 128 | 20 | 53.9 | . 620 | . 69 | . 401 |
| May. | 175 | 16 | 39.8 | .457 | . 53 | . 295 |
| June | 144 | . 7 | 8.31 | . 096 | . 11 | . 062 |
| July. | 20 | . 4 | 1.87 | . 021 | . 02 | . 014 |
| August. | 11 | . 7 | 2.83 | . 033 | . 04 | . 021 |
| Septamber | 301 | . 8 | 17.3 | . 199 | . 28 | . 129 |
| The year. | 301 | . 4 | 20.0 | . 230 | 3.12 | . 149 |
| October. . . . . . | 58 | 4.6 | 10.8 | . 124 | . 14 | . 080 |
| November | 144 | 5.2 | 13.4 | . 154 | . 17 | . 100 |
| December. | 3,200 |  |  |  | 3.01 | 1.69 |
| January. | 854 | $2 \%$ | 152 | 1.75 | 2.02 | 1.13 |
| Febmuary | 758 | 100 | 246 | 2.83 | 2.95 | 1.83 |
| March. | 588 | 74 | 153 | 1.76 | 2.03 | 1.14 |
| April | 699 | 69 | 259 | 2.88 | 3.32 | 1.93 |
| May. | 1,560 | 28 | 139 | 1.60 | 1.84 | 1.03 |
| June | 66 | 3.7 | 17.2 | . 198 | . 22 | . 128 |
| July. | 42 | 1.9 | 5.82 | . 067 | . 08 | . 043 |
| Alyust. | 22 | 1.4 | 5.95 | . 068 | . 08 | . 044 |
| Saptamber | 670 | 2.5 | 72.5 | . 833 | . 93 | . 538 |
| The year. | 3,200 | 1.4 | 108 | 1.24 | 16.79 | . 801 |
| Octobar...... | 51 | 2.5 | 6.76 | . 078 | . 09 | . 050 |
| Novambar. | 117 | 4.8 | 31.2 | . 359 | . 40 | . 232 |
| December. | 255 | 11 | 47.9 | . 551 | . 64 | . 356 |
| January. | 562 | 22 | 187 | 2.15 | 2.48 | 1.39 |
| February. | 1,560 | 63 | 357 | 4.10 | 4.42 | 2.65 |
| March. | 3,540 | 100 | 552 | 6.34 | 7.31 | 4.10 |
| Apri1. | 348 | 84 | 190 | 2.18 | 2.43 | 1.41 |
| May.. | 370 | 12 | 78.7 | . 905 | 1.04 | . 585 |
| June | 26 | 4.4 | 11.2 | . 129 | . 14 | . 083 |
| July. | 17 | 2.0 | 5.83 | . 067 | . 08 | . 043 |
| August. | $13$ | 1.5 | 2.65 | . 030 | . 03 | . 019 |
| September. | 3.2 | 1.6 | 2.37 | . 027 | . 03 | . 018 |
| The year. | 3,540 | 1.5 | 122 | 1.40 | 19.09 | . 905 |
| October............ | 113 | 1.7 |  |  |  |  |
| Novambar. | 37 | 2.4 | 5.41 | . 062 | .07 | .040 |
| Decambar. | 121 | 1.6 | 33.6 | . 386 | . 44 | . 249 |
| January.. | 625 | 31 | 151 | 1.74 | 2.01 | 1.12 |
| February. | 835 | 52 | $153$ | 1.76 | 1.83 | 1.14 |
| March.... | . 77 | 24 | $40.1$ | . 461 | . 53 | . 298 |
| April | 3,540 | 9.8 | 240 | 2.76 | 3.08 | 1.78 |
| May. | 284 | 43 | 105 | 1.21 | 1.40 | . 782 |
| June. | 64 | 7.0 | 21.8 | . 251 | . 28 | . 162 |
| July.. | 41 | 3.5 | 12.5 | - 144 | . 17 | . 093 |
| August. | 632 | 1.9 | 58.0 | . 667 | .77 | . 431 |
| Septembar......... | 1,040 | 3.0 | 66.1 | . 760 | . 95 | . 491 |
| The yaar... | 3,540 | 1.6 | 74.3 | . 854 | 11.60 | . 552 |

Monthly discharge of Paesage Creek at Buckton, Va.--Continued

| Month | Diecharge in second-feat |  |  |  | $\begin{gathered} \text { Runoff } \\ \text { in } \\ \text { Inches } \end{gathered}$ | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | M1n1mum | Mean | Per square mile |  |  |
| 1937-38 |  |  |  |  |  |  |
| October. | 1,400 | 4.8 | 186 | 2.14 | 2.47 | 1.38 |
| November | 292 | 45 | 100 | 1.15 | 1.28 | . 743 |
| Decembar. | 101 | 25 | 42.1 | . 484 | . 56 | . 313 |
| January. | 85 | 16 | 35.1 | . 403 | . 46 | - 260 |
| Fobruary. | 93 | 27 | 44.2 | . 508 | . 53 | . 328 |
| March. | 388 | 39 | 81.4 | . 936 | 1.08 | . 605 |
| April. | 132 | 45 | 74.8 | . 860 | . 96 | . 556 |
| May... | 110 | 17 | 41.8 | . 480 | . 55 | . 310 |
| June. | 45 | 11. | 20.3 | . 233 | . 26 | . 151 |
| July.. | 50 | 3.3 | 13.5 | . 155 | . 18 | . 100 |
| August. | 142 | 3.3 | 26.7 | . 307 | . 35 | . 198 |
| September | 10 | 3.1 | 5.45 | . 063 | . 07 |  |
| The y | 1,400 | 3.1 | 56.2 | . 646 | 8.75 | . 418 |
| October............. | 17 | 3.9 | 5.94 | . 068 | . 08 | . 044 |
| November. | 36 | 5.9 | 11.0 | .126 | . 14 | . 081 |
| December | 1,250 | 15 | 89.4 | 1.03 | 1.19 | . 666 |
| January. | 1,030 | 15 | 87.1 | 1.00 | 1.15 | . 646 |
| February | 1,310 | 74 | 265 | 3.05 | 3.18 | 1.97 |
| March. . | 271 | 40 | 97.8 | 1.13 | 1.30 | . 730 |
| Apr11 | 577 | 32 | 119 | 1.37 | 1.53 | . 885 |
| Мау.. | 216 | 14 | 48.2 | . 554 | . 64 | . 358 |
| June. | 170 | 4.6 | 15.4 | . 177 | . 20 | . 114 |
| July. | 543 | 4.3 | 58.0 | . 667 | . 77 | . 431 |
| August. Saptamb | 97. | 6.3 3.1 | 22.7 4.45 | . 2651 | . 30 | . .1693 |
| The ye | 1,310 | 3.1 | 67.4 | . 775 | 10.54 | .501 |
| October.......... | 71 | 4.9 | 12.9 | .148 | . 17 | . 096 |
| November. | 137 | 12 | 35.1 | . 403 | . 45 | . 260 |
| Decembar. | 154 | 11 | 26.2 | . 301 | . 35 | . 195 |
| January. | 354 | 10 | 41.1 | . 472 | . 54 | . 305 |
| Fabruary. | 430 | 25 | 106 | 1.22 | 1.32 | . 789 |
| March. | 218 | 38 | 80.6 | . 926 | 1.07 | . 598 |
| Aprdi | 696 | 42 | 202 | 2.32 | 2.58 | 1.50 |
| May. | 272 | 32 | 80.5 | -.925 | 1.07 | . 598 |
| June. | 890 | 14 5.5 | 125 12.7 | 1.44 .146 | 1.61 .17 | . 9394 |
| July. | 186 | 4.0 | 30.9 | .146 .355 | .41 | . 229 |
| September. | 69 | 5.2 | 16.9 | . 194 | . 22 | . 125 |
| The ye | 890 | 4.0 | 63.6 | .731 | 9.96 | . 472 |
| Oetober 19 |  |  |  |  |  |  |
| October. | $\begin{array}{r}74 \\ 850 \\ \hline\end{array}$ | 13.8 | 105 | 1.21 | 1.35 | . 782 |
| Dacember | 234 | 32 | 70.8 | . 814 | . 94 | . 526 |
| January | 126 | 48 | 85.4 | . 982 | 1.13 | . 635 |
| February. | 87 | 23 | 48.3 | . 555 | . 58 | . 359 |
| March. | 256 | 20 | 83.0 | . 954 | 1.10 | . 617 |
| Apr11 | 642 | 31 | 114 | 1.31 | 1.46 | . 847 |
| May. | 30 | 6.3 | 15.1 | . 174 | . 20 | . 112 |
| June | 84 | 7.3 | 20.3 | . 233 | . 26 | . 151 |
| July.. | 478 | 8.0 | 87.3 | 1.00 | 1.15 | . 646 |
| August. | 48 | 4.3 | 13.3 | . 153 | . 18 | . 099 |
| September.... | 43 | 3.0 | 7.69 | . 088 | . 10 | . 057 |
| The | 850 | 3.0 | 55.7 | . 640 | 8.70 | . 414 |
| October........... | 5.4 | 2.1 | 3.81 | . 044 | . 05 | . 028 |
| November | 9.2 | 5.0 | 6.20 | . 071 | . 08 | . 046 |
| December. | 68 | 5.4 | 21.0 | . 241 | . 28 | . 156 |
| January. | 44 | 10 | 16.8 | . 193 | . 22 | . 125 |
| Fobruary. | 104 | 14 | 30.2 | . 347 | . 36 | . 224 |
| March... | 428 | 13 | 98.5 | 1.13 | 1.30 | . 730 |
| April. | 212 | 24 | 76.5 | . 878 | . 98 | . 568 |
| May.. | 1,440 54 | 10 | 124 | 1.43 | 1.65 | . 924 |
| June. | 54 | 6.4 | 16.6 | . 191 | . 21 | -123 |
| July.. | 182 | 2.1 | 14.5 | . 167 | .19 | . 108 |
| August. . | 431 | 8.7 | 95.6 | 1.10 | 1.27 | . 711 |
| September. | 270 | 7.3 | 31.6 | . 363 | . 40 | . 235 |
| The | 1,440 | 2.1 | 44.8 | . 515 | 6.99 | .333 |

Monthly dischargs of Passage Crssk at Buckton, Va.--Continued

| Month | Diecherge in second-feet |  |  |  | Runofs in <br> Inches | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max 1mum | Minimum | Mean | Per square mile |  |  |
| 1842-43 |  |  |  |  |  |  |
| October. | 9,290 | 14 | 581 | 6.68 | 7.70 | 4.32 |
| November. | 112 | 36 | 64.2 | . 738 | . 82 | . 477 |
| December. | 1,440 | 25 | 126 | 1.45 | 1.67 | . 937 |
| January. | 400 | 58 | 127 | 1.46 | 1.68 | . 944 |
| February. | 700 | 54 | 200 | 2.30 | 2.40 | 1.49 |
| March. | 820 | 29 | 206 | 2.37 | 2.73 | 1.63 |
| April. | 762 | 34 | 131 | 1.51 | 1.68 | . 976 |
| May. . | 456 | 45 | 116 | 1.33 | 1.63 | . 860 |
| June. | 47 | 4.7 | 16.8 | 1.93 | . 22 | 1.26 |
| July. | 28 | 3.6 | 7.68 | . 088 | . 10 | . 057 |
| August. | 4.0 | 1.9 | 2.81 | . 032 | . 04 | . 021 |
| Soptember | 17 | 2.5 | 4.00 | . 046 | . 06 | . 030 |
| The year...... | 9,290 | 1.9 | 132 | 1.52 | 20.62 | . 982 |

Yararly diecharge of Paseage Creek at Buckton, Va.

| Year | Year onding Sept. 30 |  |  |  | Calender year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallone per day-per square mile | Diechargs in second-feet |  | Runoff in inchee | Discharg'o in million gallone per day per equare mile |
|  | Msan | Psr equare m11e |  |  | Mean | Por square mile |  |  |
| 1933. | 90.5 | 1.04 | 14.12 | 0.672 | 81.6 | 0.937 | 12.71 | 0.606 |
| 1934. | 20.0 | . 230 | 3.12 | . 149 | 39.3 | . 452 | 6.14 | . 292 |
| 1935 | 108 | 1.24 | 16.79 | . 801 | 93.5 | 1.07 | 14.60 | . 692 |
| 1936 | 122 | 1.40 | 19.09 | . 905 | 119 | 1.37 | 18.64 | . 885 |
| 1937 | 74.3 | . 854 | 11.60 | . 552 | 97.6 | 1.12 | 15.23 | . 724 |
| 1938. | 56.2 | . 646 | 8.75 | . 418 | 37.5 | . 431 | 5.85 | . 279 |
| 1939. | 67.4 | . 775 | 10.54 | . 501 | 64.6 | . 743 | 10.10 | . 480 |
| 1940. | 63.6 | . 731 | 9.96 | . 472 | 73.6 | . 846 | 11.53 | . 647 |
| 1941. | 55.7 | . 640 | 8.70 | . 414 | 42.1 | . 484 | 6.57 | . 313 |
| 1942. | 44.8 | . 515 | 6.99 | . 333 | 108 | 1.24 | 16.77 | . 801 |
| 1943. | 132 | 1.52 | 20.62 | . 982 | - | - | - | - |
| Hi ghest. | 132 | 1.52 | 20.62 | . 982 | 119 | 1.37 | 18.64 | . 885 |
| Average | 75.9 | . 872 | 11.84 | . 564 | 75.7 | . 870 | 11.81 | . 562 |
| Lowest. | 20.0 | . 230 | 3.12 | .149 | 37.6 | . 431 | 5.85 | . 279 |

Cstoctin Creek near Jefferson, Md.
 0.5 mlle dowstream from 8road Run and 2 mlles west of Jefferson, Froderick County. prainago area.- 111 squars milea.
Rocords avallabls. - Juns 1928 to September 1931.
Extremee: Maximun etage, 11.30 fset June 19, 1928 (diecharge not determined): minimum discharge, 0.7 eecond-foot Aug. 10-14, Sept. 29, 30, 1930.

Monthly discharge of Catoctin Crsek near Jsffereon, Md.

| Month | Discharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inchee } \end{aligned}$ | Diecharge in million gellons per day per equare mils |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1828 |  |  |  |  |  |  |
| June 7-30.. | 2,820 | 51 | 445 | 4.01 | 3.58 | 2.69 |
| July... | 950 | 62 | 185 | 1.76 | 2.03 | 1.14 |
| August. | 365 | 30 | 101 | . 810 | 1.05 | . 588 |
| September. | 350 | 29 | 89.3 | .805 | +.90 | . 520 |

Monthly discharge of Catoctin Creek near Jefferson, Md.-=Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Dlecharge in m1llion gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1928-29 |  |  |  |  |  |  |
| October | 90 | 11. | 28.2 | 0.254 | 0.29 | 0.164 |
| November. | 81 | 10 | 25.9 | . 233 | .26 | .151 |
| December. | 269 | 14 | 55,8 | . 503 | . 58 | . 325 |
| January. | 500 | - | 114 | 1.03 | 1.19 | . 666 |
| Febmuary | 570 | 4 | 95.9 | . 864 | . 90 | . 558 |
| March. | 605 | 154 | 249 | 2.24 | 2.58 | 1.45 |
| April. | , 440 | 135 | 204 | 1.84 | 2.05 | 1.19 |
| May... | 1,080 | 76 | 212 | 1.91 | 2.20 | 1.23 |
| June. | 129 | 30 | 65.4 | . 689 | . 66 | $.381$ |
| July. | 139 | 19 | 42.9 | . 386 | . 44 | . 249 |
| August. | 57 | 5 | 17.1 | . 154 | . 18 | . 100 |
| Septomber. | 54 | 2 | 15.8 | . 142 | .16 | .092 |
| The year. | 1,080 | 2 | 94.0 | . 847 | 21.49 | .547 |
| October. | 945 | 12 | 107 | . 964 | 1.11 | . 623 |
| November. | 673 | 60 | 135 | 1.22 | 1.36 | . 789 |
| December. | 178 | - | 77.3 | -. 696 | . 80 | . 450 |
| January. | 131 | - | 83.0 | . 748 | . 86 | . 483 |
| February. | 368 | 60 | 166 | 1.50 | 1.56 | . 969 |
| March. . . | 945 | 78 | 198 | 1.78 | 2.05 | 1.15 |
| April. | 360 | 58 | 99.5 | . 896 | 1.00 |  |
| May.. | 78 | 24 | 39.2 | . 353 | . 41 | . 228 |
| June | 194 | 17 | 37.6 | . 339 | . 38 | . 219 |
| July.. | 19 | 1.9 | 8.59 | . 077 | . 09 | . 050 |
| August. | 11 | . 7 | 3.24 | . 029 | . 03 | . 019 |
| September. | 45 | . 7 | 5.12 | .046 | . 05 | . 030 |
| The year. | 945 | . 7 | 79.4 | . 715 | 9.70 | . 462 |
| October. .... | 6.2 |  | 2.50 |  | . 03 |  |
| November. | 9.9 | 3.0 | 6.23 | . 056 | . 06 | . 036 |
| December. | 470 | - | 26.6 | . 240 | . 28 | . 155 |
| January.. | 180 | 21 | 37.2 | . 335 | . 39 | . 217 |
| February. | 52 | 19 | 26.1 | . 235 | . 24 | . 152 |
| March. | 400 | 24 | 52.4 | . 472 | . 54 | . 305 |
| April. | 360 | 40 | 109 | .982 | 1.10 | . 635 |
| Мау. | 168 | 34 | 53.9 | . 486 | . 56 | .314 |
| June. | 790 | 20 | 71.6 | . 645 | . 72 | . 417 |
| July. | 690 | 15 | 107 | . 964 | 1.11 | . 623 |
| August. | 790 | 8.9 | 46.8 | . 422 | . 49 | . 273 |
| September. | 111 | 4.3 | 15.1 | .136 | . 15 | . 088 |
| The year........ | 790 | .8 | 46.3 | . 417 | 5.67 | .270 |

Yearly discharge of Catactin Creek near Jefferson, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar yoar |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per equare mile | Dlecharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile |
|  | Mear | Per square mile |  |  | Moan | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| $\begin{aligned} & 1929 . . \\ & 1930 . . \\ & 1931 . \end{aligned}$ | 94.0 79.4 46.3 | $\begin{array}{r} 0.847 \\ .715 \\ .417 \\ \hline \end{array}$ | $\begin{array}{r} 11.49 \\ 9.70 \\ 5.67 \\ \hline \end{array}$ | $\begin{array}{r} 0.547 \\ .462 \\ .270 \end{array}$ | $\begin{gathered} 111 \\ 55.7 \end{gathered}$ | $\begin{aligned} & 1.00 \\ & .502 \end{aligned}$ | $\begin{array}{r} 13.63 \\ 6.80 \end{array}$ | $\begin{array}{r} 0.646 \\ .324 \end{array}$ |

Monocacy River at 8ridgeport, Md.
Locat10n.- Staff gage, lat. $39^{\circ} 40133^{\prime \prime}$, long. $7^{\circ} 7^{\circ} 14^{\prime \prime} 10^{\prime \prime}, 0.3 \mathrm{~m} 11 \mathrm{e}$ downstream from bridge on State Highway 32 at 8 ridgeport, Carroll County, 0.7 mlle upstream from Cattail
8 ranch, and 3.4 miles northwest of Taneytow. Datum of gage is 339.851 feet above
moan eea level (Corps of Engineers, U. S. Army, bench mark).
Drainage area.- 174 square miles.
Records avallable.- May 1942 to September 1943.
Extremes.- Maximum discharge, 15,000 second-feet May 21, 1943 (gage helght, 20.53 feet); minimum observed, 0.3 second-foot Sept. 30, 1943.

Monthly diecharge of Monocacy River at Bridgeport, Md.

| Month | Discherge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | Discherge in million gallons per dey per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1942 |  |  |  |  |  |  |
| May 6-31. | 5,900 | 28 |  | 2.55 | 2.47 | 1.65 |
| June. | 1,300 | 36 | 207 | 1.19 | 1.33 | . 769 |
| July. | 2,380 | 22 | 349 | 2.01 | 2.32 | 1.30 |
| August. | 4,620 | 65 | 613 | 3.52 | 4.06 | 2.28 |
| September | 523 | 16 | 53.5 | . 307 | . 34 | . 198 |
| October. |  |  |  |  |  |  |
| November. | 5,160 | 16 | 520 | 2.99 | 3.44 | 1.93 |
| December. | 5 720 | 62 | 188 | 1.08 | 1.21 | . 698 |
| Jenuery. | 5,230 | 83 | 575 179 | 1.08 1.30 1.03 | 3.81 | 2.13 |
| February. | 2,340 | 117 | 447 | 2.57 | 2.68 | 1.66 |
| March. | 2,030 | 94 | 401 | 2.30 | 2.66 | 1.49 |
| April. | 2,400 | 57 | 272 | 1.56 | 1.75 | 1.01 |
| May. | 7,640 | 57 | 554 | 3.18 | 3.67 | 2.06 |
| June | 156 | 16 | 56.0 | . 322 | . 36 | . 208 |
| July. | 162 | 6.0 | 22.4 | . 129 | . 15 | . 083 |
| August | 27 | 2.7 | 6.56 | . 038 | . 04 | . 025 |
| September | 6.3 | . 3 | 2.34 | .013 | . 01 |  |
| The year | 7,640 | . 3 | 269 | 1.55 | 20.97 | 1.00 |

Monocacy River neer Frederick, Md.
Location. - Wire end chain gages, let. $39^{\circ} 27^{\prime} 09^{\prime \prime}$, long. $77^{\circ} 22^{\prime \prime} 1^{\prime \prime}$, on Cereeville Bridge, 300 feet downstream from Tuscerora Creek and' 3 miles northeast of Frederick, Prederick County.
Dreinege erea.- 665 square miles.
Records evelleble.- August 1896 to september 1930.
Extremes. - Meximum dis charge, about 20,000 second-
28 feet) feet); questionem, 15 eecond-feet several daye in october 1910 (gege height, 3.54 neer Frederick.

| Month | Discharge in second-feet |  |  |  | Runoffininches | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | Per squere m11e |  |  |
| October........... |  |  |  |  |  |  |
| November. . . . . | 396 | 103 | 144 | 0.217 | 0.25 | 0.140 |
| December | 2,200 | 124 | 306 | . 460 | . 51 | . 297 |
| Jenuery. | 336 | 124 | 187 | . 281 | . 32 | . 182 |
| Februery. | 730 | 147 | 307 | . 462 | . 53 | . 299 |
| March... | , 750 | 256 | 2,062 | 3.10 | 3.23 | 2.00 |
| April. | , 400 | 575 | 1,384 | 2.10 | 2.40 | 1.36 |
| May.. | 3,900 10,400 | 322 | 907 | 1.36 | 1.52 | . 879 |
| June. | 2,200 | 322 | 1,650 | 2.48 | 2.86 | 1.60 |
| July.. | 4,500 | 198 | 492 | . 740 | . 83 | . 478 |
| August... | 11,000 | 178 | 710 | 1.07 | 1.23 | . 692 |
| September | 11,812 | 172 | 968 | $\begin{aligned} & 1.46 \\ & .287 \end{aligned}$ | 1.68 .32 | . 944 |
| The year | 11,000 | 103 | 769 | 1.16 | 15.68 | . 750 |
| October.... |  |  |  |  |  |  |
| November. | - 241 | 94 | 137 | . 206 | . 24 | . 133 |
| December. | 9,590 | 185 | 1,008 | 1.52 | 1.70 | . 982 |
| Januery. | -7,330 | 550 416 | 1,980 | 2.98 | 3.44 | 1.93 |
| Februery | 9,540 | 416 | 2,099 | 3.16 | 3.64 | 2.04 |
| March. | 5,350 | 487 | 1,479 | 2.22 | 2.31 | 1.43 |
| Apr11. | 1,840 | 396 | 1,319 692 | 1.98 | 2.28 | 1.28 |
| Mey. | 8,070 | 326 | 692 1.575 | 1.04 | 1.16 | . 672 |
| June. | , 730 | 256 | 1,575 | 2.37 | 2.73 | 1.53 |
| July.. | 675 | 124 | 408 | . 614 | . 68 | . 397 |
| August.... | 7,020 | 147 | 223 | . 335 | . 39 | . 217 |
| September. | 198 | 103 | 926 128 | $\begin{aligned} & 1.38 \\ & .192 \end{aligned}$ | 1.60 .21 | . 898 |
| The jeer. | 9,590 | 94 | 999 | 1.50 | 20.38 | . 969 |


| Month | Diecharge in second-feet |  |  |  | Runoff in inches | Discharge in million Eallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m11e |  |  |
| 1898-99 |  |  |  |  |  |  |
| October | 6,150 | 103 | 693 | 1.04 | 1.20 | 0.672 |
| November. | 6,970 | 256 | 1,132 | 1.70 | 1.90 | 1.10 |
| Decomber | 12,800 | 480 | 1,943 | 2.92 | 3.37 | 1.89 |
| January | 9,590 | 480 | 1,971 | 2.96 | 3.41 | 1.91 |
| February. | 12,700 | 575 | 2,939 | 4.42 | 4.60 | 2.86 |
| March.... | 12,100 | 1,370 | 3,428 | 5.16 | 5.95 | 3.33 |
| April. | 7,230 | 396 | 1,179 | 1.77 | 1.98 | 1.14 |
| May... | 2,380 | 322 | 680 | 1.02 | 1.18 | . 659 |
| June. | 5,700 | 198 | 759 | 1.14 | 2.27 | .737 |
| July.. | 288 | 124 | 196 | . 295 | . 34 | . 191 |
| August. | 525 | 103 | 208 | .313 | . 36 | . 202 |
| September. | 1,020 | 85 | 309 | . 465 | . 52 |  |
| The year............... | 12,800 | 85 | 1,278 | 1.92 | 26.08 | 1.24 |
| October......... | 480 | 103 | 133 | . 200 | . 23 | . 129 |
| November. | 2.020 | 172 | 401 | .603 | . 67 | . 390 |
| December. | 1,840 | 124 | 448 | . 675 | . 78 | . 436 |
| January. | 4,800 | 288 | 1,030 | 1.55 | 1.79 | 1.00 |
| February. | 15,800 | 525 | 2,641 | 3.97 | 4.13 | 2.57 |
| March. .. | 8,180 | 675 | 2,188 | 3.29 | 3.79 | 2.13 |
| April. | 1,300 | 358 | 576 | . 866 | . 97 | . 560 |
| May. | 1,760 | 226 | 438 | . 659 | . 76 | . 426 |
| June | 1,020 | 147 | 294 | . 442 | -49 | .286 |
| July. | 702 | 69 | 154 | . 232 | .27 | . 150 |
| August. | 702 | 49 | 150 | . 226 | . 26 | . 146 |
| September | 147 | 55 | 82.1 | .123 | . 14 | . 080 |
| The year.................... | 15,800 | 49 | 699 | 1.05 | 14.28 | .679 |
| October | 172 | 85 | 102 | . 153 | . 18 | . 099 |
| November | 3,800 | 85 | 454 | . 683 | . 76 | . 441 |
| December. | 6,700 | 124 | 520 | . 782 | . 90 | . 505 |
| January. | 2,280 | 147 | 438 | . 659 | . 76 | . 426 |
| February. | 5 525 | 226 | 329 | . 495 | . 52 | . 320 |
| March. | 15,500 | 256 | 2,167 | 3.26 | 3.76 | 2.11 |
| April | 12,900 | 675 | 2,742 | 4.12 | 4.60 | 2.66 |
| May. | 6,100 | 396 | 1,521 | 2.29 | 2.64 | 1.48 |
| June | 2,650 | 288 | 839 | 1.26 | 1.41 | . 814 |
| July | 730 | 172 | 316 | . 475 | . 57 | . 307 |
| Auguet. | 1,840 | 147 172 | 445 294 | . 669 | .77 .49 | . 432 |
| September | 1,520 | 172 | 294 | . 442 | . 49 | . 286 |
| The year.................... | 15,500 | 85 | 849 | 1.28 | 17.34 | . 827 |
| October......... | 575 | 172 | 268 | . 403 | . 46 | . 260 |
| November | 4,000 | 198 | 480 | . 722 | . 81 | . 467 |
| December | 14,700 | 358 | 2,313 | 3.48 | 4.01 | 2.25 |
| Januery | 13,000 | 437 | 1,924 | 2.89 | 3.33 | 1.87 |
| February. | 19,200 | 960 | 3,902 | 5.87 | 6.11 | 3.79 |
| March. | 20,500 | 785 | 4,677 | 7.03 | 8.10 | 4.54 |
| April. | 12,800 | 480 | 2,261 | 3.40 | 3.79 | 2.20 |
| May.. | 575 | 226 | 339 | . 510 | . 59 | . 330 |
| June | 1,840 | 147 | 323 | . 486 | . 54 | . 314 |
| Ju1\%. | 1,680 | 124 | 335 | . 504 | . 58 | . 326 |
| August | , 575 | 69 | 143 | . 215 | . 25 | . 139 |
| Septembe | 3,700 | 55 | 232 | . 349 | . 39 | .226 |
| The yea | 20,500 | 55 | 1,419 | 2.13 | 28.96 | 1.38 |
| October........ | 8,380 | 172 | 1,157 | 1.74 | 2.01 | 1.12 |
| November. | 4,000 | 198 | 552 | . 830 | . 93 | . 536 |
| December. | 12,000 | 730 | 3,981 | 5.99 | 6.91 | 3.87 |
| January. | 10,600 | 730 | 3,319 | 4.99 | 5.75 | 3.23 |
| February | 16,300 | 1,160 | 3,124 | 4.69 | 4.88 | 3.03 |
| March. | 16,500 | 900 | 3,400 | 5.11 | 5.89 | 3.30 |
| April. | 16,700 | 840 | 3,532 | 5.31 | 5.92 | 3.43 |
| May... | 9,540 | 358 | - 898 | 1.35 | 1.56 | . 873 |
| June. | 16,300 | 437 | 1,806 | 2.72 | 3.04 | 1.76 |
| July. | 13,700 | 525 | 2,342 | 3.52 | 4.06 | 2.28 |
| August.... | 6,700 | 288 | 1,063 | 1.60 | 1.84 | 1.03 |
| September. | 5,700 | 256 | 795 | 1.20 | 1.34 | . 776 |
| The year.. | 16,700 | 172 | 2,162 | 3.25 | 44.13 | 2.10 |


| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discherge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Mininum | Mean | Per square mile |  |  |
| 1903-4 |  |  |  |  |  |  |
| October. | 1,930 | 226 | 477 | 0.717 | 0.83 | 0.463 |
| November | 437 | 198 | 239 | . 359 | . 40 | . 232 |
| December | 6,650 | 172 | 540 | . 812 | . 94 | . 525 |
| Jenuary. | 14,800 | 260 | 1,069 | 1.61 | 1.86 | 1.04 |
| February. | 8,760 | 294 | 1,502 | 2.26 | 2.44 | 1.46 |
| March. ... | 12,000 | 538 | 1,812 | 2.72 | 3.14 | 1.76 |
| April | 2,400 | 294 | - 729 | 1.10 | 1.23 | . 711 |
| May. | 789 | 198 | 375 | . 561 | . 65 | .363 |
| June | 4,300 | 144 | 817 | 1.23 | 1.37 | . 795 |
| July. | 2,760 | 120 | 586 | . 881 | 1.02 | . 569 |
| August. | 7,130 | 80 | 436 | . 656 | . 76 | . 424 |
| September. |  | 80 | 251 | .377 | . 42 | . 244 |
| The year | 14,800 | 80 | 734 | 1.10 | 15.06 | . 711 |
| October. | 969 | 80 | 176 |  |  |  |
| Novembe | 228 | 120 | 139 | . 209 | . 23 | . 135 |
| December. | 3,900 | 120 | 549 | . 826 | . 95 | . 534 |
| January | 12,200 | 538 | 1,503 | 2.26 | 2.61 | 1.46 |
| Februery. | 734 | 368 | , 388 | . 588 | . 61 | . 380 |
| March. | 9,440 | 538 | 3,056 | 4.60 | 5.30 | 2.97 |
| April. | 2,220 | 368 | 790 | 1.19 | 1.33 | . 769 |
| Mey. | 450 | 170 | 279 | . 420 | . 48 | . 271 |
| June. | 2,860 | 144 | 748 | 1.12 | 1.25 | . 724 |
| July. | 6,600 | 260 | 1,296 | 1.95 | 2.25 | 1.26 |
| August. | 13,600 | 228 | 1,427 | 2.15 | 2.48 | 1.39 |
| Soptember | 2,130 | 170 | - 546 | . 821 | . 92 | . 531 |
| The yeer | 13,600 | 80 | 917 | 1.38 | 18.72 | . 892 |
| October. | 2,040 | 144 | 583 | . 877 | 1.01 | . 567 |
| November | 3,050 | 198 | 390 | . 586 | . 65 | . 379 |
| December | 13,500 | 408 | 2,124 | 3.19 | 3.68 | 2.06 |
| Jenuery. | 13,200 | 493 | 1,657 | 2.49 | 2.87 | 1.61 |
| Fobruery. | 3,900 | 260 | 824 | 1.24 | 1.29 | . 801 |
| Merch. | 12,200 | 584 | 2,275 | 3.42 | 3.94 | 2.21 |
| April. | 16,800 | 632 | 2,877 | 4.33 | 4.83 | 2.80 |
| May. . | 5 734 | 228 | + 422 | . 634 | . 73 | . 410 |
| June. | 5,200 | 228 | 1,037 | 1.56 | 1.74 | 1.01 |
| July. | 584 | 198 | 284 | . 427 | . 49 | . 276 |
| August. | 10,800 | 260 | 1,780 | 2.68 | 3.09 | 1.73 |
| September | 682 | 198 | 290 | . 436 | . 49 | . 282 |
| The yeer | 16,800 | 144 | 1,215 | 1.83 | 24.81 | 1.18 |
| October..... | 7,760 | 198 | 1,490 | 2.24 | 2.58 | 1.45 |
| November | 734 | 260 | - 418 | . 629 | . 70 | . 407 |
| December | 6,600 | 260 | 1,430 | 2.15 | 2.48 | 1.39 |
| Jenuery. | 9,650 | 682 | 2,680 | 4.03 | 4.65 | 2.60 |
| February | 1,540 | 408 | 814 | 1.22 | 1.27 | . 789 |
| Merch. | 12,400 | 408 | 3,240 | 4.87 | 5.62 | 3.15 |
| April. | 3,810 | 538 | 967 | 1.46 | 1.63 | . 944 |
| May. | 2,490 | 368 | 686 | 1.03 | 1.19 | . 666 |
| Juns | 4,700 | 330 | 1,430 | 2.15 | 2.40 | 1.39 |
| July. | 10,600 | 258 | 1,430 | 2.15 | 2.48 | 1.39 |
| August. | 1,100 | 165 | 375 | . 564 | . 65 | . 365 |
| September | 6,400 | 138 | 831 | 1.25 | 1.40 | .808 |
| The year | 12,400 | 138 | 1,325 | 1.99 | 27.05 | 1.29 |
| October.. | 1,320 | 194 | 330 | . 496 |  |  |
| November. | 8,500 | 194 | 1,540 | 2.32 | 2.59 | 1.50 |
| December. | 11,200 | 538 | 2,810 | 4.23 | 4.88 | 2.73 |
| January. | 9,540 | 734 | 2,130 | 3.20 | 3.69 | 2.07 |
| Februery. | 19,200 | 493 | 3,400 | 5.12 | 5.52 | 3.31 |
| Merch. | 6,710 | 682 | 2,470 | 3.71 | 4.28 | 2.40 |
| April. | 2,040 | 408 | 811 | 1.22 | 1.36 | . 789 |
| May... | 17,300 | 408 | 3,870 | 5.82 | 6.71 | 3.76 |
| June. | , 906 | 225 | 408 | . 614 | . 68 | . 397 |
| July. | 4,200 | 138 | 592 | . 890 | 1.03 | . 575 |
| August. | 1,280 | 152 | 335 | . 504 | . 58 | . 326 |
| September | 1,280 | 102 | 186 | . 280 | .31 | . 181 |
| The jeer.. | 19,200 | 102 | 1.573 | 2.37 | 32.20 | 1.53 |

Monthly discharge of Monocacy River near Frederick, Md.--Continuad

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inchas } \end{aligned}$ | Diacharga in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { m1le } \end{aligned}$ |  |  |
| 1908-9 |  |  |  |  |  |  |
| October. | 762 | 126 | 235 | 0.353 | 0.41 | 0.228 |
| November. | 180 | 126 | 154 | . 232 | . 26 | .150 |
| Decembar. | 472 | 126 | 212 | . 319 | . 37 | . 206 |
| January | 3,380 | 140 | 590 | 1.04 | 1.20 | . 672 |
| Fabruary. | 10,500 | 340 | 2,560 | 3.85 | 4.01 | 2.49 |
| March... | 6,970 | 560 | 1,710 | 2.57 | 2.96 | 1.66 |
| April. | 4,850 | 340 | 1,350 | 2.03 | 2.26 | 1.31 |
| May.. | 2,090 | 240 | 564 | . 848 | . 98 | . 548 |
| Juna | 2,960 | 247 | 982 | 1.48 | 1.65 | . 957 |
| July. | 320 | 79 | 150 | . 226 | . 26 | . 146 |
| August. . | 537 | 38 | 99.2 | . 149 | . 17 | . 096 |
| September <br> The ye |  |  |  |  |  |  |
|  | 10,500 | 38 | 720 | 1.08 | 14.69 | . 698 |
|  | 282 | 38 | 85.6 | . 129 | . 15 | . 083 |
|  | 127 | 57 | 80.8 | .122 | . 14 | . 079 |
|  | 9,120 | 79 | 664 | 1.00 | 1.15 | 1.646 |
|  | 12,600 | 150 | 1,700 | 2.56 3.31 | 2.95 3.45 | 1.65 2.14 |
|  | 10,200 7,440 | 247 214 | 2,200 | 3.31 1.38 | 3.45 1.59 | 2.14 |
|  | 9,960 | 127 | 1,210 | 1.82 | 2.03 | 1.18 |
|  | 1,030 | 183 | . 388 | . 584 | . 67 | . 377 |
|  | 7,760 | 183 | 1,130 | 1.70 | 1.90 | 1.10 |
|  | -789 | 79 | 236 | . 355 | . 41 | $.229$ |
|  | 1,540 214 | 38 22 | 169 58.5 | . .254 | $\begin{array}{r}.29 \\ .10 \\ \hline\end{array}$ | $\begin{aligned} & .164 \\ & .057 \\ & \hline \end{aligned}$ |
| The y | 12,600 | 22 | 725 | 1.09 | 14.83 | . 704 |
| October........... | 102 | 15 | 49.5 | .074 | . 09 | . 048 |
| November. | 154 | 38 | 77.8 | . 117 | . 13 | . 076 |
| December. | 360 | 79 | 127 | . 191 | . 22 | . 123 |
| January | 3,140 | 154 | 598 | . 899 | 1.04 | . 581 |
| February | 1,540 | 282 | 815 | . 123 | 1.28 | . 080 |
| March. | 1,880 | 360 | 825 | 1.24 | 1.43 | . 801 |
| April | 3,670 | 402 | 990 | 1.49 | 1.66 | . 963 |
| May. | 789 | 154 | 293 | . 441 | . 51 | . 285 |
| June | 632 | 154 | 264 | . 397 | - 44 | . 257 |
| July. | 17, 446 | 38 | 1.280 | 1.238 | 2.21 | 1.24 |
| Septamber. | 15,200 | 127 | 1,180 | 1.77 | 1.98 | 1.14 |
| The yar | 17,400 | 15 | 552 | . 830 | 11.26 | . 536 |
| October........... | 2,400 | 79 | 661 | . 994 | 1.15 | . 642 |
| Novambar. | 2,960 | 320 | 865 | 1.30 | 1.45 | . 840 |
| Dacember. | 5,900 3,800 | 360 | 1,300 796 | 1.97 1.20 | 2.25 1.38 | 1.27 .776 |
| February. | 13,000 | - | 1,980 | 2.98 | 3.21 | 1.93 |
| March... | 14,000 | 593 | 3,750 | 5.64 | 6.50 | 3.65 |
|  | 2,860 | 593 | 1,250 | 1.88 | 2.10 | 1.22 |
| $\begin{aligned} & \text { Apr11 } \\ & \text { May.. } \end{aligned}$ | 1,960 | 294 | 719 358 | 1.08 <br> .538 | 1.24 .60 | .698 .348 |
| Juna. July. | 2,950 | 139 | 496 | . 746 | . 86 | . 482 |
| August... | 3,420 | 139 | $\begin{array}{r}433 \\ \hline 390\end{array}$ | .651 2.09 | .75 2.33 | 1.421 |
|  | 17,400 | 68 | 1,390 | 2.09 |  |  |
| The ye | 17,400 | 68 | 1,165 | 1.75 | 23.82 | 1.13 |
| October........... | 1,050 | 167 | 309 | . 465 | . 54 | .301 |
| November | 1,960 | 167 | 311 | . 468 | . 52 | . 302 |
| December | 9,360 | 139 | 877 | 1.32 | 1.52 | . 853 |
| January. | 4,760 | 805 | 1,690 | 2.54 | 2.93 | 1.64 |
| February | 1,320 | 197 | . 638 | - 959 | 1.00 | . 620 |
|  | 13,200 | 259 | 2,480 | 3.73 | 4.30 | 2.41 |
| March. April. | 4,760 | 643 | 1,620 | 2.44 | 2.72 | 1.58 |
| April. Mяу. | 1,960 | 331 | 667 | 1.02 | 1.18 | -659 |
| Juna | 643 | 167 | 281 | . 423 | . 47 | . 2780 |
| July....Soptembe | 2,220 | 68 | 228 | . 343 | . 40 | . 222 |
|  | 4,850 | 30 | 272 | . 409 | .46 | .264 |
| Tha yea | 13,200 | 30 | 796 | 1.20 | 16.25 | .776 |

Monthly discharge of Monocacy River near Frederick, Md.--Continued

| Month | Diecharge in eecond-feet |  |  |  | $\left\lvert\, \begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1913-14 |  |  |  |  |  |  |
| October.. | 7,890 | 101 | 1,060 | 1.59 | 1.83 | 1.03 |
| November. | 2,400 | 243 | , 516 | . 776 | . 87 | . 502 |
| December. | 7,890 | 276 | 1,300 | 1.95 | 2.25 | 1.26 |
| January. | 7,050 | 545 | 1,820 | 2.74 | 3.16 | 1.77 |
| Pebruary | 8,520 | - | 1,230 | 1.85 | 1.93 | 1.20 |
| March. | 7,780 | - | 1,620 | 2.44 | 2.81 | 1.58 |
| April. | 5,140 | 545 | 1,330 | 2.00 | 2.23 | 1.29 |
| May... | 3,330 | 259 | 866 | 1.30 | 1.50 | . 840 |
| June. | , 569 | 101 | 231 | . 347 | . 39 | . 224 |
| July. | 3,900 | 78 | 497 | . 747 | . 86 | . 483 |
| August. | 2,400 | 59 | 292 | . 439 | . 51 | . 284 |
| September | 212 | 43 | 76.6 | .115 | .13 | .074 |
| The yaar. | 8,520 | 43 | 905 | 1.36 | 18.47 | . 879 |
| $1914-15$ 432 30 71.4 .107 12 | 432 |  |  |  |  |  |
| November. . . . . . | 2,580 | 50 | 246 | .370 | . 12 | $\begin{array}{r} .069 \\ 230 \end{array}$ |
| December. | 1,250 | 89 | 436 | . 656 | . 71 | . 234 |
| January. | 20,900 | 227 | 3,300 | 4.96 | 5.72 | 3.21 |
| February | 17,100 | 800 | 3,120 | 4.69 | 4.88 | 3.03 |
| March. | 1,230 | 302 | 652 | . 980 | 1.13 | . 633 |
| April. | 445 | 212 | 267 | . 402 | . 45 | . 260 |
| May. | 2,710 | 158 | 425 | . 539 | . 74 | . 413 |
| June | 14,800 | 226 | 1,270 | 1.91 | 2.13 | 1.23 |
| July. | , 318 | 68 | 169 | . 254 | . 29 | . 164 |
| August | 13,000 | 122 | 1,960 | 2.95 | 3.40 | 1.91 |
| Septemba | 10,800 | 240 | 1,060 | 1.59 | 1.77 | 1.03 |
| The year | 20,900 | 30 | 1,070 | 1.61 | 21.80 | 1.04 |
| October | 3,140 | 286 | 571 | . 859 |  |  |
| November | 1,820 | 198 | 441 | . 663 | . 74 | . 429 |
| December | 7,730 | 158 | 1,190 | 1.79 | 2.06 | 1.16 |
| January. | 2,540 | 465 | , 915 | 1.38 | 1.59 | . 892 |
| F'ebruary | 5,410 | 682 | 1,330 | 2.00 | 2.16 | 1.29 |
| March. | 9,940 | 318 | 1,910 | 2.87 | 3.31 | 1.85 |
| April | 3,910 | 592 | 1,200 | 1.80 | 2.01 | 1.16 |
| May. | + 705 | 286 | 413 | . 621 | . 72 | $.401$ |
| June. | 13,300 | 255 | 2,140 | 3.22 | 3.59 | 2.08 |
| July. | 5,580 | 270 | 824 | 1.24 | 1.43 | . 801 |
| August. | 570 | 171 | 297 | . 447 | . 52 | . 289 |
| Septermber | 7,550 | 78 | 653 | . 982 | 1.10 | . 635 |
| The year | 13,300 | 78 | 987 | 1.48 | 20.22 | . 957 |
| October.. | 7,010 | 122 | 440 | . 662 |  |  |
| November. | 525 | 122 | 158 | . 238 | . 26 | . 154 |
| Dacambar | 2,610 | 158 | 576 | . 868 | 1.00 | . 560 |
| January. | 3,290 | 405 | 1,250 | 1.88 | 2.17 | 1.22 |
| February. | 1,420 | 240 | , 682 | 1.03 | 1.07 | . 666 |
| March. | 9,750 | 705 | 2,380 | 3.58 | 4.13 | 2.31 |
| April. | 7,550 | 434 | 1,130 | 1.70 | 1.90 | 1.10 |
| May. | 2,050 | 232 | - 430 | . 646 | . 74 | . 418 |
| June | 4,230 | 218 | 783 | 1.18 | 1.32 | . 763 |
| July. | 2,840 | 204 | 701 | 1.05 | 1.21 | . 679 |
| August. | 4,900 | 165 | 643 | . 967 | 1.11 | $.625$ |
| September | 2,410 | 204 | 460 | . 692 | . 77 | . 447 |
| The year | 9,750 | 122 | 805 | 1.21 | 16.44 | .782 |
| October...... | 12,400 |  |  |  |  |  |
| November. . | 3,060 | 262 | 1,440 604 | 2.1708 | 2.50 | 1.40 |
| December. | , | 262 | 275 | . 414 | -. 48 |  |
| January. . | - | - | 408 | . 614 | . 71 | . 397 |
| February. | 13,700 | - | 3,560 | 5.35 | 5.57 | 3.46 |
| March. | 3,590 | 454 | 1,310 | 1.97 | 2.27 | 1.27 |
| April | 8,830 | 343 | 2,370 | 3.56 | 3.97 | 2.30 |
| May . | 5,580 | 310 | 705 | 1.06 | 1.22 | . 685 |
| June. | 882 | 165 | 286 | . 430 | . 48 | . 278 |
| July. | 713 | 116 | 198 | . 298 | . 34 | . 193 |
| August. | 1,200 | 72 | 185 | . 278 | . 32 | . 180 |
| Septembar | 378 | 54 | 138 | . 208 | . 23 | . 134 |
| The year.. | 13,700 | 54 | 935 | 1.41 | 19.10 | . 911 |

Monthly discherge of Monocacy RIver near Frederick, Md.--Continued

| Month | Diecherge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1918-19 |  |  |  |  |  |  |
| October.. | 104 | 72 | 88.4 | . 133 | . 15 | . 086 |
| November | 2,410 | 72 | 244 | . 367 | . 41 | . 237 |
| December | 9,750 | 72 | 1,070 | 1.61 | 1.86 | 1.04 |
| Jenuary. | 6,650 | 494 | 1,420 | 2.14 | 2.47 | 1.38 |
| Februery | 3,750 | 191 | , 832 | 1.25 | 1.30 | . 808 |
| Merch. . | 7,550 | 494 | 1,530 | 2.30 | 2.65 | 1.49 |
| April | 3,590 | 415 | . 853 | 1.28 | 1.43 | . 827 |
| May. . | 5,320 | 396 | 1,260 | 1.89 | 2.18 | 1.22 |
| June | 1,910 | 232 | 589 | . 886 | . 99 | . 573 |
| July. | 5,410 | 178 | 984 | 1.48 | 1.71 | . 957 |
| August | 1,200 | 152 | 291 | . 438 | . 50 | . 283 |
| September | 1,260 | 116 | 235 | . 353 | . 39 | . 228 |
| The yeer. | 9,750 | 72 | 786 | 1.18 | 16.04 | . 763 |
| October....... | 622 | 116 | 249 | .374 | . 43 |  |
| November. | 3,750 | 204 | 894 | 1.34 | 1.50 | . 866 |
| December. | 2,920 | 204 | 791 | 1.10 | 1.37 | . 769 |
| Jenuery | 2,920 | - | 662 | . 995 | 1.15 | . 643 |
| Februery. | - | - | 1,500 | 2.26 | 2.44 | 1.46 |
| March. | 10,600 | 434 | 3,400 | 5.11 | 5.89 | 3.30 |
| April | 4,560 | 525 | 1,160 | 1.74 | 1.94 | 1.12 |
| May. | 1,420 | 255 | - 490 | . 737 | . 85 | . 476 |
| June. | 728 | 158 | 282 | . 424 | . 44 | . 274 |
| July.. | 950 | 88 | 243 | . 365 | . 42 | .236 |
| August. | 5,160 | 88 | 751 | 1.13 | 1.30 | . 730 |
| September. | 615 | 99 | 217 | . 326 | . 36 | .211 |
| The year | 10,600 | 88 | 885 | 1.33 | 18.09 | . 860 |
| October.. | 4,390 | 110 | 373 | . 561 | . 65 | .363 |
| November. | 2,540 | 122 | 548 | . 824 | . 92 | . 533 |
| December | 8,560 | 405 | 1,140 | 1.71 | 1.97 | 1.11. |
| Jenuery. | 2,170 | 240 | . 599 | . 901 | 1.04 | . 582 |
| February. | 950 | 335 | 539 | . 817 | . 84 | . 528 |
| March. | 5,580 | 370 | 1,160 | 1.74 | 2.00 | 1.12 |
| April | 1,540 | 255 | 451 | . 678 | . 76 | . 438 |
| May. | 12,600 | 405 | 2,250 | 3.38 | 3.90 | 2.18 |
| June | 525 | 146 | 279 | . 420 | . 47 | . 271 |
| July. | 638 | 99 | 218 | . 328 | . 38 | . 212 |
| August. | 3,360 | 78 | 384 | . 577 | .67 | . 373 |
| September | 1,820 | 57 | 456 | . 686 | . 77 | . 443 |
| The year. | 12,600 | 57 | 703 | 1.06 | 14.37 | .685 |
| October.. | 151 | 72 | 929 | . 140 | . 16 |  |
| November. | 3,360 | 101 | 324 | . 487 | . 54 | . 315 |
| Decomber. | 4,980 | 270 | 786 | 1.18 | 1.36 | . 763 |
| Jenuery. | 2,240 | - | 451 | . 678 | . 78 | . 438 |
| Februery. | 4,980 | - | 1,410 | 2.12 | 2.21 | 1.37 |
| March'. | 8,100 | 615 | 2,000 | 3.01 | 3.47 | 1.95 |
| April | 2,320 | 320 | 609 | . 916 | 1.02 | . 592 |
| May. | 2,240 | 255 | 569 | . 856 | . 99 | . 553 |
| June | 6,650 | 226 | 946 | 1.42 | 1.58 | . 918 |
| July.. | 3,520 | 146 | 502 | . 755 | . 87 | . 488 |
| August... | 950 | 110 | 230 | . 346 | . 40 | $.224$ |
| September. | 198 | 46 | 90.8 | .137 | . 15 | $.088$ |
| The year | 8,100 | 46 | 663 | .997 | 13.53 | . 644 |
| 1922-23 |  |  |  |  |  |  |
| October.... November. | 485 92 |  |  | 0.179 |  |  |
| November. <br> December. | 92 850 | 61 | 159.9 | .116 .239 | $\begin{aligned} & .13 \\ & .28 \end{aligned}$ | .075 .154 |
| Jenuary. | 1,820 | 61 | 267 | . 402 | . 46 | . 260 |
| Februery. | 5,240 | - | 1,080 | 1.62 | 1.69 | 1.05 |
| March. | 5,580 | - | 1,540 | 2.32 | 2.68 | 1.50 |
| April. | 2,350 | 318 | 702 | 1.06 | 1.18 | . 685 |
| Mey. | 682 | 240 | 346 | . 520 | . 60 | . 336 |
| June. | 240 | 86 | 162 | . 244 | . 27 | . 158 |
| July. | 13,000 | 23 | 502 | . 755 | . 87 | . 488 |
| August. | 900 | 49 | 223 | . 335 | . 39 | . 217 |
| Seftember. | 2,170 | 76 | 402 | . 605 | . 68 | . 391 |
| The yeer. | 13,000 | 23 | 461 | . 693 | 9.44 | . 448 |

Monthly diecherge of Monocacy River neer Frederick, Md.--Continued

| Month | Discherge in second-feet |  |  |  | RunoffIninches | Dhschere in million gollons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1923-24 |  |  |  |  |  |  |
| October. | 255 | 64 | 120 | . 180 | . 21 | . 116 |
| November. | 226 | 120 | 156 | . 235 | . 26 | . 152 |
| December | 2,390 | 318 | 728 | 1.09 | 1.26 | . 704 |
| Jenuary. | 14,600 | 134 | 2,060 | 3.10 | 3.58 | 2.00 |
| Februery. | 4,820 | 405 | . 998 | 1.50 | 1.62 | . 969 |
| Merch.... | 11,600 | 1,050 | 3,950 | 5.94 | 6.85 | 3.84 |
| April | 11,400 | 615 | 2,450 | 3.68 | 4.11 | 2.38 |
| Mey.. | 12,300 | 425 | 1,740 | 2.62 | 3.02 | 1.69 |
| June | 11,000 | 405 | 1,530 | 2.30 | 2.57 | 1.49 |
| July. | 2,920 | 179 | 671 | 1.01 | 1.16 | . 653 |
| August. | 2,170 | 106 | 305 | . 459 | . 53 | . 297 |
| September. | 5,750 | 106 | 316 | .475 | . 53 | .307 |
| The jeer. | 14,600 | 64 | 1,250 | 1.88 | 25.70 | 1.22 |
| October.......... | 8,930 | 139 | 844 | 1.27 | 1.46 | . 821 |
| November. | 1,230 | 139 | 254 | . 382 | . 43 | . 247 |
| December. | 615 | 134 | 300 | . 451 | . 52 | . 291 |
| Jenuery | 1,170 | 110 | 402 | . 605 | . 70 | . 391 |
| February. | 12,000 | 525 | 2,470 | 3.71 | 3.86 | 2.40 |
| Merch. | 2,240 | 485 | 764 | 1.15 | 1.33 | . 743 |
| April | 660 | 270 | 428 | . 644 | . 72 | . 416 |
| Mey. | 1,110 | 158 | 406 | .611 | . 71 | . 395 |
| June. | - | 88 | 129 | . 194 | . 22 | . 125 |
| July. | 5 | 43 | 83.0 | - 125 | -14 | . 081 |
| August. | 255 660 | 28 30 | 99.0 138 | . 149 | . 17 | .096 .134 |
| The year | 12,000 | 28 | 513 | . 771 | 10.49 | . 498 |
| October......... | 1,420 | 24 | 305 | . 459 | . 53 | . 297 |
| November | 9,290 | 146 | 771 | 1.16 | 1.29 | . 750 |
| December. | 1,680 | 212 | 568 | . 854 | . 98 | . 552 |
| Januery. | 17,460 |  | 878 | 1.32 | 1.52 | . 853 |
| February | 13,500 | 335 | 2,620 | 3.94 | 4.10 | 2.55 |
| Merch. | 3,750 | 425 | 947 | 1.42 | 1.64 | . 918 |
| April | 7,550 | 352 | 947 | 1.42 | 1.58 | . 918 |
| Мау. | 505 | 134 | 266 | . 400 | - 46 | . 259 |
| June | 900 | 99 | 188 | . 283 | . 32 | . 183 |
| July. | 335 | 78 | 135 | .203 | . 23 | .131 |
| August | 9,020 | 78 | 1,020 | 1.53 | 1.76 | . 989 |
| September | 4,100 | 115 | 565 | . 850 | .95 | . 549 |
| The yeer. | 13,500 | 24 | 754 | 1.13 | 15.36 | . 730 |
| October. | 7,010 | 320 | 872 | 1.31 | 1.51 | . 847 |
| November | 15,600 | 290 | 2,170 | 3.26 | 3.64 | 2.11 |
| December | 4,730 | 450 | 882 | 1.38 | 1.53 | . 860 |
| Jenuary. | 2,220 | 340 | 866 | 1.30 | 1. 50 | . 840 |
| February. | 4,820 | 392 | 1,820 | 2.74 | 2.85 | 1.77 |
| March.... | 1,710 | 470 | . 886 | 1.33 | 1.53 | -. 860 |
| April | 7,190 | 322 | 1,510 | 2.27 | 2.53 | 1.47 |
| May. | 2,930 | 322 | 814 | 1.22 | 1.41 | . 789 |
| June | 2,080 | 90 | 562 | . 845 | . 94 | . 546 |
| July. | 450 | 90 135 | 200 | .301 | . 35 | . 195 |
| August. | 1,590 | 135 | 357 | . 537 | . 62 | . 347 |
| September | 6,170 | 80 | 327 | . 492 | . 55 | . 318 |
| The jeer. | 15,600 | 80 | 929 | 1.40 | 18.96 | . 905 |
| October.......... | 13,800 | 76 | 1,910 | 2.87 | 3.31 | 1.85 |
| November. | 5,540 | 320 | , 640 | . 962 | 1.07 | .622 |
| December. | 5,900 | 305 | 1,280 | 1.92 | 2.21 | 1.24 |
| Jenuary. | 2,360 | - | - 523 | .786 | . 91 | . 508 |
| Februery. | 11,900 | - | 1,530 | 2.30 | 2.48 | 1.49 |
| Merch... | 4,370 | 390 | 1,400 | 2.11 | 2.43 | 1.36 |
| April. | 12,900 | 430 | 2,090 | 3.14 | 3.50 | 2.03 |
| Mey.. | 4,190 | 320 | - 977 | 1.47 | 1.70 | . 950 |
| June. | 12,000 | 218 | 2,320 | 3.49 | 3.89 | 2.26 |
| July. | 12,200 | 340 | 1,530 | 2.30 1.03 | 2.65 1.19 | 1.49 |
| August... September | 3,250 2,710 | 305 160 | 684 461 | 1.03 .693 | 1.19 .77 | $\begin{array}{r} .666 \\ .448 \end{array}$ |
| The jear.... | 13,800 | 76 | 1,280 | 1.92 | 26.11 | 1.24 |

Monthiy diacharge of Monocacy River near Frederick, Md.--Continued

| Month | Dlecharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | D1scharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por equare mile |  |  |
| 1928-28 |  |  |  |  |  |  |
| October. | 642 | 103 | 267 | . 402 | . 46 | .260 |
| November. | 289 | 157 | 215 | . 323 | . 36 | . 209 |
| December. | 1,410 | 89 | 307 | . 462 | . 53 | . 299 |
| January. | 8,010 | - | 1,030 | 1.55 | 1.79 | 1.00 |
| February | 8,930 | - | 1,240 | 1.86 | 1.94 | 1.20 |
| March... | 10,500 | 430 | 2,120 | 3.19 | 3.68 | 2.06 |
| Apr11 | 10,900 | 340 | 1,540 | 2.32 | 2.59 | 1.50 |
| May. . | 15,000 | 375 | 1,310 | 1.97 | 2.27 | 1.27 |
| June | 3,250 | 138 | 483 | . 726 | . 81 | . 469 |
| July.. | 305 | 103 | 171 | . 257 | . 30 | . 166 |
| August. . | 146 | 75 | 103 | . 155 | - 18 | . 100 |
| September | 1,180 | 67 | 240 | .361 | . 40 | . 233 |
| The year | 15,000 | 67 | 749 | 1.13 | 15.31 | . 730 |
| October. | 9,290 | 108 | 1,030 | 1.55 | 1.79 | 1.00 |
| November. | 6,080 | 275 | 1,040 | 1.56 | 1.74 | 1.01 |
| December. | 1,870 |  | 573 | . 862 | . 99 | . 557 |
| January. | 1,940 | - | 608 | . 914 | 1.05 | . 591 |
| February. | 4,460 | - | 1,260 | 1.89 | 1.97 | 1.22 |
| March. ... | 8,370 | 460 | 1,340 | 2.02 | 2.33 | 1.31 |
| Apr11. | 5,090 | 333 | 712 | 1.07 | 1.19 | . 692 |
| May..... | 404 518 | 141 | 246 219 | .370 .329 | . 43 | . 239 |
| June. | 146 | 28 | 69.7 | . 105 | . 12 | . 068 |
| Augugt. | 50 | 28 | 38.8 | . 058 | . 07 | . 038 |
| September. | 160 | 30 | 57.4 | . 086 | . 10 | . 056 |
| The year..... | 9,290 | 28 | 595 | . 895 | 12.15 | . 578 |

Yearly discharge of Monocacy River noar Frederick, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in <br> inches | Diecharge in million gallone per day per square mile | Diecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | D1echarge in million gallons per day per equare mile |
|  | Mean | Per square mile |  |  | Mean | Por equare mile |  |  |
| 1897. | 769 | 1.16 | 15.68 | 0.750 | 978 | 1.47 | 19.98 | 0.950 |
| 1898. | 999 | 1.50 | 20.38 | . 969 | 1,053 | 1.59 | 21.47 | 1.03 |
| 1899 | 1,278 | 1.92 | 26.08 | 1.24 | 1,043 | 1.57 | 21.29 | 1.01 |
| 1900 | - 698 | 1.05 | 14.28 | . 679 | 707 | 1.06 | 14.44 | . 685 |
| 1901 | 849 | 1.28 | 17.34 | . 827 | 1,018 | 1.53 | 20.78 | . 989 |
| 1902 | 1,419 | 2.13 | 28.96 | 1.38 | 1,642 | 2.47 | 33.53 | 1.60 |
| 1903 | 2,162 | 3.25 | 44.13 | 2.10 | 1,786 | 2.68 | 36.45 | 1.74 |
| 1904. | 734 | 1.10 | 15.06 | . 711 | 702 | 1.06 | 14.38 | . 685 |
| 1905 | 916 | 1.38 | 18.72 | . 892 | 1,105 | 1.66 | 22.57 | 1.07 |
| 1906 | 1,215 | 1.83 | 24.81 | 1.18 | 1,236 | 1.86 | 25.23 | 1.20 |
| 1907 | 1,325 | 1.99 | 27.05 | 1.29 | 1,436 | 2.16 | 29.33 | 1.40 |
| 1908. | 1,573 | 2.37 | 32.20 | 1.53 | 1,231 | 1.85 | 25.20 | 1.20 |
| 1909. | 720 | 1.08 | 14.69 | . 698 | 739 | 1.11 | 15.09 | . 717 |
| 1910. | 725 | 1.09 | 14.83 | . 704 | 676 | 1.02 | 13.83 | . 659 |
| 1911 | 552 | . 830 | 11.26 | . 536 | 768 | 1.16 | 15.67 | . 750 |
| 1912. | 1,165 | 1.75 | 23.82 | 1.13 | 1,054 | 1.58 | 21.55 | 1.02 |
| 1913 | 796 | 2.20 | 16.25 | . 776 | 913 | 1.37 | 18.62 | . 885 |
| 1914 | 905 | 1.36 | 18.47 | . 879 | 725 | 1.09 | 14.81 | . 704 |
| 1915 | 1,070 | 1.61 | 21.80 | 1.04 | 1,190 | 1.79 | 24.30 | 1.16 |
| 1916. | 987 | 1.48 | 20.22 | . 957 | 901 | 1.35 | 18.45 | . 873 |
| 1917. | 805 | 1.21 | 16.44 | . 782 | 901 | 1.35 | 18.41 | . 873 |
| 1918 | 935 | 1.41 | 19.10 | . 911 | 858 | 1.29 | 17.53 | . 834 |
| 1919 | 786 | 1.18 | 16.04 | . 763 | 830 | 1.25 | 16.92 | . 808 |
| 1920 | 885 | 1.33 | 18.09 | . 860 | 897 | 1.35 | 18.33 | . 873 |
| 1921 | 703 | 1.06 | 14.37 | . 685 | 631 | . 949 | 12.89 | .613 |

Yearly discharge of Monocacy River near Frederick, Md.--Continued

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
|  | Mean | Por square mile |  |  | Mean | Per square mile |  |  |
| 1922. | 663 | 0.997 | 13.53 | 0.644 | 592 | 0.890 | 12.09 | 0.575 |
| 1923 | 461 | . 693 | 9.44 | . 448 | 516 | . 776 | 10.55 | . 502 |
| 1924 | 1,250 | 1.88 | 25.70 | 1.22 | 1,290 | 1.94 | 26.38 | 1.25 |
| 1925 | 513 | . 771 | 10.49 | . 498 | - 533 | . 802 | 10.88 | . 518 |
| 1926 | 754 | 1.13 | 15.36 | . 730 | 945 | 1.42 | 19.24 | . 918 |
| 1927. | 929 | 1.40 | 18.96 | . 905 | 926 | 1.39 | 18.87 | . 898 |
| 1928. | 1,280 | 1.92 | 26.11 | 1.24 | 1,020 | 1.53 | 20.87 | . 989 |
| 1929. | 749 | 1.13 | 15.31 | . 730 | 904 | 1.36 | 18.48 | . 879 |
| 1930. | 595 | . 895 | 12.15 | . 578 |  | - | - |  |
| R1ghest | 2,162 | 3.25 | 44.13 | 2.10 | 1,786 | 2.69 | 36.45 | 1.74 |
| Average | 946 | 1.42 | 19.33 | . 918 | 962 | 1.45 | 19.65 | . 937 |
| Lowest. | 461 | . 693 | 9.44 | . 448 | 516 | . 776 | 10.55 | . 502 |

Monocacy River at Jug 8ridge, near Frederick, Md.
Location. - Water-stage recorder, lat. $39^{\circ} 24^{\prime} 13^{\prime \prime}$, long. $77^{\circ} 21^{15} 58^{\prime \prime}$, a quarter of a mile upstream from Jug Bridge, 0.35 mile downstream from Linganoré Creek, and $2 \frac{3}{2}$ miles east of Frederick, Frederick county. Datum of gage is 231.92 feet above mear sea level (Corps of Engineers, U. S. Army, bench mark).
Drainage area.- 817 square miles.
Hecorda avallable. - November 1929 to September 1943
Extremes.- Maximum discharge, 51,000 second-feet Aug. 24, 1933 (gage height, 28.1 feet); minimum, 35 second-feet Oct. 1, 1930.

Maximum stage known, 30 foet sometime in June 1889, from floodmarks (discharge, 56,000 second-feet).
Remarks.- Records do not include water diverted from Linganore creek for municipal supply of Frederick and do include inflow from sewage of city of Westminster which obtains its water supply from the Patapsco River Basin and discharges ita seware into Little pipe Creek. Records of diversion and inflow can be obtained from the office of Chief Engineer, Maryland State Department of Health, Baltimore.

Monthly discharge of Monocacy River at Jug Bridge, near Frederick, Md.

| Month | Discharge in second-feet |  |  |  | Runoffininches | Discharge in million mallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por square mile |  |  |
| 1929-30 |  |  |  |  |  |  |
| November 21-30. | 1,260 | 350 | 805 | 0.985 | 0.37 | 0.637 |
| December... | 1,700 | - | 663 | . 812 | . 94 | . 525 |
| Jenuary. | 2,360 | - | 779 | . 953 | 1.10 | . 616 |
| February. | 5,120 | - | 1,520 | 1.86 | 1.94 | 1.20 |
| March.. | 9,500 | 572 | 1,480 | 1.81 | 2.09 | 1.17 |
| April. | 5,920 | 440 | -914 | 1.12 | 1.25 | . 724 |
| May.. | 530 | 177 | 297 | . 364 | . 42 | . 235 |
| June | 1,260 | 139 | 271 | . 332 | . 37 | . 215 |
| July.. | 630 | 68 | 128 | . 157 | . 18 | . 101 |
| August... | 79 | 57 | 66.3 | . 081 | . 09 | . 052 |
| September. | 142 | 39 | 70.2 | . 086 | . 10 | . 056 |
| October........... |  |  |  |  |  |  |
| November. | 62 90 | 39 | 46.8 | . 057 | . 07 | . 037 |
| December. | 3,250 | - | 229 | . 088 | . 09 | . 052 |
| January.. | 2,040 | 77 | 261 | . 319 | . 37 | . 206 |
| February. | 460 | - | 175 | . 214 | . 22 | . 238 |
| March. | 5,920 | 158 | 684 | . 837 | . 96 | . 541 |
| April. | 7,540 | 15 | 919 | 1.12 | 1.25 | . 724 |
| May... | - | - | 389 | 1.12 | 1.25 | . 308 |
| June. | 1,340 | 143 | 386 | . 472 | . 53 | . 305 |
| July. | 835 | 110 | 311 | . 381 | . 44 | . 246 |
| August. | 2,330 | 78 | 346 | . 424 | . 49 | . 274 |
| September. | 560 | 67 | 124 | . 152 | .17 | . 098 |
| The year. | 7,540 | 39 | 329 | . 403 | 5.46 | . 260 |

Monthly discharge of Monocecy River et Jug Bridge, neer Frederick, Md.--Continued

| Month | Discherge in second-feet |  |  |  | Runoff in inches | Discharge in milison gellons per dey per squeremile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere m11e |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| The jeer................... | 13,300 | 44 | 523 | . 640 | 8.72 | . 414 |
| Oc | 9,820 | 57 | 1,120 | 1.37 | 1.58 | . 885 |
| November . . . . . . . . . . . . . . . . . | 10,300 | 630 | 2,500 | 3.06 | 3.41 | 1.98 |
|  | 4,380 | 354 | 890 | 1.09 | 1.26 | . 704 |
| January. | 3,660 | 516 | 1,010 | 1.24 | 1.43 | . 801 |
| Februery | 4,010 | 502 | 1,280 | $\frac{1}{3} .57$ | 1.64 | 1.01 |
| Merch. Apri1 | 9,280 | 565 | 2,470 | 3.02 | 3.48 | 1.95 |
|  | 10,000 | 1,120 | 2,900 | 3.55 | 3.96 | 2.29 |
| Mey June July Auguat. August.... | 3,810 | 580 | 1,390 | 1.70 | 1.96 | 1.10 |
|  | 3,220 | 246 | 518 | . 634 | .71 | . 410 |
|  | 4,810 | 167 | 515 | . 630 | . 73 | . 407 |
|  | 42,100 | 155 | 3,230 | 3.95 | 4.55 | 2.55 |
| September <br> The jerr | 12,600 | 435 | 1,220 | 1.49 | 1.66 | . 963 |
|  | 42,100 | 57 | 1,590 | 1.95 | 26.37 | 1.26 |
| October... 1933-34 | 1,950 | 312 | 553 | . 677 | . 78 | . 438 |
| November. . . . . . . . . | 545 | 235 | 293 | . 359 | . 40 | . 232 |
|  | 830 | 190 | 311 | . 381 | . 44 | - 246 |
| Jenuery. | 4,140 | 370 | 1,010 | 1.24 | 1.43 | . 801 |
| Februery | 370 4,680 | 220 | 261 1.100 | .319 1.35 | .33 1.56 | . 206 |
| Merch. <br> April <br> Mey. <br> June. <br> July. <br> August. | 4,440 | 630 | 1,330 | 1.63 | 1.82 | 1.05 |
|  | 2,590 | 385 | 745 | . 912 | 1.05 | . 589 |
|  | 2,650 | 217 | 450 | . 551 | . 61 | . 356 |
|  | 1,090 | 111 | 209 | .256 .252 | .30 .29 | . 165 |
|  | 29,000 | 108 99 | 2,670 |  | .29 3.65 |  |
| The J | 29,000 | 99 | 761 | .931 | 12.66 | . 602 |
| October........... | 4,800 | 285 | 682 | . 835 | . 96 | . 540 |
| November. . . . . . . . | 2,890 | 250 | 509 | . 623 | . 70 | . 403 |
|  | 15,400 | 550 | 1,820 | 2.23 | 2.57 | 1.44 |
| Jenuery. | 2,260 | 591 | 1,010 | 1.24 | 1.43 | . 801 |
| Febmuery | 7,410 | 680 | 1,950 | 2.39 | 2.49 | 1.54 |
| Merch | 3.80 | 760 | 1,280 | 1.57 | 1.81 | 1.01 |
| April | 5,330 | 573 | 1,300 | 1.59 | 1.77 | 1.03 |
|  | 1,720 | 311 | 680 | . 832 | . 96 | . 538 |
| June <br> July | 606 | 190 | 307 | .376 | . 42 | . 243 |
|  | 564 | 143 | 240 | . 294 | . 34 | . 190 |
| August | 188 | 84 | 119 | - 146 | .17 | . 094 |
| September. .... . . . . . . . . . . . . . | 2,350 | 90 | 304 | .372 | . 42 | .240 |
| The y | 15,400 | 84 | 842 | 1.03 | 14.04 | . 666 |
| October... 1935-36 | 2,220 | 103 | 208 | . 255 | . 29 | . 165 |
| Oc tober. . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 3,350 | 179 | 647 | . 792 | . 88 | . 512 |
| December | 2,940 | 358 | 749 | . 917 | 1.06 | . 593 |
| Jenuary. | 6,410 | 480 | 1,910 | 2.34 | 2.70 | 1.51 |
| Februery | 19,280 | - 660 | 1,813 | 2.22 | 2.39 | 1.43 |
| Merch... | 18,900 | 1,400 | 4,345 | 5.32 | 6.13 | 3.44 |
| April | 7,790 | 582 | 1,758 | 2.15 | 2.40 | 1.39 |
|  | - 573 | 245 | 385 | . 471 | . 54 | . 304 |
| Mey. June | 1,250 | 162 | 290 | . 355 | - 40 | . 229 |
| July. | . 771 | 112 | 308 | . 377 | . 43 | . 244 |
| Augret.. <br> Septembe | 2,740 | 105 | 402 | . 492 | . 57 | . 318 |
|  | 205 | 93 | 129 | .158 | . 18 | .102 |
| The jeer | 18,900 | 93 | 1,079 | 1.32 | 17.97 | . 853 |

Monthly discharge of Monocacy River at Jug Bridge, near Frederick, Md.--Continued

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gellons per dey per squere male |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1936-37 |  |  |  |  |  |  |
| October. | 3,730 | 111 | 485 | 0.594 | 0.68 | 0.384 |
| November | 262 | 126 | 171 | . 209 | . 23 | . 135 |
| December | 5,910 | 126 | 1,503 | 1.84 | 2.12 | 1.19 |
| Jenuery. | 6,130 | 980 | 2,515 | 3.08 | 3.55 | 1.99 |
| February. | 12,800 | 1,10p | 2,462 | 3.01 | 3.13 | 1.95 |
| Merch. | 2,040 | 682 | - 999 | 1.22 | 1. 41 | . 789 |
| April. | 29,900 | 575 | 3,011 | 3.69 | 4.12 | 2.38 |
| May. . | 2,490 | 469 | 1,020 | 1.25 | 1.44 | . 808 |
| June | 4,010 | 335 | 983 | 1.20 | 1.34 | . 776 |
| July. | 2,390 | 262 | 612 | . 749 | . 86 | . 484 |
| August. | 6,080 | 207 | 983 | 1.20 | 1.38 | . 776 |
| September. | 1,310 | 178 | 347 | . 425 | . 47 | . 275 |
| The jeer | 29,900 | 111 | 1,249 | 1.53 | 20.73 | . 989 |
| October | 9,070 | 178 | 2,017 | 2.47 | 2.85 | 1.60 |
| November. | 13,600 | 671 | 2,057 | 2.52 | 2.81 | 1.63 |
| December. | 1,360 | 519 | 754 | . 923 | 1.06 | . 597 |
| Jenuery. | 2,600 | 372 | 801 | . 980 | 1.13 | . 633 |
| Februery. | 2,620 | 490 | 846 | 1.04 | 1.08 | . 672 |
| March. | 4,750 | 550 | 1,143 | 1.40 | 1.61 | . 905 |
| April | 1,240 | 450 | 677 | . 829 | . 92 | . 536 |
| Mey. | 3,020 | 315 | 687 | . 841 | . 97 | . 544 |
| June | 1,150 | 211 | 391 | .479 | . 53 | . 310 |
| July. | 2,990 | 148 | 453 | . 554 | . 64 | . 358 |
| August. | $\begin{array}{r}1,440 \\ \hline 996\end{array}$ | 115 | 324 304 | .397 <br> .372 | . 46 | . 257 |
| Septembe |  |  |  |  |  |  |
| The yeer | 13,600 | 115 | 872 | 1.07 | 14.48 | . 692 |
| October.. | 286 | 143 | 172 |  |  |  |
| November. | 858 | 146 | 323 | . 395 | . 44 | . 255 |
| December. | 8,650 | 454 | 1,366 | 1.67 | 1.92 | 1.08 |
| Jenuary. | 10,200 | 399 | 1,124 | 1. 38 | 1.59 | . 892 |
| Februery. | 13,700 | 885 | 2,786 | 3.41 | 3.55 | 2.20 |
| March. | 9,430 | 732 | 1,805 | 2.21 | 2.55 | 1.43 |
| April | 6,050 | 820 | 1,764 | 2.16 | 2.41 | 1.40 |
| May. | 1,480 | 336 | 685 | . 838 | . 97 | . 542 |
| June | 2,210 | 242 | 430 | . 526 | . 59 | . 340 |
| July. | 779 | 146 | 255 | .312 | . 36 | . 202 |
| August | 605 | 93 | 150 | . 184 | . 21 | . 119 |
| Soptember | 858 | 84 | 178 | . 218 | . 24 | . 141 |
| The yeer | 13,700 | 84 | 907 | 1.11 | 15.07 | . 717 |
| October.. | 2,810 | 110 | 327 | . 400 |  | . 259 |
| November. | 2,340 | 148 | 415 | . 508 | . 57 | . 328 |
| December. | 692 | 140 | 207 | . 253 | . 29 | . 164 |
| Jenuery. | 4,360 | 132 | 458 | . 561 | . 65 | . 363 |
| Februsry. | 8,560 | 294 | 1,531 | 1.87 | 2.02 | 1.21 |
| Merch. | 11,400 | 650 | 1,979 | 2.42 | 2.79 | 1.56 |
| April. | 18,300 | 920 | 3,333 | 4.08 | 4.55 | 2.64 |
| Mey... | 5,600 | 519 | 1,115 | 1.36 | 1.57 | . 879 |
| Jurie. | 1,710 | 288 | 591 | . 723 | . 81 | . 467 |
| July. | 876 | 182 | 344 | . 421 | - 49 | .272 |
| August... | 4,210 | 78 | 435 | . 532 | . 61 | . 344 |
| September | 21,500 | 176 | 1,854 | 2.27 | 2.53 | 1.47 |
| The year | 21,500 | 78 | 1,041 | 1.27 | 17.34 | . 821 |
| October........... | 3,410 | 296 | 647 | . 792 | . 91 |  |
| November. | 10,000 | 602 | 2,094 | 2.56 | 2.86 | 1.65 |
| December. | 5,440 | 648 | 1,507 | 1.84 | 2.13 | 1.19 |
| Jenuary. | 2,570 | 648 | 1,054 | 1.29 | 1.49 | . 834 |
| Februery. | 4,760 | 566 | 1,015 | 1.24 | 1.29 | . 801 |
| Merch. | 5,310 | 494 | 1,355 | 1.66 | 1.91 | 1.07 |
| April. | 11,600 | 500 | 1,480 | 1.81 | 2.02 | 1.17 |
| May.. | 490 | 210 | 336 | . 411 | . 47 | . 266 |
| June. | 1,430 | 164 | 411 | . 503 | . 56 | . 325 |
| July. | 670 | 102 | 211 | . 258 | . 30 | . 167 |
| August. | 170 | 80 | 111 | . 136 | . 16 | . 088 |
| September..... | 131 | 42 | 75.9 | . 093 | . 10 | . 060 |
| The yeer... | 11,600 | 42 | 855 | 1.05 | 14.20 | .679 |

Monthly discharge of Monocacy River at Jug Bridge, near Frederick, Md.--Continued

| Month | Diecharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | D1 echarge in million gallons per dey per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| October. . | 76 | 44 | 55.9 | 0.068 | 0.08 | 0.044 |
| November. | 199 | 74 | 98.9 | . 121 | . 14 | . 078 |
| Decomber. | 1,800 | 88 | 307 | . 376 | . 43 | . 243 |
| January. | 1,050 | 134 | 281 | . 344 | . 40 | . 222 |
| February. | 5,260 | 240 | 891 | 1.09 | 1.14 | . 704 |
| March... | 3,420 | 257 | 1,084 | 1.33 | 1.53 | . 860 |
| April | 8,550 | 374 | 1,919 | 2.35 | 2.62 | 1.52 |
| May. | 12,700 | 232 | 1,478 | 1.81 | 2.09 | 1.17 |
| June. | 2,700 | 321 | 971 | 1.19 | 1.33 | . 769 |
| July.. | 2,460 | 198 | 719 | . 880 | 1.02 | . 569 |
| Auguet. | 21,300 | 391 | 2,269 | 2.78 | 3.20 | 1.80 |
| September | 2,340 | 201 | 414 | . 607 | . 56 | . 328 |
| The year. | 21,300 | 44 | 874 | 1.07 | 14.54 | .692 |
| October. . . . . . . . | 13,100 | 216 | 2,142 | 2.62 | 3.02 | 1.69 |
| November | 2,330 | 643 | , 946 | 1.16 | 1.29 | . 750 |
| December | 13,900 | 400 | 1,893 | 2.32 | 2.67 | 1.50 |
| January | 3,180 | 670 | 1,161 | 1.42 | 1.64 | . 918 |
| February | 6,400 | 880 | 1,955 | 2.39 | 2.49 | 1.54 |
| March. | 4,680 | 645 | 1,908 | 2.34 | 2.68 | 1.61 |
| April. | 7,760 | 570 | 1,271 | 1.66 | 1.74 | 1.01 |
| May.. | 12,600 | 530 | 1,626 | 1.98 | 2.29 | 1.29 |
| Juno. | 940 | 239 | 438 | . 536 | . 60 | .346 |
| July. | 350 | 110 | 198 | . 242 | . 28 | . 156 |
| August. | 123 | 59 | 85.1 | . 104 | . 12 | .067 |
| Soptember | 96 | 41 | 65.0 | . 080 | . 09 | . 062 |
| The jear..... | 13,800 | 41 | 1,139 | 1.39 | 18.92 | . 898 |

Yearly discharge of Monocacy River at Jug Bridge, near Frederlck, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-reet |  | Runoff in inchee | Di scharge In million gallons per day per equare milo | Diecharge in eecond-reet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Diecharge in million gallons per day per square mile |
|  | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}$ |  |  | Mean | $\begin{gathered} \text { Per } \\ \text { equare } \\ \text { m1le } \end{gathered}$ |  |  |
| 1930 | - | - | - | - | 482 | 0.590 | 8.02 | 0.381 |
| 1931. | 329 | 0.403 | 5.46 | 0.260 | 322 | . 394 | 5.35 | . 256 |
| 1932 | 523 | . 640 | 8.72 | . 414 | 876 | 1.07 | 14.60 | . 682 |
| 1933. | 1,590 | 1.95 | 26.37 | 1.26 | 1,308 | 1.60 | 21.74 | 1.03 |
| 1934. | 761 | . 931 | 12.66 | . 602 | 918 | 1.12 | 15.27 | . 724 |
| 1935. | 842 | 1.03 | 14.04 | . 666 | 723 | . 885 | 12.04 | . 572 |
| 1936. | 1,079 | 1.32 | 17.97 | . 853 | 1,127 | 1.38 | 18.77 | . 892 |
| 1937 | 1,249 | 1.53 | 20.73 | . 989 | 1,471 | 1.80 | 24.42 | 1.16 |
| 1938. | 872 | 1.07 | 14.48 | . 692 | 624 | . 764 | 10.36 | . 494 |
| 1939 | 907 | 1.11 | 15.07 | . 717 | 829 | 1.01 | 13.78 | . 653 |
| 1940. | 1,041 | 1.27 | 17.34 | . 821 | 1,316 | 1.61 | 21.92 | 1.04 |
| 1941. | 855 | 1.05 | 14.20 | .679 | 539 | . 660 | 8.95 | . 427 |
| 1942 | 874 | 1.07 | 14.54 | . 692 | 1,256 | 1.64 | 20.87 | . 995 |
| 1943. | 1,139 | 1.39 | 18.92 | . 898 | - | - | - | - |
| H1 cheet | 1,590 | 1.95 | 26.37 | 1.26 | 1,471 | 1.80 | 24.42 | 1.16 |
| Average | 928 | 1.14 | 15.42 | . 737 | 907 | 1.11 | 15.08 | . 717 |
| Lowest. | 329 | .403 | 5.46 | .260 | 322 | . 394 | 5.35 | . 255 |

Owene Creak at Lantz, Md.
Location.- Water-etage recorder, lat. $39^{\circ} 40 \cdot 36^{\prime \prime}$, long. $77^{\circ} 27^{\prime} 50^{\prime \prime}$, half a mile weot of Lantz post office (Deerfield etation on Western Maryland Railroad), Frederick County, and $1 \frac{1}{c}$ mile south of Sabillasville.
Drainage area.- 5.70 equare milee.
Records avillable.- October 1931 to September 1943.
Extremes.- Max1mum discharge, 4,500 aecond-feet Dec. 1, 1934 (gage height, 8.4 feot), from rating curve extended above 1,000 eecond-feet; minimum 0.06 eecond-foot 0ct. 8, 1941 (gage height, 0.85 foot), not including about 0.10 second-foot diverted above station; minimum daily, including water diverted above gage, 0.18 second-foot Sept. 20, 1932, Sept. 30, oct. 7, 8, 1941.
Remarks.- Records do not include water diverted by pumps half a mile above atation (Crainage area, 3.83 souare miles) to Maryland Tuberculoeis sanatorium. Records of pumpage can be obtained from the office of Chief Engineer, Maryland State Department of Health, Beltimore.

Monthly diecharge of Owene Creek at Lantz, Md.

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m110 |  |  |
|  | $\begin{array}{r} 0.9 \\ 1.7 \\ 3.8 \\ 26 \\ 15 \\ 59 \\ 32 \\ 84 \\ 5.5 \\ 2.9 \\ 1.2 \\ .6 \end{array}$ | 0.36 .41 .47 2.4 2.8 2.6 5.5 6 2.0 .55 .16 .07 | $\begin{gathered} 0.518 \\ .510 \\ 1.21 \\ 5.35 \\ 4.49 \\ 12.6 \\ 13.1 \\ 20.1 \\ 3.79 \\ 1.37 \\ .399 \\ .195 \\ \hline \end{gathered}$ |  |  |  |
| The year. | 84 | . 07 | 5.32 |  |  |  |
| October..... November <br> Dacambar <br> January. <br> Fobruary <br> March. <br> April <br> May <br> June. <br> July <br> August <br> Saptembar | $\begin{array}{r} 60 \\ 143 \\ 21 \\ 31 \\ 33 \\ 53 \\ 91 \\ 32 \\ 12 \\ 26 \\ 330 \\ 31 \end{array}$ | $\begin{gathered} 10^{.15} \\ 5.5 \\ 6 \\ 7.5 \\ 7 \\ 14 \\ 6.5 \\ 1.9 \\ 1.1 \\ .9 \\ 3.4 \end{gathered}$ | $\begin{gathered} 8.36 \\ 28.8 \\ 9.15 \\ 10.0 \\ 12.4 \\ 22.1 \\ 27.2 \\ 15.4 \\ 4.22 \\ 3.72 \\ 19.8 \\ 6.84 \end{gathered}$ |  |  |  |
| The year. | 330 | . 15 | 14.0 |  |  |  |
| Octobar..... <br> November <br> December. <br> January. <br> February.... <br> March. <br> April. <br> May. <br> June <br> July <br> August....... <br> September. | $\begin{aligned} & 14 \\ & 5.2 \\ & 10 \\ & 26 \\ & 4.0 \\ & 31 \\ & 23 \\ & 20 \\ & 27 \\ & 4.2 \\ & 8.5 \\ & 112 \end{aligned}$ | $\begin{aligned} & 3.0 \\ & 2.0 \\ & 1.7 \\ & 3.5 \\ & 1.4 \\ & 2.0 \\ & 7.4 \\ & 4.8 \\ & 2.1 \\ & .81 \\ & .51 \\ & .51 \end{aligned}$ | $\begin{gathered} 4.33 \\ 2.88 \\ 3.22 \\ 8.78 \\ 2.52 \\ 9.37 \\ 13.8 \\ 8.61 \\ 4.81 \\ 1.59 \\ 1.77 \\ 14.7 \end{gathered}$ |  |  |  |
| The year. | 112 | . 51 | 6.37 |  |  |  |
| October... <br> November. . <br> December <br> January. <br> February. <br> March. <br> April..... <br> May. <br> June...... . <br> July. <br> Augast <br> September. | 26 41 396 20 36 40 36 23 11 40 5.5 15 | $\begin{gathered} 3.8 \\ 3.8 \\ 8.6 \\ 6.5 \\ 6.8 \\ 12 \\ 8.3 \\ 4.3 \\ 1.6 \\ .90 \\ .78 \\ .82 \\ \hline \end{gathered}$ | $\begin{gathered} 8.00 \\ 8.58 \\ 29.3 \\ 10.9 \\ 16.0 \\ 16.8 \\ 16.0 \\ 9.77 \\ 3.79 \\ 4.34 \\ 1.51 \\ 2.43 \\ \hline \end{gathered}$ |  |  |  |
| The year. | 396 | . 78 | 10.6 |  |  |  |
| October. <br> November <br> December $\qquad$ <br> January. $\qquad$ <br> February. <br> March. <br> April. <br> May. <br> June <br> July <br> Augast <br> Saptamber | $\begin{array}{r} 47 \\ 18 \\ 27 \\ 41 \\ 43 \\ 173 \\ 55 \\ 8.5 \\ 6.3 \\ 2.6 \\ 8.0 \\ 1.7 \\ \hline \end{array}$ | $\begin{gathered} .95 \\ 2.4 \\ 5.9 \\ 6.2 \\ 4.7 \\ 20 \\ 9.0 \\ 2.3 \\ 1.0 \\ .47 \\ .29 \\ .19 \\ \hline \end{gathered}$ | $\begin{gathered} 3.03 \\ 8.27 \\ 10.7 \\ 14.3 \\ 10.7 \\ 51.0 \\ 21.6 \\ 4.57 \\ 2.31 \\ .958 \\ 1.01 \\ .367 \end{gathered}$ |  |  |  |
| Tha yaar....... | 173 | . 19 | 10.8 |  |  |  |

Monthly discharge of Owens Creek et Lantz, Md..-Continued



Yearly discharge of Owens Creek at Lantz, Md.

| Year | Year ending Sapt. 30 |  |  |  | Calendar yazar |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecharge in second-fset |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | D1scharge in million gallons per day per square mile | Discharge in second-feet |  | RunoffIninches | Discharge in million gallons per day per ecuare mile |
|  | Mean | Per equare mile |  |  | Man | Por square mile |  |  |
| 1932.......... | 5.32 |  |  | 1 | 8.98 |  |  |  |
| 1933. . . . . . . . . | 14.0 |  |  |  | 11.0 |  |  |  |
| 1934.... . . . . . | 6.37 |  |  |  | 9.37 |  |  |  |
| 1935.......... | 10.6 |  |  |  | 8.58 |  |  |  |
| 1936. . . . . . . . | 10.8 |  |  |  | 10.1 |  |  |  |
| 1937.......... | 12.3 |  |  |  | 14.2 |  |  |  |
| 1938.......... | 7.63 |  |  |  | 6.26 |  |  |  |
| 1939. | 8.52 |  |  |  | 7.42 |  |  |  |
| 1940.......... | 8.69 |  |  |  | 11.0 |  |  |  |
| 1941. . . . . . . . | 7.26 |  |  |  | 4.70 |  |  |  |
| 1942. | 7.77 |  |  |  | 11.2 |  |  |  |
| 1943. . . . . . . . | 11.4 |  |  |  |  |  |  |  |
| Higheat. . . | 14.0 |  |  |  | 14.2 |  |  |  |
| Average.... | 9.22 |  |  |  | 9.35 |  |  |  |
| Lowest..... | 5.32 |  |  |  | 4.70 |  |  |  |

Linganore Creek near Frederick, Md.
Location.- Staff gage, 1at. $39^{\circ} \mathbf{2}^{\prime \prime} 5^{\prime \prime \prime}$, long. $77^{\circ} 20^{\prime} 00^{\prime \prime}, 2 \frac{2}{4}$ miles upstream from mouth and 4 miles east of Frederick, Frederick County. Prior to Sept. 12, 1934, staff gage at pumping station, $1 \frac{1}{2}$ miles downstream.
Drainage area.- 82.3 square miles; 84.6 square miles prior to September 1934.
Kecords available.- November 1931 to March 1932, September 1934 to September 1943.
Extremes.- Maxlmum discharge, 3, 400 second-fect Aug. 14, 1942 (gage height, 11.72 feet), from rating curve extended above 2,300 second-feet by logarithmic plotting; minimum observed, 6.0 second-feet oct. 9, 1941 (gage height, 1.00 foot).

Maximum stage known prior to 1942, 10.5 feet Aug. 23 or 24, 1933, from floodmarks (discharge, 2,920 second-feet).


Monthly discherge of Linganore Creek neer Frederick, Md.--Continued


Yearly discharge of IInganore Creek near Frederick, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar yeer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Funoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Diacharge in second-feet |  | Runof in inchee | Diacharge in million gallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per square mil $\theta$ |  |  |
| 1935. | 78.9 | 0.959 | 13.01 | 0.620 | 74.6 | 0.906 | 12.30 | 0.586 |
| 1936. | 96.3 | 1.17 | 15.92 | . 756 | 98.8 | 1.20 | 16.33 | . 776 |
| 1937 | 103 | 1.25 | 17.00 | . 808 | 122 | 1.48 | 20.14 | . 957 |
| 1938. | 76.8 | . 933 | 12.68 | . 603 | 57.0 | . 693 | 9.42 | . 448 |
| 1939. | 82.8 | 1.01 | 13.66 | . 653 | 77.6 | . 943 | 12.79 | . 609 |
| 1940 | 76.8 | . 933 | 12.68 | . 603 | 91.7 | 1.11 | 15.16 | . 717 |
| 1941. | 70.6 | . 858 | 11.66 | . 555 | 53.1 | . 645 | 8.77 | . 417 |
| 1942. | 74.5 | . 905 | 12.29 | . 585 | 107 | 1.30 | 17.58 | . 840 |
| 1943. | 98.8 | 1.20 | 16.30 | . 776 | - | - | - | - |

Goose Creek near Leesburg, Va.
Location.- Water-stace recorder, lat. $39^{\circ} 01$, long. $77035^{\prime}, 400$ feet upstream from highway bridge at Evergreen Mills, three-quarters of a mile downstream from Little River, and 7 miles south of Leesburg, Loudoun county. Datum of gare is 249.0 feet above mean sea level, unadjusted. Prior to Nov. 29, 1938, chain ga e at highway bridre 400 feet downstream.
Drainage area.- 338 square miles.
Records ava1lable.- July 1909 to December 1912; January 1930 to September 1943.
Fxtremes.- Maximum discharge, 45,000 second-feet Aug. 26, 1937 and Oct. 16, 1942 (gage heights, 26.86 feet, site and datum then in use, and 22.9 feet, present datum, respectively), from rating curve extended above 8,000 second-feet by locarithmic plotting on basis of slope-area determination at cage height, 22.9 feet; minimum, 0.4 second-foot Sept. 29, 1941.

Maximum stare known, about 29 feet (former site and datur) in May or June 1889.
Monthly discharge of Gooae Creek near Leesburg, Va.

| Month | Diacharge in second-feet |  |  |  | $\begin{gathered} \text { Bunoff } \\ \text { in } \\ \text { inchea } \end{gathered}$ | Discharge in million gallone per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1909 |  |  |  |  |  |  |
| July 12-31.. | 95 | 48 | 67.8 | 0.201 | 0.15 | 0.130 |
| August... | 743 | 25 | 71.5 | . 212 | . 24 | .137 |
| September | 130 | 27 | 63.5 | . 188 | . 21 | . 122 |
| October. 1909-10 | 182 |  |  |  | . 33 |  |
| November | 210 | 102 | 163 | . 482 | . 54 | . 312 |
| December | 1,150 | - | 160 | . 473 | . 55 | . 306 |
| January. | 2,490 | - | 439 | 1.30 | 1.50 | . 840 |
| February. | 2,270 | 155 | 648 | 1.92 | 2.00 | 1.24 |
| March.. | 1,410 | 130 | 321 | . 950 | 1.10 | . 614 |
| April. | 743 | 84 | 255 | . 754 | . 84 | . 487 |
| May. | 225 | 73 | 230 | . 385 | . 44 | . 249 |
| June | 2,040 | 93 | 397 | 1.17 | 1.30 | . 756 |
| July.. | 391 | 42 | 130 | . 385 | . 44 | .249 |
| August.. | 76 36 | 10 | 34.8 14.6 | .103 .043 | .12 | .067 .028 |
| Soptember | 36 | 2 | 14.6 | . 043 | . 05 | . 028 |
| The year. | 2,490 | 2 | 229 | . 678 | 9.21 | . 438 |
| October. | 210 | 1.6 | 27.5 | . 081 | . 09 | . 052 |
| November | 106 | 30 | 55.2 | . 164 | . 18 | . 106 |
| December. | 336 | - | 89.7 | . 265 | . 30 | .171 |
| January. | 944 | 95 | 296 | . 876 | 1.01 | . 566 |
| February | 588 | 256 | 313 | . 926 | . 96 | . 598 |
| March... | 646 | 168 | 341 | 1.01 | 1.16 | . 653 |
| April. | 924 | 168 | 314 | . 929 | 1.04 | . 600 |
| September. | 1,150 | 25 | 379 | 1.12 | 1.25 | . 724 |


| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discherge in million gallons per dey per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per squere m11e |  |  |
| 1911-12 |  |  |  |  |  |  |
| October | 1,150 | 84 | 219 | 0.648 | 0.75 | 0.419 |
| November | 743 | 130 | 428 | 1.27 | 1.42 | . 821 |
| December | 1,150 | 150 | 446 | 1.32 | 1.52 | . 853 |
| Jenuery | 944 | 256 | 465 | 1.38 | 1.59 | . 892 |
| Februery | 1,590 | 199 | 492 | 1.46 | 1.58 | . 944 |
| March... | 2,040 | 477 | 849 | 2.51 | 2.89 | 1.62 |
| April | 1,070 | 405 | 600 | 1.78 | 1.99 | 1.15 |
| Mey. | 1,820 | 513 | 859 | 2.54 | 2.93 | 1.64 |
| June | 944 | 441 | 642 | 1.90 | 2.12 | 1.23 |
| July. | 665 | 84 | 292 | . 864 | 1.00 | . 558 |
| August. | 743 | 57 | 331 | . 979 | 1.13 | . 633 |
| September | 7,000 |  |  | 2.21 |  |  |
| The year. | 7,000 | 7 | 530 | 1.57 | 21.39 | 1.01 |
| October. | 704 | 142 | 254 | . 751 | . 87 |  |
| November | 155 | 130 | 144 | . 426 | . 48 | . 275 |
| December | 3,160 | 130 | 304 | . 899 | 1.04 | . 581 |
| 1930 |  |  |  |  |  |  |
| Jemuary 21-31. | 214 | 178 | 198 | . 586 | . 24 | . 379 |
| Fobruary. | 1,690 | 206 | 420 | 1.24 | 1.29 | . 801 |
| Merch. | 3,300 | 206 | 450 | 1.33 | 1.53 | . 860 |
| April | 1,590 | 186 | 315 | . 932 | 1.04 | . 602 |
| Mey. | 300 | 56 | 113 | . 334 | . 39 | . 216 |
| June. | 126 | 16 | 48.3 | . 143 | . 16 | . 092 |
| July. | 139 | 2.1 | 15.3 | $.045$ | . 05 | . 029 |
| August. | 2.2 | 1.5 | $1.86$ | $.0055$ | . 006 | . 0036 |
| September | 4.2 |  |  | $.0061$ |  | . 0039 |
| 1930-31 |  |  |  |  | - |  |
| October. | 2.7 | 1.5 | 2.12 |  |  |  |
| November. | 6.2 | 2.4 | 3.83 | $.011$ | $.01$ | $.0071$ |
| Decomber. | 436 | 4.6 | 30.5 | . 090 | . 10 | $.058$ |
| Januery. | 700 | 7.0 | 49.8 | .147 | .17 | $.095$ |
| Fobruery | 56 | 10 | 26.3 | . 078 | . 08 | . 050 |
| March. | 348 | 24 | 83.6 | . 247 | . 28 | . 160 |
| April. | 502 | 46 | 164 | . 485 | . 54 | . 313 |
| May.. | 398 | 46 | 116 | . 343 | . 40 | . 222 |
| June | 273 | 6.6 | 63.2 | . 187 | . 21 | . 121 |
| July. | 370 | 2.6 | 49.0 | . 145 | . 17 | . 094 |
| August. | 348 | 1.8 | 49.3 | . 146 | .17 | . 094 |
| September | 269 | 2.0 | 23.7 | . 070 | . 08 | . 045 |
| The yee | 700 | 1.5 | 55.2 | . 163 | 2.22 | . 105 |
| October. | 54 | 2.2 |  | . 018 | . 02 |  |
| November. | 14 | 5.0 | 9.19 | . 027 | . 03 | . 018 |
| Decombe | 52 | 13 | 23.1 | . 068 | . 08 | . 044 |
| Jenuery. | 436 | 60 | 157 | . 464 | . 53 | . 300 |
| February | 1,400 | 85 | 238 | . 704 | . 76 | . 455 |
| March. | 2,960 | 82 | 481 | 1.42 | 1.64 | . 918 |
| April. | 2,200 | 178 | 486 | 1.44 | 1.61 | . 931 |
| May.. | 7,760 | 175 | 830 | 2.46 | 2.84 | 1.59 |
| June | 316 | 62 | 124 | . 367 | . 41 | . 237 |
| July.. | $382$ | 15 | 70.6 | . 209 | . 24 | . 135 |
| August... | $86$ | 1.3 | $12.2$ | . 036 | . 04 | . 023 |
| September | 470 | 1.2 | 27.9 | . 083 | . 09 | . 054 |
| The jear. | 7,760 | 1.2 | 206 | . 609 | 8.29 | . 394 |
| October. . 1932-3. . . | 1,230 |  | 202 |  |  |  |
| November. | 12,400 | 267 | 1,210 | 3.58 | 3.99 | 2.31 |
| December. | 2,110 | 170 | 417 | 1.23 | 1.42 | . 795 |
| January.. | 7.310 | 284 | 795 | 2.35 | 2.71 | 1.52 |
| Februery. | 1,950 | 368 | 544 | 1.61 | 1.68 | 1.04 |
| March. | 1,740 | 280 | 500 | 1.48 | 1.71 | 1.957 |
| Apr1l | 3,530 | 323 | 880 | 2.60 | 2.90 | 1.68 |
| Mey.. | 2,320 | 281 | 581 | 2.72 | 1.98 | 1.11 |
| June. | 316 | 65 | 162 | . 479 | . 53 | . 310 |
| July. | 2,210 | 26 | 181 | . 536 | . 62 | . 346 |
| August. | 7,010 | 16 | 560 | 1.66 | 1.91 | 1.07 |
| September | 484 | 98 | 192 | . 568 | . 63 | -. 367 |
| The jeer. | 12,400 | 2 | 518 | 1.53 | 20.77 | . 989 |

Monthly discharge of Gooes Creek neer Leeoburg, Va.--Continued

| Month | Diecherge in eecond-feet |  |  |  | Runoff in inches | Discharge in million gellone per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { squere } \\ \text { mile } \end{gathered}$ |  |  |
| 1933-34 |  |  |  |  |  |  |
| October. | 262 145 | 78 64 | 116 | 0.343 .241 | $0.40$ | $\begin{array}{r} 0.222 \\ .156 \end{array}$ |
| November. | 197 | 50 | 79.7 | . 236 | . 27 | . 153 |
| December. | 326 | 59 | 147 | . 435 | . 50 | . 281 |
| Jenuary. | 145 | 40 | - 65.6 | . 194 | . 20 | . 126 |
| Februery.. | 1,550 | 51 | 384 | 1.14 | 1.31 | . 737 |
| April. | 668 | 200 | 384 | 1.14 | 1.27 | . 737 |
| Mey. . | 1,000 | 159 | 335 | . 991 | 1.14 | . 641 |
| June | 576 | 28 | 141 | . 417 | . 47 | .270 |
| July. | 1,290 | 8 | 95.9 | . 284 | . 33 | . 184 |
| August. | 712 | 9 | 77.1 | . 228 | . 26 | . 147 |
| September. | 1,740 | 8 | 239 | . 707 | . 78 | . 457 |
| The yeer | 1,740 | 8 | 179 | . 530 | 7.21 | . 343 |
| October | 345 | 55 | 127 | . 376 | . 43 | .243 |
| November | 574 | 46 | 103 | . 305 | . 34 | .197 |
| Docomber | 4,930 | 145 | 480 | 1.42 | 1. 64 | . 918 |
| Jenuery. | 2,400 | 149 | 421 | . 25 | . 44 | 808 |
| Februery. | 3,030 | 249 | 882 | 2.61 | 2.72 | 1.69 |
| Merch. | 1,440 | 326 | 575 | 1.70 | 1.96 | 1.58 |
| April..... | 3,020 | 173 | 455 | 1.35 | 1.56 | . 873 |
| May. | -589 | -52 | 170 | . 503 | . 56 | . 325 |
| July. | 81 | 6 | 35.3 | . 104 | . 12 | . 067 |
| Auguet. | 36 | 3 | 11.5 | . 034 | . 04 | . 022 |
| Septomber. | 1,250 | 3 | 154 | .456 | . 51 | .295 |
| The | 4,930 | 3 | 350 | 1.04 | 14.05 | . 672 |
| October........... | 587 | 29 | 75.1 | . 222 | . 26 | . 143 |
| November. | 994 | 88 | 307 | . 908 | 1.01 | . 587 |
| December. | 1,040 | 140 | 265 | . 784 | . 90 | . 607 |
| Jenuary | 3,140 | 146 | 716 | 2.12 | 2.44 | 1.37 |
| Februery | 3,260 | 207 | 920 | 2.72 | 2.93 | 1.76 |
| March. | 3,260 | 452 | 1,265 | 3.74 | 4.31 | 2.42 |
| Apr11 | 857 | 203 | 447 | 1.32 | 1.47 | . 853 |
| Mey. | 281 | 74 | 148 | . 438 | . 50 | . 283 |
| June. | 587 | 30 | 88.2 | . 261 | . 29 | . 168 |
| July. | 294 | 13 | 35.7 | . 106 | . 12 | . 068 |
| Auguet. | 362 17 | 5.0 2.1 | 29.8 6.23 | . 088 | .10 .02 | $\begin{aligned} & .067 \\ & .012 \end{aligned}$ |
| The y |  |  |  |  |  |  |
|  | 3,260 | 2.1 | 357 | 1.06 | 14.35 | .685 |
| October............ |  |  |  |  |  |  |
|  | 677 16 | 7.3 3.2 | 44.5 7.67 | . 132 | . 15 | . 086 |
| Navember | 1,990 | 5.0 | 316 | . 935 | 1.08 | . 604 |
| Jenuery. | 2,150 | 182 | 685 | 2.03 | 2.34 | 1.31 |
| Februery. | 6,580 | 362 | 899 | 2.66 | 2.77 | 1.72 |
| Merch. | 520 | 178 | 328 | . 970 | 1.12 | . 627 |
| April. | 19,000 | 118 | 1,295 | 3.83 | 4.27 | 2.48 |
| May... | 1,090 | 158 | 371 | 1.10 | 1.27 | . 711 |
| June | 812 | 85 | 199 | . 589 | . 66 | . 381 |
| July | 812 | 38 | 144 | - 426 | . 49 | . 275 |
| August. | 24,000 | 21 | 1,188 | 3.51 | 4.05 | 2.27 |
| September | 632 | 68 | 182 | . 538 | . 60 | .348 |
| The y | 24,000 | 3.2 | 469 | 1.39 | 18.83 | . 898 |
| October........... | 7,500 | 72 | 1,064 | 3.25 | 3.63 | 2.04 |
| November. | 4,010 | 362 | 669 | 1.98 | 2.21 | 1.28 |
| December. | 520 | 150 | 274 | . 811 | . 94 | . 524 |
| Jenuary. . | 857 | 123 | 262 | . 775 | . 89 | . 501 |
| Fobruary. | 767 | 165 | 319 | . 944 | . 98 | . 610 |
| March. . | 767 | 219 | 359 | 1.06 | 1.22 | . 685 |
| Apr11. | 857 | 226 | 364 | 1.08 | 1.20 | . 698 |
| May... | 299 452 | 118 | 173 | . 512 | . 59 | . 331 |
| June | 452 | 36 | 92.3 | . 273 | . 30 | -176 |
| July. | 362 | 20 | 52.6 | - 156 | . 18 | . 101 |
|  | 497 149 | 11. | 54.6 | . 162 | .19 .06 | .105 .032 |
| Septomber.. | 149 | 5.4 | 17.0 | . 050 |  |  |
|  | 7,500 | 5.4 | 308 | . 911 | 12.39 | . 589 |


| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1938-39 |  |  |  |  |  |  |
| October. | 80 | 5.9 | 14.8 | 0.044 | 0.05 | 0.028 |
| November. | 155 | 18 | 45.3 | . 134 | . 25 | . 087 |
| December. | 2,220 | 91 | 352 | 1.04 | 1.20 | . 672 |
| January. | 3,450 | 126 | 357 | 1.06 | 1.22 | . 685 |
| February. | 2,570 | 367 | 1,015 | 3.00 | 3.12 | 1.94 |
| March. | 1,570 | 254 | - 516 | 1.53 | 1.76 | 1.94 |
| April. | 1,190 | 183 | 427 | 1.26 | 1.41 | . 814 |
| May... | 511 | 98 | 220 | . 651 | 1.75 | . 421 |
| June | 309 | 41 | 97.8 | . 289 | . 32 | . 187 |
| July. | 350 | 18 | 95.0 | . 281 | . 32 | . 182 |
| August. | 691 | 10 | 70.8 | . 209 | . 24 | . 135 |
| September | 473 | 5 | 29.6 | . 088 | . 10 | . 057 |
| The jear. | 3,450 | 5 | 265 | . 784 | 10.64 | .507 |
| October. |  |  |  |  |  |  |
| November. | 932 | 8 | 53.3 | . 158 | . 18 | . 102 |
| December. | 276 | 23 | 135 |  | - 45 | . 258 |
| January. | 747 | 19 | 56 | -157 | - 18 | . 101 |
| Pobmary | 3,000 | 42 | 444 | 1.31 | 1.29 | . 165 |
| March. | 1,500 | 198 | 444 440 | 1.30 | 1.42 | . 847 |
| April. | 2,960 | 187 | 775 | 1.30 2.29 | 1.50 | . 840 |
| May. | 2,170 | 169 | 436 | 1.29 | 2.56 | 1.48 |
| June | 608 | 101 | 277 | . 820 |  |  |
| July. | 596 | 25 | 115 | . 340 |  | . 530 |
| August | 356 | 20 | 93.5 | . 277 | . 32 | -220 |
| Soptembe | 417 | 14 | 82.5 | . 244 | . 27 | . 158 |
| The year | 3,000 | 8 | 247 | . 731 | 9.96 | . 472 |
| October. . . . . . . ${ }^{\text {a }}$. |  |  |  |  |  |  |
| November | 1,550 | 32 60 | 99.5 342 | 1.294 | .34 1.13 | . 190 |
| December | 1,220 | 129 | 338 | 1.00 | 1.15 | . 646 |
| January. | 648 | 221 | 378 | 1.12 | 1.29 | . 724 |
| Febmary | 400 | 170 | 260 | -. 769 | . 80 | . 497 |
| March. | 864 | 126 | 386 | 1.14 | 1.31 | . 737 |
| April. | 2,750 | 183 | 514 | 1.52 | 1.70 | . 982 |
| May. | 176 | 40 | 110 | -. 325 | . 37 | . 210 |
| June. | 347 | 14 | 82.5 | . 244 | . 27 | . 158 |
| July. | 712 | 18 | 154 | . 456 | . 53 | . 295 |
| August. | 74 | 4.8 | 20.6 | . 061 | . 07 | . 039 |
| September | 23 | . 4 | 6.38 | . 019 | . 02 | . 012 |
| The year. | 2,750 | . 4 | 224 | . 663 | 8.98 | . 429 |
| October.. | 7 | . 8 | 2.54 |  |  |  |
| November. | 37 | 6 | 15.4 | . 046 | . 05 | $.0048$ |
| December. | 263 | 12 | 62.4 | . 185 | . 21 | . 120 |
| January.. | 199 | 15 | 58.6 | . 173 | . 20 | . 112 |
| February. | 856 | 70 | 161 | . 476 | . 50 | . 308 |
| March. | 1,540 | 70 | 372 | 1.10 | 1.27 | . 711 |
| April | 971 | 104 | 266 | . 787 | . 88 | . 509 |
| Mry. | 1,680 | 72 | 320 | . 947 | 1.09 | . 612 |
| June. | 541 | 73 | 155 | . 459 | . 51 | . 297 |
| July.. | 553 | 31 | 102 | . 302 | . 35 | . 195 |
| August.. | 2,580 | 58 | 422 | 1.25 | 1.44 | . 808 |
| September | 1,660 | 61 | 225 | . 666 | . 74 | . 430 |
| The jear. | 2,580 | . 8 | 181 | . 536 | 7.25 | . 346 |
| October........ | 26,100 | 710 |  |  |  |  |
| November. | 26, 850 | 263 | 2, 415 | 6.70 | 7.72 | 4.33 |
| December | 3,820 | 132 | 449 | 1.23 | 1.53 | . 865 |
| January. | 1,180 | 228 | 415 | 1.23 | 1.42 | . 860 |
| February | 1,710 | 302 | 697 | 2.06 | 2.14 | 1.33 |
| March. | 1,310 | 192 | 670 | 1.98 | 2.28 | 1.28 |
| April | 2,320 | 221 | 538 | 1.59 | 1.77 | 1.03 |
| May.. | 646 | 207 | 305 | . 902 | 1.04 | . 583 |
| June. | 270 | 72 | 154 | . 456 | . 51 | . 295 |
| July. | 243 | 26 | 67.4 | . 199 | . 23 | . 129 |
| August | 50 | 11 | 15.7 | . 046 | . 05 | . 030 |
| September. | 78 | 3.7 | 12.5 | . 037 | . 04 | . 024 |
| The year. | 26,100 | 3.7 | 501 | 1.48 | 20.10 | . 957 |

Yearly discharge of Goose Creek near Leesburg, Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | DIscharge in million gallons per day per square mile | Discharge in second-feet |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inches } \end{array}\right.$ | D1scharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square m110 |  |  |
| 1910. | 229 | 0.678 | 9.21 | 0.438 | 209 | 0.618 | 8.36 | 0.399 |
| 1912. | 530 | 1.57 | 21.39 | 1.01 | 498 | 1.47 | 20.09 | . 950 |
| 1931 | 55.2 | . 163 | 2.22 | . 105 | 55.4 | . 164 | 2.23 | . 106 |
| 1932. | 206 | . 609 | 8.29 | .394 | 354 | 1.05 | 14.26 | . 679 |
| 1933. | 518 | 1.53 | 20.77 | . 988 | 388 | 1.15 | 15.61 | .743 |
| 1934. | 179 | . 530 | 7.21 | . 343 | 216 | . 639 | 8.68 | . 413 |
| 1935. | 350 | 1.04 | 14.05 | . 672 | 344 | 1.02 | 13.82 | . 659 |
| 1936. | 357 | 1.06 | 14.35 | . 685 | 334 | . 988 | 13.44 | . 639 |
| 1937. | 469 | 1.39 | 18.83 | . 898 | 606 | 1.79 | 24.35 | 1.16 |
| 1938. | 308 | . 911 | 12.38 | . 589 | 175 | . 518 | 7.01 | . 335 |
| 1939. | 265 | . 784 | 10.64 | . 507 | 250 | . 740 | 10.05 | . 478 |
| 1940. | 247 | . 731 | 9.96 | . 472 | 292 | . 864 | 11.77 | . 558 |
| 1941. | 224 | . 663 | 8.98 | . 429 | 165 | . 488 | 6.63 | . 315 |
| 1942 | 181 | . 536 | 7.25 | . 346 | 438 | 1.30 | 17.60 | . 840 |
| 1943 | 501 | 1.48 | 20.10 | . 957 |  |  |  |  |
| Highest | 530 | 1.57 | 21.39 | 1.01 | 606 | 1.79 | 24.35 | 1.16 |
| Average | 308 | . 911 | 12.38 | . 589 | 309 | . 914 | 12.42 | .591 |
| Lowest. | 55.2 | . 163 | 2.22 | . 105 | 55.4 | . 164 | 2.23 | .106 |

Great Seneca Creek near Gaitherabure, Md.
Location.- Chain gace, lat. $39^{\circ} 10^{\prime 101^{\prime \prime}, ~ l o n g . ~} 77^{\circ} 13^{\prime 37 \prime \prime}$, at highway bridge 0.1 mile downtream from whetstone Run and 2 miles northwest of Gaithersburg, Montgomery County. Datim of gage is 305.37 feet above mean sea level (Warhington Suburban Sanitary Commisaion bench mark).
Drainage area.- 41.0 sgnare miles.
Reccris availablo.- March 1925 to January 1931.
Extremes.- Maximum discharge, about 800 second-feet Nov. 16, 1926 ( age height, 8.80 feeft, from ratin亏 curve extended above 450 second-foet; minimum, 1.3 second-feet sent. 28,1930 (rage height, 0.94 foot).

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharee in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}$ |  |  |
| 1825 |  |  |  |  |  |  |
| March 19-31. | 85 | 36 | 43.5 |  | 0.51 | 0.685 |
| April. | 48 | 25 | 31.6 | $.771$ | . 86 | . 498 |
| May.. | 35 | 18.5 | 24.4 | . 595 | . 69 | . 385 |
| June. | 36 | 11.5 | 15.9 | . 388 | . 43 | . 251 |
| July. | 112 | 9.5 | 22.7 | . 554 | . 64 | . 358 |
| August... | 51 | 9.5 | 14.8 | . 361 | . 42 | . 233 |
| Soptember. | 73 | 8.5 | 14.3 | . 348 | . 39 | . 225 |
| October.... | 120 |  |  |  |  |  |
| November. . | 129 | 26 | 37.2 | . 639 | 1.01 |  |
| December. | 50 | - | 27.9 | . 680 | . 78 | . 439 |
| January. | 295 | 19.5 | 44.2 | 1.08 | 1.24 | . 698 |
| Febmuary. | 251 | - | 65.9 | 1.61 | 1.68 |  |
| March. | 52 | 27 | 34.5 | . 841 | . 97 | . 544 |
| April. | 44 | 20.5 | 27.6 | . 673 | . 75 | . 435 |
| May. | 12 | 15 | 19.4 | . 473 | . 55 | . 306 |
| June | 31 | 8.0 | 13.9 | . 339 | . 38 | . 219 |
| July. | 164 | 7.6 | 18.3 | . 446 | . 51 | . 288 |
| August. | 106 | 5.7 | 21.9 | . 534 | . 62 | .345 |
| September. | 494 | 11 | 45.8 | 1.12 | 1.25 | . 724 |
| The year. | 494 | 5.7 | 31.6 | . 771 | 10.48 | .498 |

Monthly discherge of Greet Seneca Creek neer Gaithersburg, Md.--Continued

| Month | Discherge in second-feet |  |  |  | Runoff in <br> inches | DIscherge in million Eellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1926-27 |  |  |  |  |  |  |
| October. | 134 | 21 | 33.7 | 0.822 | 0.95 | 0.531 |
| November. | 598 | 23 | 63.2 | 1.54 | 1.72 | . 995 |
| December. | 127 | - | 53.5 | 1.30 | 1.50 | . 840 |
| Jenuary. | 93 | - | 43.9 | 1.07 | 1.23 | . 692 |
| Februery. | 141 | 42 | 65.9 | 1.61 | 1.68 | 1.04 |
| March... | 64 | 40 | 49.4 | 1.20 | 1.38 | . 776 |
| April. | 300 | 40 | 65.2 | 1.59 | 1.77 | 1.03 |
| Mey... | 72 | 40 | 50.6 | 1.23 | 1.42 | . 795 |
| June. | 87 | 26 | 37.7 | . 920 | 1.03 | . 595 |
| July. | 32 | 17 | 22.3 | .544 | . 63 | . 352 |
| August. | 72 | 16 | 23.6 | .576 | - 66 | . 372 |
| September. | 61 | 14 | 17.3 | . 422 | .47 | .273 |
| The jear. | 598 | 14 | 43.7 | 1.07 | 14.44 | . 692 |
| October...... | 165 | 13 | 36.0 | . 378 | 1.01 | . 567 |
| November. | 102 | 24 | 31.8 | . 776 | -. 87 | . 502 |
| December. | 170 | 26 | 50.4 | 1.23 | 1.42 | . 795 |
| Jenuery. | 66 |  | 32.1 | . 783 | . 90 | . 506 |
| Februery. | 190 | - | 60.9 | 1.43 | 1.61 | . 963 |
| Merch. | 107 | 34 | 49.1 | 1.20 | 1.38 | . 776 |
| April | 242 | 31 | 54.2 | 1.32 | 1.47 | . 853 |
| Mey. | 90 | 29 | 43.9 | 1.07 | 1.23 | . 692 |
| June | 330 | 16 | 81.0 | 1.98 | 2.21 | 1.28 |
| July. | 59 | 26 | 39.4 | . 961 | 1.11 | . 621 |
| August. | 299 | 23 | 58.4 | 1.42 | 1.64 | . 918 |
| September | 106 | 26 | 39.6 | . 966 | 1.08 | . 624 |
| The yeer. | 330 | 13 | 48.0 | 1.17 | 15.93 | . 756 |
| October. | 37 | 27 | 29.5 | . 722 | . 83 | . 467 |
| November. | 63 | 24 | 28.5 | . 695 | . 78 | . 449 |
| December. | 60 | - | 27.3 | . 666 | .77 | . 430 |
| Jonuery. | 97 | - | 34.1 | . 932 | . 96 | . 538 |
| Februery. | 261 | - | 51.0 | 1.24 | 1.29 | . 801 |
| March.... | 162 | 37 | 66.7 | 1.63 | 1.88 | 1.05 |
| April | 258 | 34 | 66.0 | 1.61 | 1.80 | 1.04 |
| Mey.. | 109 | 31 | 48.5 | 1.18 | 1.36 | . 763 |
| June. | 184 | 20 | 33.0 | . 805 | . 90 | . 520 |
| July. | 34 | 14 | 24.3 | . 593 | . 68 | . 383 |
| August.. | 22 24 | 9 | 13.9 10.5 | .339 .256 | .39 .29 | .219 .165 |
| The year | 261 | 4 | 36.0 | . 878 | 11.93 | . 567 |
| October.... | 350 | 14 | 38.0 | . 827 | 1.07 | . 599 |
| November. | 60 | 18 | 27.5 | . 671 | .75 | . 434 |
| December. | 34 | - | 22.5 | . 543 | . 63 | . 355 |
| Januery. | 35 | - | 21.4 | . 522 | . 60 | . 337 |
| February | 104 | 18 | 42.4 | 1.03 | 1.07 | . 666 |
| March. | 122 | 20 | 34.7 | . 846 | . 98 | . 547 |
| April | 149 | 24 | 45.9 | 1.12 | 1.25 | . 724 |
| May. | 33 | 17 | 23.9 | . 583 | . 67 | . 377 |
| June. | 27 | 7.4 | 13.3 | . 324 | . 36 | . 209 |
| July. | 10 | 2.6 | 5.11 | . 125 | . 14 | . 808 |
| August. | 4.4 | 1.8 | 2.75 | . 067 | . 08 | .043 |
| September. | 3.2 | 1.3 | 2.03 | . 050 | . 06 | . 032 |
| The yeer. | 350 | 1.3 | 23.1 | . 563 | 7.66 | .364 |
|  |  |  |  |  |  |  |
| October. | 5.4 | 1.4 | 2.70 | . 066 | . 08 | .043 |
| November. | 11 | 4.8 | 6.34 | . 155 | . 17 | .100 |
| December. | 130 | - | 10.3 | . 251 | . 29 | . 162 |
| January 1-13...... | 35 | 7.4 | 12.3 | .300 | .15 | .194 |


| Year | Year ending Sept. 30 |  |  |  | Calendar jear |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inchee | Discharge in million gallons per day per square mile | Discharge in sscond-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Diecharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1926. | 31.6 | 0.771 | 10.48 | 0.498 | 36.6 | 0.893 | 12.12 | 0.577 |
| 1927. | 43.7 | 1.07 | 14.44 | . 692 | 41.0 | 1.00 | 13.57 | . 646 |
| 1928 | 48.0 | 1.17 | 15.93 | .756 | 45.2 | 1.10 | 15.01 | . 711 |
| 1929 | 36.0 | -878 | 11.93 | . 567 | 36.2 | . 883 | 12.00 | . 571 |
| 1930. | 23.1 | . 563 | 7.66 | .364 | 17.4 | . 424 | 5.75 | .274 |

Seneca Croek at Dewsonville, Md.
 from highwey bridge, 150 feet downstream from confluence of oreat Seneca end Little Seneca Creeks, and half a mile east of Dawsonville, Montgomery County. Datum of gage is 214.15 feet above mean sea level, adjustment of 1912.
Drainage area.- 101 square miles.
Records avallablo.- October 1930 to September 1943.
Extremes.- Mex1mum discharge, 6,500 second-feet Aug. 24, 1933 (gage height, 10.3 feet), from rating curve extended above 2,000 eecond-reet on basis of velocity-area studies; minimum, 1.9 second-feet Oct. 1, 1930 (gage height, 0.57 foot).

| Month | Discharge in aecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million eallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1930-31 |  |  |  |  |  |  |
| October.. | 12 | 1.9 | 7.10 | 0.070 | 0.08 | 0.045 |
| November. | 21 | 11 | 15.7 | . 155 | . 17 | . 100 |
| December. | 347 | - | 30.5 | . 302 | . 35 | . 195 |
| Januery. | 174 | 15 | 34.6 | . 343 | . 40 | . 222 |
| February | 54 | 20 | 26.7 | . 264 | . 27 | . 171 |
| March... | 292 | 25 | 44.3 | . 439 | . 51 | . 284 |
| Apr11. | 224 | 26 | 57.5 | . 569 | . 63 | . 368 |
| May. | 124 | 20 | 30.3 | . 300 | . 35 | . 194 |
| June. | 268 | 11 | 44.4 | . 440 | . 49 | . 284 |
| July. | 483 | 11 | 56.1 | . 555 | . 64 | . 359 |
| August. | 219 | 8.4 | 35.3 | .350 | . 40 | . 226 |
| September. | 84 | 3.1 | 10.1 | . 100 | . 11 | . 065 |
| The jear. | 483 | 1.9 | 32.8 | .325 | 4.40 | .210 |
| October . | 91 | 3.8 | 9.64 | . 095 | . 11 |  |
| November. | 16 | 8.4 | 12.6 | .125 | . 14 | . 081 |
| December. | 53 | 11 | 20.6 | . 204 | . 24 | . 132 |
| January. | 154 | 23 | 58.9 | . 583 | . 67 | .377 |
| February | 437 | 29 | 61.5 | . 610 | . 66 | . 394 |
| March... | 830 | 28 | $109$ | 1.08 | 1.24 | . 698 |
| April. | 454 | 43 | 100 | . 990 | 1.10 | . 640 |
| May. | 500 | 45 | 97.5 | .965 | 1.11 | . 624 |
| June. | 118 | 22 | 40.3 | . 399 | . 45 | . 258 |
| July.. | 106 | 7.4 | 21.1 | . 209 | . 24 | . 135 |
| August.. | 25 | 3.2 | 8.35 | . 083 | -10 | . 054 |
| September..... | 94 | 2.9 | 12.2 | .121 | .14 | .078 |
| The jear. | 830 | 2.9 | 46.0 | . 455 | 6.20 | .294 |
| October......... | 767 | 6.2 | 93.9 | . 930 | 1.07 | .601 |
| November | 983 | 64 | 158 | 1.56 | 1.74 | 1.01 |
| December. | 496 | 45 | 95.6 | . 946 | 1.09 | . 611 |
| January. | 494 | 66 | 108 | 1.07 | 1.23 | . 692 |
| February | 451 | 80 | 128 | 1.27 | 1.32 | . 821 |
| March. | 421 | 72 | 138 | 1.37 | 1.58 | . 885 |
| April. | 645 | 106 | 199 | 1.97 | 2.20 | 1.27 |
| Mey.. | 694 | 108 | 215 | 2.13 | 2.46 | 1.38 |
| June. | 451 | 63 | 105 | 1.04 | 1.16 | . 672 |
| July.. | 1,950 | 46 | 155 | $1.53$ | 1.76 | . 989 |
| August.. | 2,420 200 | 36 58 | $\begin{aligned} & 195 \\ & 81.5 \end{aligned}$ | 1.93 .807 | 2.22 .90 | $\begin{array}{r} 1.25 \\ .522 \end{array}$ |
| The jear.. | 2,420 | 6.2 | 140 | 1.39 | 18.73 | . 898 |

Monthly discharge of Seneca Creek at Dawsonville, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{array}{\|l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | Per square mile |  |  |
| 1933-34 |  |  |  |  |  |  |
| October... | 133 | 53 | 64.3 | 0.637 | 0.73 | 0.412 |
| November. | 88 | 44 | 50.3 | . 498 | . 56 | . 322 |
| December. | 104 | 44 | 54.0 | . 535 | . 62 | . 346 |
| January. | 222 | 45 | 88.2 | . 873 | 1.01 | . 564 |
| February. | 180 | 45 | 56.6 | . 560 | . 58 | . 362 |
| March. | 1,210 | 50 | 198 | 1.96 | 2.26 | 1.27 |
| April | 296 | 73 | 122 | 1.21 | 1.35 | . 782 |
| May. | 361 | 65 | 107 | 1.06 | 1.22 | . 685 |
| June | 275 | 41 | 74.9 | . 742 | . 83 | . 480 |
| July. | 237 | 23 | 38.5 | . 381 | . 44 | . 246 |
| August. | 116 | 18 | 32.6 | . 323 | . 37 | . 209 |
| September | 1,080 | 21 | 161 | 1.59 | 1.77 | 1.03 |
| The year | 1,210 | 18 | 87.3 | . 864 | 11.74 | . 558 |
| October. | 174 | 52 | 73.8 | . 731 | . 84 |  |
| November | 185 | 48 | 61.6 | . 610 | . 68 | . 394 |
| December | 797 | 65 | 120 | 1.19 | 1.37 | . 769 |
| January. | 436 | 73 | 121 | 1.20 | 1.38 | . 776 |
| February | 588 | 80 | 205 | 2.03 | 2.11 | 1.31 |
| March. | 510 | 120 | 178 | 1.76 | 2.03 | 1.14 |
| Apr11 | 870 | 115 | 204 | 2.02 | 2.25 | 1.31 |
| May. | 989 | 88 | 159 | 1.57 | 1.81 | 1.01 |
| June | 310 | 56 | 85.4 | . 846 | . 94 | . 547 |
| July. | 73 | 33 | 47.1 | . 466 | . 54 | .301 |
| August. | 37 | 20 | 27.9 | . 276 | . 32 | . 178 |
| September | 699 | 20 | $95 \cdot 7$ | . 948 | 1.06 | . 613 |
| The year. | 989 | 20 | 114 | 1.13 | 15.33 | . 730 |
|  |  |  |  |  |  |  |
| November. | 210 308 | 40 51 | $55.0$ | .545 .954 | $\begin{array}{r} .63 \\ 1.06 \end{array}$ | $.362$ |
| December. | 157 | 60 | 81.7 | . 809 | . 93 | . 523 |
| January. | 1,370 | 69 | 225 | 2.23 | 2.57 | 1.44 |
| Fobmary | 1,240 | 67 | 307 | 3.04 | 3.28 | 1.96 |
| March. | 708 | 118 | 232 | 2.30 | 2.65 | 1.49 |
| April | 305 | 98 | 147 | 1.46 | 1.63 | 1.944 |
| May. | 160 | 58 | 84.7 | . 839 | -. 97 | . 542 |
| June | 253 | 43 | 70.8 | . 701 | . 78 | . 453 |
| July. | 146 | 30 | 49.3 | . 488 | . 56 | . 315 |
| August | 556 | 22 | 75.5 | . 748 | . 86 | . 483 |
| Septembe | 52 | 25 | 32.1 | . 318 | . 35 | . 206 |
| The year | 1,370 | 22 | 121 | 1.20 | 16.27 | .776 |
| October. | 126 | 30 | 41.6 | . 412 | . 48 | . 266 |
| November. | 49 | 29 | 34.0 | . 337 | . 38 | . 218 |
| December. | 642 | 28 | 120 | 1.19 | 1.37 | . 769 |
| January. | 616 | 88 | 194 | 1.92 | 2.21 | 1.24 |
| February. | 677 | 132 | 202 | 2.00 | 2.08 | 1.29 |
| March. | 174 | 98 | 125 | 1.24 | 1.43 | . 801 |
| April | 1,400 | 75 | 191 | 1.89 | 2.11 | 1.22 |
| May. | 252 | 82 | 128 | 1.27 | 1.46 | . 821 |
| June | 1,070 | 65 | 157 | 1.55 | 1.73 | $1.00$ |
| July.. | 175 | 43 | 67.7 | . 670 | . 77 | $.433$ |
| August... | 1,210 | 35 | $169$ | $1.67$ | $1.92$ | $1.08$ |
| September | 343 | 46 | 74.7 | . 740 | . 83 | $\begin{array}{r} .478 \\ \hline \end{array}$ |
| The year. | 1,400 | 28 | 125 | 1.24 | 16.77 | .801 |
| October......... | 1,630 | 46 | 214 | 2.12 |  |  |
| November | 1,290 | 100 | 175 | 1.73 | 1.93 | 1.12 |
| December | 157 | 86 | 102 | 1.01 | 1.16 | 1.653 |
| January. | 210 | 77 | 104 | 1.03 | 1.19 | . 666 |
| February. | 390 | 80 | 120 | 1.19 | 1.24 | . 769 |
| March. | 251 | 86 | 111 | 1.10 | 1.27 | . 711 |
| Apri1. | 196 | 71 | 101 | 1.00 | 1.12 | . 646 |
| May. | 120 | 58 | 73.3 | . 726 | . 84 | $.469$ |
| June | 110 | 38 | 53.8 | . 533 | . 59 | . 344 |
| July. | 232 | 24 | 57.9 | . 573 | . 66 | . 370 |
| August. | 437 | 28 | 67.5 | . 668 | . 77 | . 432 |
| September. | 179 | 26 | 58.9 | . 583 | . 65 | . 377 |
| The jear.. | 1,630 | 24 | 103 | 1.02 | 13.96 | . 659 |

Monthly discharge of Seneca Creek at Dawsonville, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | Runoff in inchee | Dlecharge in million gallone per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Moan | Per square mile |  |  |
| 1938-39 |  |  |  |  |  |  |
| October. | 52 | 32 | 37.0 | 0.366 | 0.42 | 0.237 |
| November. | 102 | 35 | 48.4 | . 479 | . 53 | . 310 |
| December | 356 | 54 | 91.5 | . 906 | 1.04 | . 586 |
| January. | 1,400 | 50 | 120 | 1.19 | 1.37 | . 769 |
| Fobruary | 760 | 123 | 261 | 2.58 | 2.69 | 1.67 |
| March... | 381 | 115 | 175 | 1.73 | 1.99 | 1.12 |
| Apr*I. | 500 | 105 | 158 | 1.56 | 1.74 | 1.01 |
| May. . | 150 | 58 | 96.2 | . 952 | 1.10 | . 615 |
| June | 443 | 52 | 84.5 | . 937 | . 93 | .541 |
| July. | 80 | 34 | 43.1 | . 427 | . 49 | . 276 |
| August. | 224 | 20 | 33.1 | . 328 | . 38 | . 212 |
| September | 176 | 18 | 31.4 | .311 | . 35 | .201 |
| The year. | 1,400 | 18 | 97.1 | . 961 | 13.03 | . 621 |
| October...... | 332 | 24 | 44.5 | . 441 | . 51 | . 285 |
| November | 172 | 35 | 50.6 | . 501 | . 51 | . 324 |
| December | 120 | 33 | 42.5 | . 421 | . 49 | . 272 |
| January. | 500 | 32 | 57.7 | . 571 | . 66 | . 369 |
| February | 457 | 34 | 103 | 1.02 | 1.10 | . 659 |
| March. | 412 | 64 | 119 | 1.18 | 1.36 | . 763 |
| April | 931 | 56 | 194 | 1.92 | 2.14 | 1.24 |
| Mey. | 210 | 73 | 108 | 1.07 | 1.23 | . 692 |
| June | 128 | 40 | 60.4 | . 598 | . 67 | . 386 |
| July. | 333 | 26 | 54.6 | . 541 | . 62 | . 350 |
| August | 119 | 22 | 38.1 | . 377 | . 43 | . 244 |
| September | 111 | 21 | 35.8 | . 354 | . 40 | . 229 |
| The year. | 931 | 21 | 75.4 | . 747 | 10.17 | . 483 |
| October | 102 | 28 | 35.4 | .350 | . 40 | . 226 |
| November | 540 | 35 | 105 | 1.04 | 1.16 | . 672 |
| December | 153 | 53 | 79.0 | . 782 | . 90 | .505 |
| January. | 180 | 55 | 93.3 | .924 | 1.06 | .597 |
| February. | 166 | 60 | 86.9 | . 860 | . 90 | . 556 |
| March.. | 207 | 58 | 89.7 | . 987 | 1.14 | . 638 |
| April. | 659 | 66 | 124 | 1.23 | 1.37 | . 795 |
| May. | 64 | 32 | 48.5 | . 480 | . 55 | . 310 |
| June. | 322 | 31 | 61.2 | . 606 | . 68 | .392 |
| July... | 188 | 22 | 45.1 | . 447 | . 51 | . 289 |
| August. | 126 | 14.5 | 25.9 13.9 | .256 .138 | .30 .15 | . 165 |
|  |  |  |  |  |  |  |
| The year | 659 | 7.5 | 67.9 | . 672 | 9.12 | . 434 |
| October. . . . . . . . | 18 | 6.6 | 11.0 | . 109 | . 13 | . 070 |
| November | - 41 | 15 | 18.4 | . 182 | . 20 | . 118 |
| December | 163 | 18 | 37.3 | . 369 | . 43 | .238 |
| January. | 117 | 23 | 35.2 | . 349 | . 40 | . 226 |
| February. | 208 | 31 | 51.7 | . 512 | . 53 | . 331 |
| March. | 284 | 31 | 69.7 | . 690 | . 80 | . 446 |
| April. | 411 | 44 | 103 | 1.02 | 1.14 | . 659 |
| May... | 707 | 34 | 81.9 | . 811 | . 93 | . 524 |
| June | 116 | 26 | 44.2 | . 438 | . 49 | . 283 |
| July. | 727 | 21 | 57.3 | . 567 | . 65 | . 366 |
| August | 612 | 25 | 118 | 1.17 | 1.34 | . 756 |
| Septembe | 532 | 22 | 57.9 | -. 573 | . 64 | . 370 |
| The year. | 727 | 6.6 | 57.2 | . 566 | 7.68 | . 366 |
| October......... | 1,900 | 34 | 230 | 2.28 | 2.63 | 1.47 |
| November. | 162 | 75 | 99.3 | . 983 | 1.10 | . 635 |
| Decomber. | 1.210 | 60 | 149 | 1.48 | 1.70 | . 957 |
| January. | 223 | 90 | 112 | 1.11 | 1.28 | . 717 |
| February. | 502 | 109 | 185 | 1.83 | 1.91 | 1.18 |
| March.. | 313 | 94 | 168 | 1.66 | 1.92 | 1.07 |
| Apr11.. | 300 | 99 | 130 | 1.29 | 1.44 | . 834 |
| May... | 293 | 73 | 103 | 1.02 | 1.17 | . 659 |
| Juna. | 139 | 42 | 65.4 | . 648 | . 72 | . 419 |
| July. | 150 | 23 | 38.9 | . 385 | . 44 | . 249 |
| August. | 22 | 12 | 16.2 | . 160 | . 19 | . 103 |
| Soptember. | 159 | 13 | 29.3 | . 290 | . 32 | . 187 |
| The year....... | 1,900 | 12 | 110 | 1.09 | 14.82 | . 704 |

Yearly diecharge of Seneca Creek at Dewsonville, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runof ${ }^{\prime}$ in inches | Dtecharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1931. | 32.8 | 0.325 | 4.40 | 0.210 | 31.8 | 0.316 | 4.29 | 0.204 |
| 1932. | 46.0 | . 455 | 6.20 | . 294 | 71.4 | . 707 | 9.61 | . 457 |
| 1933 | 140 | 1.39 | 18.73 | . 898 | 125 | 1.24 | 16.74 | . 801 |
| 1934 | 87.3 | . 864 | 11.74 | . 558 | 94.6 | . 937 | 12.72 | . 606 |
| 1935. | 114 | 1.13 | 15.33 | . 730 | 112 | 1.11 | 15.06 | . 717 |
| 1936. | 121 | 1.20 | 16.27 | . 776 | 118 | 1.17 | 15.88 | .756 |
| 1937. | 125 | 1.24 | 16.77 | . 801 | 150 | 1.49 | 20.07 | . 963 |
| 1938. | 103 | 1.02 | 13.86 | . 659 | 76.8 | . 760 | 10.32 | . 491 |
| 1939 | 97.1 | . 961 | 13.03 | . 621 | 93.8 | . 929 | 12.60 | . 600 |
| 1940 | 75.4 | . 747 | 10.17 | . 483 | 82.2 | . 814 | 11.07 | . 526 |
| 1941. | 67.9 | . 672 | 9.12 | . 434 | 55.2 | . 547 | 7.42 | . 354 |
| 1942. | 57.2 | . 566 | 7.68 | . 366 | 91.9 | . 910 | 12.35 | . 588 |
| 1943. | 110 | 1.09 | 14.82 | . 704 | - | - | - | - |
| Highest | 140 | 1.39 | 18.73 | . 898 | 150 | 1.49 | 20.07 | . 963 |
| Average | 90.5 | . 896 | 12.16 | . 579 | 91.9 | . 910 | 12.34 | . 588 |
| Lowest. | 32.8 | . 325 | 4.40 | . 210 | 31.9 | . 316 | 4.29 | . 204 |

Difricult Fun near Oreat Falls, Va.
Location. - Water-stage recorder, lat. $38^{\circ} 58^{13} 3^{\prime \prime}$, long. $77^{\circ} 14^{11} 46^{11}$, 300 feet downstream from Rocky Run, and lizmles southeast of Great Falls, Falrfax County. Datum of gage is 151.4 feet above mean sea level (unadjusted).
Drainage area.- 58 square miles.
Rocorde avallable.- December 1934 to September 1943.
Extremee:- Maximum discharge, 2,890 second-reet June 13, 1936, Oct. 28, 1937 (gage helght, 10.6 feet), from rating curve extended above 1,100 second-feet by logarithmic plotting; minimum, 3.4 second-ieet sometime in October 1941 (gage height, 2.21 feet).

Monthly discharge of Difficult Run near oreat Falle, Va.

| Month | Diecharge in second-feet |  |  |  |  | Discharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per equare m11e |  |  |
| 1935 |  |  |  |  |  |  |
| January. | 610 | 48 | 106 | 1.83 | 2.11 | 1.18 |
| Fobruary | 280 | 50 | 115 | 1.98 | 2.06 | 1.28 |
| March. | 396 | 71 | 108 | 1.86 | 2.14 | 1.20 |
| April. | 514 | 67 | 124 | 2.14 | 2.39 | 1.38 |
| May. | 244 | 47 | 75.1 | 1.29 | 1.49 | . 834 |
| June. | 126 | 33 | 52.5 | . 905 | 1.01 | . 585 |
| July. | 32 | 16 | 24.5 | . 422 | . 49 | . 273 |
| August. | 27 | 11 | 15.1 | . 260 | . 30 | . 168 |
| September | 478 | 11 | 59.3 | 1.02 | 1.14 | . 659 |
| 1935-36 |  |  |  |  |  |  |
| Navor.. | 157 | 20 | 31.9 | . 550 | . 63 | . 355 |
| November. | 288 | 29 | 60.9 | 1.05 | 1.17 | . 679 |
| December. | 101 | 36 | 48.3 | . 833 | . 96 | . 538 |
| January. | 777 | 41 | 129 | 2.22 | 2.56 | 1.43 |
| February | 586 | 40 | 163 | 2.81 | 3.03 | 1.82 |
| March. | 598 | 74 | 148 | 2.55 | 2.94 | 1.65 |
| April. | 182 | 58 | 84.7 | 1.46 | 1.63 | .944 |
| May.. | 262 | 38 | 65.0 | 1.12 | 1.29 | . 724 |
| June. | 440 | 27 | 68.9 | 1.19 | 1.33 | . 769 |
| July.. | 175 | 21 | 36.4 | . 628 | . 72 | .406 |
| August. | 271 | 15 | 35.1 | . 605 | . 70 | .391 |
| September | 25 | 14 | 16.8 | . 290 | . 32 | .187 |
| The year. | 777 | 14 | 73.7 | 1.27 | 17.28 | . 821 |

Monthly discharge of Difficult Run near oreat Falls, Va.--Continued

| Month | Discharge in eecond-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Meximum | Minimum | Mean | Per square mile |  |  |
| 1936-37 |  |  |  |  |  |  |
| October. | 109 | 17 | 25.7 | 0.443 | 0.51 | 0.286 |
| November. | 31 | 20 | 21.7 | . 374 | . 42 | . 242 |
| December. | 276 | 20 | 69.2 | 1.19 | 1.37 | . 769 |
| January. | 584 | 49 | 147 | 2.53 | 2.82 | 1.64 |
| Febmiary. | 535 | 71 | 122 | 2.10 | 2.19 | 1.36 |
| March. | 148 | 58 | 77.5 | 1.34 | 1.54 | . 866 |
| April. | 1,160 | 50 | 126 | 2.17 | 2.42 | 1.40 |
| May... | 148 | 49 | 76.2 | 1.31 | 1.51 | . 847 |
| June. | 101 | 32 | 49.6 | . 855 | . 95 | . 553 |
| July | 204 | 23 | 48.6 | . 838 | . 97 | . 542 |
| August. | 661 | 15 | 72.3 | 1.25 | 1.44 | . 808 |
| Soptember | 239 | 24 | 42.5 | . 733 | . 82 | . 474 |
| The year. | 1,160 | 15 | 72.9 | 1.26 | 17.06 | . 814 |
| October. . . . . . . . | 1,020 | 26 | 154 | 2.66 | 3.07 | 1.72 |
| November. | . 980 | 50 | 103 | 1.78 | 1.99 | 1.15 |
| December. | 85 | 45 | 58.7 | 1.01 | 1.16 | -. 653 |
| January. | 181 | 51 | 72.4 | 1.25 | 1.44 | . 808 |
| February. | 194 | 46 | 74.6 | 1.29 | 1.34 | . 834 |
| March.... | 116 | 54 | 69.4 | 1.20 | 1.38 | . 776 |
| April. | 120 | 45 | 62.0 | 1.07 | 1.19 | . 692 |
| May.. | 80 | 34 | 45.9 | . 791 | . 91 | . 511 |
| June | 71 | 21 | 29.9 | . 516 | . 58 | .333 |
| July. | 101 | 15 | 28.2 | . 486 | . 56 | . 314 |
| August. | 110 | 11 | 23.6 | . 407 | . 47 | . 263 |
| September | 68 | 10 | 15.8 | .272 | . 30 | .176 |
| The jear. | 1,020 | 10 | 61.4 | 1.06 | 14.39 | .685 |
| October. | 20 | 14 | 14.9 | . 257 | . 30 |  |
| November. | 62 | 15 | 21.9 | . 378 | . 42 | .244 |
| December. | 169 | 24 | 45.8 | . 790 | . 91 | . 511 |
| January. | 735 | 24 | 60.6 | 1.04 | 1.20 | . 672 |
| February | 384 | 48 | 111 | 1.91 | 1.99 | 1.23 |
| March. | 174 | 44 | 67.9 | 1.17 | 1.35 | . 756 |
| Apr11. | 150 | 43 | 68.4 | 1.18 | 1.32 | . 763 |
| May. | 67 | 22 | 38.4 | . 662 | . 76 | . 428 |
| June | 68 | 16 | 24.5 | . 422 | . 47 | . 273 |
| July. | 39 | 11 | 17.0 | . 293 | . 34 | . 189 |
| Augret. | 212 | 8 | 18.4 | . 317 | .37 | .205 |
| September. | 268 | 10 | 25.7 | . 443 | . 49 | . 286 |
| The yoar. | 735 | 8 | 42.4 | . 731 | 9.92 | .472 |
| October.... | 276 | 14 |  |  |  |  |
| November. | 215 | 18 | 36.4 | . 628 | . 70 | . 406 |
| December. | 68 | 17 | 23.8 | . 410 | . 47 | . 265 |
| Januery. | 158 | 14 | 26.2 | . 452 | . 52 | . 292 |
| February. | 323 | 16 | 60.2 | 1.04 | 1.12 | . 672 |
| March. | 288 | 33 | 62.4 | 1.08 | 1.24 | . 698 |
| April. | 685 | 29 | 106 | 1.93 | 2.04 | 1.18 |
| May. | 107 | 28 | 39.5 | . 681 | . 78 | . 440 |
| June | 34 | 15 | 20.0 | . 345 | . 39 | . 223 |
| July. | 77 | 11 | 17.6 | . 303 | . 35 | . 196 |
| August. | 55 | 8 | 15.9 | . 274 | . 32 | . 177 |
| September. | 103 | 8 | 16.6 | . 286 | . 32 | . 185 |
| The year. | 685 | 8 | 37.7 | . 650 | 8.84 | . 420 |
| October.... | 57 | 11 | 16.9 | . 291 | . 34 |  |
| November. | 332 | 16 | 66.2 | 1.14 | 1.27 | . 737 |
| December. | 89 | 30 | 44.4 | -.766 | -.88 | . 495 |
| January. | 159 | 33 | 60.8 | 1.05 | 1.21 | . 679 |
| February. | 70 | 35 | 45.5 | . 784 | . 82 | . 507 |
| March. | 161 | 36 | 62.8 | 1.08 | 1.25 | . 698 |
| April. | 425 | 36 | 69.4 | 1.20 | 1.34 | . 776 |
| May... | 35 | 18 | 27.7 | . 478 | . 55 | . 309 |
| June. | 118 | 18 | 32.3 | . 557 | . 62 | . 360 |
| July. | 297 | 12 | 46.9 | . 809 | . 93 | . 523 |
| August. | 39 | 7.0 | 12.0 | . 207 | .24 | . 134 |
| September. | 12 | 3.7 | 5.88 | .101 | . 11 | . 065 |
| The year...... | 425 | 3.7 | 40.8 | . 703 | 9.56 | . 454 |



Yearly discharge of Difficult Run near Great Falls, Va.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { Inches } \end{aligned}$ | D1scharge in million gallons per day per square mile | Discharge in second-feet |  | Runoff in <br> inches | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square m1le |  |  |
| 1935. .. . . . . . | - | - | - | - | 67.9 | 1. 17 | 15.89 | 0.756 |
| 1936.......... | 73.7 | 1.27 | 17.28 | 0.821 | 71.7 | 1.24 | 16.82 | .801 |
| 1937.......... | 72.9 | 1.26 | 17.06 | . 814 | 89.5 | 1.54 | 20.98 | . 995 |
| 1938.......... | 61.4 | 1.06 | 14.39 | . 685 | 41.9 | .722 | 9.80 | - 467 |
| 1939.... . . . . . | 42.4 | .731 | 9.92 | . 472 | 43.0 | . 741 | 10.05 | . 479 |
| 1940. . . . . . . . . | 37.7 | .650 | 8.84 | . 420 | 40.8 | . 703 | 9.57 | . 454 |
| 1941.......... | 40.8 | . 703 | 9.56 | . 454 | 33.0 | . 568 | 7.78 | . 367 |
| 1942......... | 28.5 | . 491 | 6.74 | .317 | 48.2 | -8ミコ | 11.30 | . 537 |
| 1943.......... | 65.2 | 1.12 | 15.29 | . 724 |  |  | - | - |

Rock Creek at Sherrill Drive, Washington, D. C.
Location. - Water-stage recorder, lat. $38^{\circ} 58^{\prime 2} 21^{\prime \prime}$, long. $77^{\circ} 02^{\prime 2} 25^{\prime \prime}, 600$ feet downstream from Sherrill Drive bridge in Rock Creek Park in Washincton and $7 \frac{1}{2}$ miles upstream from mouth. Datum of gage is 148.99 feet above mean sea level, adjustment of 1912. Drainage area.- 62.2 squere miles.
Records avaliable. - October 1929 to September 1943.
Extremes.- Maxlmum discharge, 4,460 second-feet Aug. 24, 1933 (cage height, 11.6 feet), from rating curve extended above 3,200 second-feet; minimum, 0.5 second-foot Oct $1-7,1930$ (zage helght, 1.04 feet).

Monthly discharge of Rock Creek at Sherrill Drive, Washington, D. C.

| Month | Diacharge in second-feet |  |  |  | Runoff in inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Min1mum | Mean | Per square mile |  |  |
| October. . . . . . . . . . | - | - | 38.7 | 0.622 | 0.72 | 0.402 |
| November | 83 | 22 | 33.2 | . 534 | . 60 | . 345 |
| December. | 64 | - | 34.1 | . 548 | . 63 | . 354 |
| January. | 62 | - | 34.2 | . 550 | . 63 | . 355 |
| Februery. | 284 | 35 | 73.8 | 1.19 | 1.24 | . 769 |
| March.... | 582 | 40 | 72.5 | 1.17 | 1.35 | . 756 |
| April. | 722 | 40 | 81.8 | 1.32 | 1.47 | . 853 |
| May... | 57 | 25 | 33.0 | . 531 | . 61 | . 343 |
| Juno | 57 | 12 | 21.7 | . 349 | . 39 | . 226 |
| July. | 13 | 2.7 | 7.09 | . 114 | . 13 | . 074 |
| September <br> The je | 2.3 8.5 | 1.17 | 1.72 2.04 | . 0238 | . 04 | . 0218 |
|  |  |  |  |  |  |  |
|  | - | .7 | 35.9 | . 577 | 7.84 | .373 |
| October......... | 10 | . 5 | 2.63 | . 042 | . 05 | . 027 |
| November | 9.4 | 2.7 | 5.57 | . 090 | . 10 | . 058 |
| December | 41 | $5 \cdot 1$ | 8.75 | . 147 | . 16 | . 091 |
| January | 42 | 6.3 | 11.8 | .190 | . 22 | . 123 |
| February. | 24 | 7.7 | 11.9 | .191 | . 20 | . 123 |
| March.... | 118 | 13 | 23.4 | .376 | - 43 | . 243 |
| April | 104 | 18 | 31.4 | . 505 | . 56 | . 326 |
| May. | 122 | 13 | 26.5 | . 426 | . 49 | .275 |
| June | 89 | $5 \cdot 7$ | 21.7 | . 349 | . 39 | . 226 |
| July.. | 367 | 5.7 | 25.7 | . 413 | . 48 | . 267 |
| August. | 73 | 4.6 | 18.3 | . 294 | . 34 | . 180 |
| September. | 8.5 | 2.7 | 4.83 | . 078 | . 09 |  |
| The yeo | 367 | . 5 | 16.1 | . 259 | 3.51 | . 167 |
| October........... | 28 | 2.0 | 5.25 | . 084 | . 10 | . 054 |
| November | 10 | 2.7 | 4.57 | . 073 | . 08 | . 047 |
| December. | 25 | 6.3 | 10.8 | .174 | . 20 | . 112 |
| January | 110 | 18 | 36.7 | . 590 | . 68 | . 381 |
| February | 187 | 22 | 36.6 | . 588 | . 63 | . 380 |
| March. | 594 | 19 | 64.4 | 1.04 | 1.20 | . 672 |
| Apr11 | 194 | 31 | 51.5 | . 828 | . 92 | . 535 |
| May. | 580 | 28 | 73.6 | 1.18 | 1.36 | . 763 |
| June | 147 | 15 | 27.3 | . 439 | . 49 | . 284 |
| July. | 44 | 4.6 | 13.4 | . 215 | . 25 | . 139 |
| August. | 8.5 | 1.4 | 4.15 | . 067 | . 08 | . 043 |
| September | 67 | . 9 | 7.03 | . 113 | .13 | . 073 |
| The | 594 | . 9 | 28.0 | .450 | 6.12 | .291 |
| October..... | 419 | 2.7 | 56.8 | . 913 | 1.05 | . 590 |
| November | 363 | 35 | 98.8 | 1.59 | 1.77 | 1.03 |
| December. | 373 | 27 | 59.8 | . 961 | 1.11 | . 621 |
| January. | 412 | 43 | 71.9 | 1.16 | 1.34 | . 750 |
| February. | 192 | 50 | 78.1 | 1.26 | 1.31 | . 814 |
| March. | 288 | 49 | 82.5 | 1.33 | 1.53 | . 818 |
| Apr11.... | 524 | 64 | 114 | 1.83 | 2.04 | 1.18 |
| May...... | 241 | 28 | 85.8 | -. 849 | -. 95 | . 549 |
| July | 819 | 24 | 65.0 | 1.05 | 1.21 | . 679 |
| August. | 2,430 | 17 | 131 39.3 | 2.11 .632 | $\begin{array}{r}2.43 \\ \hline .70\end{array}$ | 1.36 .408 |
| September. | 131 | 28 | 39.3 | . 632 |  |  |
| The jear. | 2,430 | 2.7 | 77.9 | 1.25 | 16.98 | . 808 |
| October. ......... | 88 | 27 | 35.8 | . 576 | . 66 | . 372 |
| November. | 47 | 26 | 30.7 | . 494 | . 55 | . 319 |
| Decomber. | 75 | 26 | 33.5 | . 539 | . 62 | . 348 |
| January. | 154 | 29 | 52.0 | . 836 | . 96 | . 540 |
| February. | 145 | 33 | 41.8 | . 672 | . 70 | . 434 |
| Narch. ... | 878 | 46 | 122 | 1.96 | 2.25 | 1.27 |
| April. | 221 | 52 | 82.8 | 1.32 | 1.47 | . 853 |
| May... | 155 | 48 | 73.6 | 1.18 | 1.36 | . 763 |
| June. | 191 | 25 | 41.4 | . 666 | . 74 | . 430 |
| July.. | 178 | 13 | 27.2 | . 437 | . 50 | . 282 |
| August. | 122 | 10 | 24.5 | . 394 | . 45 | . 255 |
| September. | 862 | 12 | 126 | 2.03 | 2.26 | 1.31 |
| The year. | 879 | 10 | 57.5 | . 924 | 12.53 | . 597 |

Monthly discharge of Rock Creek at Sherrill Drive, Washington, D. C.--Continued

| Month | Diacharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | DIscharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maxirmum | Minimum | Mean | Per square mile |  |  |
| 1934-35 |  |  |  |  |  |  |
| October. | 102 | 33 | 44.6 | 0.717 | 0.83 | 0.463 |
| November | 370 | 32 | 49.2 | . 791 | . 88 | . 511 |
| December. | 572 | 46 | 83.8 | 1.35 | 1.56 | . 873 |
| January. | 388 | 50 | 91.7 | 1.47 | 1.70 | . 950 |
| February | 372 | 57 | 138 | 2.22 | 2.31 | 1.43 |
| March. | 430 | 80 | 119 | 1.91 | 2.20 | 1.23 |
| April. | 818 | 75 | 148 | 2.38 | 2.66 | 1.54 |
| May.. | 930 | 53 | 111 | 1.78 | 2.05 | 1.15 |
| June | 238 | 32 | 54.3 | . 873 | . 97 | . 564 |
| July. | 39 | 17 | 26.1 | . 420 | . 48 | . 271 |
| August. | 20 | 8.2 | 13.8 | . 222 | . 26 | .143 |
| September | 350 | 9.0 | 47.7 | . 767 | . 86 | . 496 |
| The jear. | 930. | 8.2 | 76.8 | 1.23 | 16.76 | . 795 |
| October... | 217 | 18 | 29.1 |  |  |  |
| November. | 268 | 27 | 62.1 | .998 | 1.11 | . 645 |
| December. | 83 | 37 | 47.9 | . 770 | 1.89 | . 498 |
| January.. | 774 | 44 | 144 | 2.32 | 2.68 | 1.50 |
| Fobruary. | 779 | 42 | 184 | 2.96 | 3.19 | 1.91 |
| March. | 569 | 73 | 155 | 2.49 | 2.87 | 1.61 |
| Apr11. | 200 | 62 | 90.1 | 1.45 | 1.62 | . 937 |
| May. . | 142 | 37 | 59.4 | . 955 | 1.10 | . 617 |
| June | 86 | 21 | 33.5 | . 539 | . 60 | . 348 |
| July. | 70 | 14 | 23.9 | . 384 | . 44 | . 248 |
| August. | 281 | 9.0 | 28.7 | . 461 | . 53 | . 298 |
| September | 22 | 9.8 | 13.8 | .223 | . 25 | . 144 |
| The year. | 779 | 9.0 | 72.3 | 1.16 | 15.82 | . 750 |
| October. . . 1936-..... |  |  |  |  |  |  |
| November | 22 | 14 | 16.4 | . 264 | . 29 | .171 |
| December | 335 | 15 | 60.4 | . 971 | 1.12 | . 628 |
| January. | 434 | 50 | 125 | 2.01 | 2.32 | 1.30 |
| February | 537 | 67 | 116 | 1.86 | 1.94 | 1.20 |
| March. | 133 | 58 | 78.5 | 1.26 | 1.45 | . 814 |
| April | 1,350 | 53 | 156 | 2.51 | 2.80 | 1.62 |
| May. | 117 | 52 | 78.3 | 1.26 | 1.45 | . 814 |
| June | 515 | 37 | 70.9 | 1.14 | 1.27 | . 737 |
| July. | 133 | 23 | 39.1 | . 629 | . 73 | . 407 |
| August. | 1,380 | 19 |  |  |  |  |
| September | 81 | 24 | 35.2 | $.566$ | $.63$ | 1.366 |
| The year | 1,380 | 11 | 76.1 | 1.22 | 16.59 | .789 |
| October. | 1,430 | 26 | 144 | 2.32 | 2.68 |  |
| November. | 1,270 | 52 | 124 | 1.99 | 2.22 | 1.29 |
| December | 83 | 51 | 60.3 | . 969 | 1.12 | . 626 |
| January. | 138 | 48 | 66.8 | 1.07 | 1.23 | . 692 |
| February | 313 | 52 | 84.6 | 1.36 | 1.42 | . 879 |
| March | 136 | 63 | 76.9 | 1.24 | 1.43 | . 801 |
| April | 116 | 47 | 64.1 | 1.03 | 1.15 | . 666 |
| May. | 104 | 36 | 47.4 | . 762 | . 88 | . 492 |
| June. | 83 | 24 | 32.2 | . 518 | . 58 | . 335 |
| July. | 128 | 14 | 27.5 | . 442 | . 51 | . 286 |
| August. | 215 | 12 | 30.0 | . 482 | . 56 | . 312 |
| Soptember. | 94 | 12 | 24.5 | . 394 | . 44 | . 255 |
| The year. | 1,430 | 12 | 65.1 | 1.05 | 14.22 | .679 |
| October. . . . . . . . . |  |  |  |  |  |  |
| November. | 42 | 18 | 19.1 | . 307 | . 35 | .198 .235 |
| December. | 201 | 27 | 43.9 | . 706 | . 81 | . 456 |
| January. | 696 | 22 | 62.8 | 1.01 | 1.16 | . 653 |
| February. | 344 | 53 | 117 | 1.88 | 1.96 | 1.22 |
| March... | 240 | 62 | 89.0 | 1.43 | 1.65 | . 924 |
| April. | 402 | 53 | 98.1 | 1.58 | 1.76 | 1.02 |
| May.. | 89 | 33 | 50.9 | . 818 | . 94 | . 529 |
| June. | 144 | 20 | 35.1 | . 564 | . 63 | . 365 |
| July.. | 137 | 17 | 29.1 | . 468 | . 54 | . 302 |
| August. | 195 | 9.1 | 19.9 | . 320 | .37 | . 207 |
| Septembor | 178 | 7.5 | 20.3 | . 326 | . 36 | . 211 |
| The year.. | 696 | 7.5 | 50.2 | . 807 | 10.93 | . 522 |

Monthly discherge of Rock Craek at Sharrill Driva, Weshington, D. C.--Continued

| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | D1scharge in million callons per day per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}$ |  |  |
|  | $\begin{array}{r} 265 \\ 120 \\ 62 \\ 191 \\ 416 \\ 298 \\ 750 \\ 117 \\ 44 \\ 106 \\ 90 \\ 58 \end{array}$ | $\begin{gathered} 15 \\ 20 \\ 19 \\ 19 \\ 20 \\ 39 \\ 38 \\ 41 \\ 18 \\ 12 \\ 9.5 \\ 9.1 \end{gathered}$ | $\begin{array}{r} 34.6 \\ 29.2 \\ 24.7 \\ 30.3 \\ 69.6 \\ 69.8 \\ 119 \\ 57.6 \\ 27.4 \\ 22.5 \\ 17.3 \\ 17.3 \end{array}$ | $\begin{array}{r} 0.556 \\ .469 \\ .397 \\ .487 \\ 1.12 \\ 1.12 \\ 1.91 \\ .926 \\ .441 \\ .362 \\ .278 \\ .278 \end{array}$ | $\begin{array}{r} 0.64 \\ .52 \\ .46 \\ .56 \\ 1.21 \\ 1.29 \\ 2.13 \\ 1.07 \\ .49 \\ .42 \\ .32 \\ .31 \end{array}$ | 0.359 <br> .303 <br> .257 <br> .315 <br> .724 <br> .724 <br> 1.23 <br> .598 <br> .285 <br> .234 <br> .180 <br> .180 |
| The yeer. | 750 | 9.1 | 43.1 | . 683 | 9.42 | . 448 |
| October. November. <br> Dacambar <br> Jenuery. <br> Febriuary <br> Merch. <br> April. <br> Mey. <br> June. <br> July <br> August. <br> Septembar | 35 370 121 188 111 130 304 36 102 144 108 15 | $\begin{gathered} 13 \\ 18 \\ 30 \\ 35 \\ 35 \\ 38 \\ 36 \\ 18 \\ 16 \\ 13 \\ 8.4 \\ 2.8 \end{gathered}$ | $\begin{gathered} 17.7 \\ 60.1 \\ 47.4 \\ 61.5 \\ 50.0 \\ 61.9 \\ 69.9 \\ 28.4 \\ 32.5 \\ 27.1 \\ 18.6 \\ 6.01 \\ \hline \end{gathered}$ | $\begin{gathered} .285 \\ .966 \\ .762 \\ .989 \\ .804 \\ .995 \\ 1.12 \\ .457 \\ .523 \\ .436 \\ .299 \\ .097 \\ \hline \end{gathered}$ | $\begin{array}{r} .33 \\ 1.08 \\ .88 \\ 1.14 \\ .84 \\ 1.15 \\ 1.25 \\ .53 \\ .58 \\ .50 \\ .34 \\ .11 \end{array}$ | $\begin{aligned} & .184 \\ & .624 \\ & .492 \\ & .639 \\ & .520 \\ & .643 \\ & .724 \\ & .295 \\ & .338 \\ & .282 \\ & .193 \\ & .063 \end{aligned}$ |
| Tha jear. | 370 | 2.8 | 40.0 | . 643 | 8.73 | . 416 |
| October. <br> Novambar <br> Docember. <br> Jenuary. <br> Fabruary. <br> March. <br> April. <br> Mey <br> June. <br> July. <br> August. <br> September | 10 18 92 44 160 167 252 122 108 63 249 47 | $\begin{gathered} 2.1 \\ 6.4 \\ 8.4 \\ 11 \\ 14 \\ 20 \\ 26 \\ 20 \\ 11 \\ 7.8 \\ 11 \\ 5.7 \end{gathered}$ | $\begin{aligned} & 5.29 \\ & 8.63 \\ & 19.1 \\ & 18.0 \\ & 30.6 \\ & 48.0 \\ & 59.9 \\ & 32.0 \\ & 23.2 \\ & 18.5 \\ & 36.2 \\ & 12.4 \end{aligned}$ | $\begin{aligned} & .085 \\ & .139 \\ & .307 \\ & .289 \\ & .492 \\ & .772 \\ & .963 \\ & .514 \\ & .373 \\ & .297 \\ & .582 \\ & .199 \end{aligned}$ | $\begin{array}{r} .10 \\ .15 \\ .35 \\ .33 \\ .51 \\ .89 \\ 1.07 \\ .59 \\ .42 \\ .34 \\ .67 \\ .22 \end{array}$ | .055 .090 .198 .187 .318 .499 .622 .332 .191 .376 .129 |
| The yaer. | 252 | 2.1 | 26.0 | . 418 | 5.64 | .270 |
| 1942-43 <br> Octobar <br> Novambar <br> ......... . <br> December <br> Jenuary. <br> Februery <br> March. <br> April. <br> Mey. <br> June. <br> July. <br> August. <br> September. | $\begin{array}{r} 1,800 \\ 54 \\ 547 \\ 88 \\ 235 \\ 207 \\ 266 \\ 480 \\ 230 \\ 77 \\ 12 \\ 191 \\ \hline \end{array}$ |  | $\begin{gathered} 121 \\ 37.4 \\ 63.5 \\ 48.6 \\ 91.4 \\ 90.5 \\ 75.4 \\ 75.8 \\ 47.3 \\ 23.2 \\ 7.32 \\ 18.7 \end{gathered}$ | 1.95 <br> . .601 <br> 1.02 <br> .781 <br> 1.47 <br> 1.45 <br> 1.21 <br> 1.22 <br> .760 <br> .373 <br> .118 <br> .301 | 2.24 .67 1.18 .90 1.53 1.68 1.35 1.41 .85 .43 . .14 .34 | $\begin{aligned} & 1.26 \\ & .388 \\ & .659 \\ & .505 \\ & .950 \\ & .937 \\ & .782 \\ & .789 \\ & .491 \\ & .241 \\ & .076 \\ & .195 \end{aligned}$ |
|  | 1,800 | 4.5 | 58.2 | . 936 | 12.72 | . 605 |

Yeorly discharge of Rock Creek at Sherrill Drive, Washington, D. C.


Yearly discherge of Rock Creek et Sherrill Drive, Weshington, D. C---Continued

| Yeer | Year ending Sept. 30 |  |  |  | Celender yeer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discherge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge in million gellons per dey per squere mile | Discherge in second-feet |  | Runoff in <br> inches | Discharge in million gellons per day per square mile |
|  | Mean | Per squere mile |  |  | Meen | Per squere mile |  |  |
| 1935. | 76.8 | 1.23 | 16.76 | 0.795 | 73.5 | 1.18 | 16.03 | 0.763 |
| 1936. | 72.3 | 1.16 | 15.82 | . 750 | 68.6 | 1.10 | 15.02 | . 711 |
| 1937. | 76.1 | 1.22 | 16.59 | . 789 | 95.7 | 1.54 | 20.87 | . 995 |
| 1938. | 65.1 | 1.05 | 14.22 | . 679 | 44.8 | . 720 | 9.76 | . 465 |
| 1939. | 50.2 | .807 | 10.93 | . 522 | 50.4 | . 81.0 | 10.99 | . 524 |
| 1940. | 43.1 | . 693 | 9.42 | . 448 | 46.1 | . 741 | 10.09 | . 479 |
| 1941. | 40.0 | . 643 | 8.73 | . 416 | 32.3 | . 519 | 7.04 | .335 |
| 1942. | 26.0 | . 418 | 5.64 | . 270 | 41.9 | . 674 | 9.13 | . 436 |
| 1943. | 58.2 | . 936 | 12.72 | . 605 | - |  | - | . 4 |
| H1 chest | 77.9 | 1.25 | 16.98 | . 808 | 95.7 | 1.54 | 20.87 | . 995 |
| Average | 51.7 | .83] | 11.27 | . 537 | 51.9 | 1.834 | 11.33 | . 539 |
| Lowest. | 16.1 | . 259 | 3.51 | . 167 | 16.4 | . 264 | -3.58 | . 171 |

Rock Creek et Q Street, Weshington, D. C.
(Rock Creok et Lyon's Mill, D. C.)
Locetion.- Weter-stage recorder, lat. $38^{\circ} 5^{\prime} 4^{\prime} 40^{\prime \prime}$, long. $77^{\circ} 03^{\prime} 06^{\prime \prime}$, 100 feet upstream from Street bridge end 1.1 miles upstream from mouth. Prior to October 1929, weter-stege recorder et Lyon's M1ll Road bridge 1;000 feet upstream at different datum. Drainage area.- 75.8 square miles.
Records avallable. - Auguat 1892 to December 1894 , October 1929 to September 1933.
Extremes.- Maximum discharge, 4,560 second-feet Aug. 24, 1933 (gage height, 14.0 feet), from rating curve extended above 800 second-feet; minimum, 1.0 second-foot Sept. 7, 1930 (gege hoight, 1.65 feet).

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million galions per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per square mile |  |  |
| $1892$ <br> August 18-31. <br> September |  |  |  |  |  |  |
|  | 29 | 23 | 26.4 | 0.348 | 0.13 | 0.225 |
|  | 137 | 21 | 32.8 | . 433 | . 48 | - 280 |
| october. . . . . . . . . . . . . . . . . . . | 29 |  |  |  |  |  |
| November. . . | 102 | 22 | 35.4 | . 467 | $\begin{aligned} & .36 \\ & .52 \end{aligned}$ | . 202 |
|  | 137 | 27 | 44.5 | . 468 | . 52 | . 302 |
| Januery. | 238 | 29 | 65.7 | . 867 | 1.00 | $.379$ |
| Februery | 390 | 37 | 94.0 | 1.24 | 1.29 | . 801 |
|  | 265 | 58 | 88.5 | 1.17 | 1.35 | . 756 |
| April. | 124 | 44 | 65.9 | . 869 | . 97 | . 562 |
| Mey.. | 980 | 58 | 107 | 1.41 | 1.63 | . 911 |
| June. July. | 133 | 31 | 46.0 | . 607 | . 68 | . 392 |
|  | 436 | 20 | 53.0 | . 699 | . 81 | . 452 |
| August. <br> Septembe | 261 | 8 | 22.0 | . 290 | . 33 | .187 |
|  | 89 | 10 | 19.8 | . 261 | . 29 | . 169 |
| The y | 980 | 8 | 55.3 | . 730 | 9.91 | . 472 |
| October. . . . . . . . 4 . |  |  |  |  |  |  |
| November. | 436 315 | 13 | 39.3 | . 518 | . 60 | . 335 |
|  | 198 | 32 | 56.5 | - 745 | . 83 | . 482 |
| December | 205 | 46 | 58.6 | -773 | -89 | -500 |
| Februery | 156 | 44 | 63. | -739 | -85 | . 478 |
| Merch. <br> April. | 205 | 54 | 63.0 | . 831 | . 87 | . 537 |
|  | 232 | 40 | 68.6 | . 905 | 1.04 | . 585 |
| Mey... | 156 | 35 | 67.8 | - 794 | 1.00 | . 578 |
| June 1-15.......... . . . . . . . . . . | - 41 | 20 | 29.8 | -786 | . 91 | . 508 |
| August 20-29...... September 2-22... | 13 | 20 |  | . 393 | . 22 | . 254 |
|  | 31 | $\begin{array}{r}6 \\ 15 \\ \hline\end{array}$ | 81.10 | $\begin{array}{r} .107 \\ .282 \end{array}$ | $\begin{aligned} & .04 \\ & .22 \end{aligned}$ | .069 .182 |
|  |  |  |  |  |  |  |
| October. . . . . . . . .November |  |  |  |  |  |  |
|  | 78 | $\begin{aligned} & 17 \\ & 22 \\ & \hline \end{aligned}$ | $\begin{array}{r} 24.9 \\ 31.3 \\ \hline \end{array}$ | $\begin{array}{r} .328 \\ .413 \\ \hline \end{array}$ | $\begin{array}{r} 38 \\ .46 \\ \hline \end{array}$ | $\begin{aligned} & .212 \\ & .267 \end{aligned}$ |

Monthly discharga of Rock Craek at Q Street, Washington, D. C.--Continued

| Month | Discharge in second-feet |  |  |  | Runoffininches | D1 scharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mıla } \end{gathered}$ |  |  |
|  | 254 95 63 81 289 598 811 70 138 34 - 35 | 16 26 - 38 46 45 28 16 4.5 -1.2 | $\begin{gathered} 61.6 \\ 37.5 \\ 35.4 \\ 41.7 \\ 79.8 \\ 82.2 \\ 96.7 \\ 39.5 \\ 32.3 \\ 11.9 \\ 2.70 \\ 4.09 \end{gathered}$ | $\begin{array}{r} 0.813 \\ .495 \\ .467 \\ .550 \\ 1.05 \\ 1.08 \\ 1.28 \\ .521 \\ .426 \\ .157 \\ .036 \\ .054 \end{array}$ | $\begin{array}{r} 0.42 \\ .55 \\ .54 \\ .63 \\ 1.09 \\ 1.24 \\ 1.43 \\ .60 \\ .48 \\ .18 \\ .04 \\ .06 \end{array}$ | 0.525 .320 .302 .355 .679 .698 .827 .337 .275 .101 .023 .035 |
| July 15-31..... <br> August. <br> Septamber | $\begin{array}{r} 339 \\ 146 \\ 51 \\ \hline \end{array}$ | $11$ $\begin{aligned} & 7 \\ & 5.5 \\ & \hline \end{aligned}$ | $\begin{gathered} 38.4 \\ 30.0 \\ 0.83 \end{gathered}$ | $\begin{array}{r} .507 \\ .396 \\ .130 \\ \hline \end{array}$ | $\begin{aligned} & .32 \\ & .46 \\ & .14 \end{aligned}$ | $\begin{aligned} & .328 \\ & .256 \\ & .084 \\ & \hline \end{aligned}$ |
| October....... <br> November. <br> December. <br> January. <br> Fabruary. <br> March. $\qquad$ <br> Apr11 $\qquad$ <br> May. $\qquad$ <br> June. $\qquad$ <br> July. <br> August... $\qquad$ <br> Septamber | 42 80 60 230 326 842 235 712 386 89 23 218 | $\begin{gathered} 3.6 \\ 4.6 \\ 8.5 \\ 22 \\ 24 \\ 24 \\ 35 \\ 28 \\ 17 \\ 7 \\ 2.3 \\ 2.5 \end{gathered}$ | $\begin{aligned} & 8.27 \\ & 9.34 \\ & 15.3 \\ & 52.9 \\ & 45.6 \\ & 87.6 \\ & 64.1 \\ & 95.1 \\ & 39.7 \\ & 20.5 \\ & 7.25 \\ & 17.5 \end{aligned}$ | $\begin{gathered} .109 \\ .123 \\ .202 \\ .698 \\ .602 \\ 1.16 \\ .846 \\ 1.25 \\ .524 \\ .270 \\ .096 \\ .231 \end{gathered}$ | $\begin{array}{r} .13 \\ .14 \\ .23 \\ .80 \\ .65 \\ 1.34 \\ .94 \\ 1.44 \\ .58 \\ .31 \\ .11 \\ .26 \end{array}$ | .070 <br> .080 <br> .131 <br> . 451 <br> . 389 <br> .750 <br> .547 <br> .808 <br> .339 <br> .175 <br> . 062 <br> .149 |
| The year. | 842 | 2.3 | 38.6 | . 509 | 6.93 | . 329 |
|  | 656 | 3.5 | 84.5 | 1.12 | 1.29 | . 724 |
| November. | 493 | 42 | 128 | 1.69 | 1.89 | . 09 |
| Dacember. | 544 | 40 | 82.0 | 1.08 | 1.24 | . 698 |
| January. | 515 | 47 | 87.7 | 1.16 | 1.34 | . 750 |
| Fobruary. | 300 | 58 | 97.6 | 1.29 | 1.34 | . 834 |
| March. | 387 | 50 | 99.1 | 1.31 | 1.51 | . 847 |
| April... | 730 | 78 | 150 | 1.98 | 2.21 | 1.28 |
| May . . . June | 256 393 | 56 39 | 103 72.7 | 1.36 .959 | 1.57 1.07 | .879 .620 |
| Juiy. | 1,140 | 32 | 97.3 | 1.28 | 1.48 | . 827 |
| August.... Saptembar. | 2,710 108 | $\begin{aligned} & 21 \\ & 33 \end{aligned}$ | $\begin{array}{r} 188 \\ 47.0 \end{array}$ | $\begin{aligned} & 2.48 \\ & .620 \\ & \hline \end{aligned}$ |  | $\begin{gathered} 1.60 \\ .401 \\ \hline \end{gathered}$ |
| The year.. | 2,710 | 3.5 | 103 | 1.36 | 18.49 | . 879 |

Northeast Branch Anacostia River at Riverdale, Md.
Location.- Water-staga recorder, lat. $38^{\circ} 57137^{\prime \prime}$, long. $76^{\circ} 55134^{n}$, at Riverdala Road bridge in Riverdale, Prince Georges County, and $3 / 4 \mathrm{mlle}$ upstream from confluence with Northwest 8ranch. Datum of gava is 14.00 feet above mean sea level (Washington Suburban Sanitary Commission banch mark). Prior to June 12, 1942 wire-welght gaga at same site and datum.
Drainage area.- 72.8 square miles.
Records avallable.- Aucust 1938 to September 1943.
Extremes.- Maximum discharge, 3,660 second-feet Oct. 16, 1942 (gage height, 12.93 feet), from rating ci:rve extended above 2,950 sacond-feet; minimum observed, 5.6 secondfeet Sept. 29, 30, Oct. 1, 1941 (gace helght, 2.72 feet).

Maximum stage known, about 15.5 feet Aug. 23 or 24 , 1933 , from floodmarks (discharge, 10,500 second-feet, from rating curve extended above 2,950 second-feet).

Monthly discharge of Northeast Branch Anacostia RIver at RIverdala, Md.

| Munth | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { Inches } \end{array}\right.$ | Discharge in million gallons per day per squara mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { mile } \end{aligned}$ |  |  |
| $1938$ <br> Aucrust 13-31..... Sartember......... | $\begin{aligned} & 122 \\ & 252 \\ & \hline \end{aligned}$ | 9 11 | $\begin{array}{r} 21.4 \\ 42.9 \\ \hline \end{array}$ | $\begin{array}{r} 0.294 \\ .589 \\ \hline \end{array}$ | $\begin{array}{r} 0.21 \\ .66 \\ \hline \end{array}$ | $\begin{array}{r} 0.190 \\ .381 \\ \hline \end{array}$ |

Monthly discherge of Northeast Brench Anecostie River ot Riverdsle, Md.--Continued

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gellons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per squere mile |  |  |
| 1938-39 |  |  |  |  |  |  |
| October. | 58 | 17 | 24.5 | 0.337 | 0.39 | 0.218 |
| November | 87 | 23 | 34.5 | . 474 | . 53 | . 306 |
| December | 215 | 31 | 61.9 | . 850 | . 98 | . 549 |
| Jenuery. | 961 | 27 | 91.4 | 1.26 | 1.45 | . 814 |
| February | 706 | 71 | 206 | 2.83 | 2.95 | 1.83 |
| Merch. | 392 | 69 | 131 | 1.80 | 2.08 | 1.16 |
| April. | 444 | 67 | 129 | 1.77 | 1.98 | 1.14 |
| Mey... | 95 | 26 | 54.4 | . 747 | . 86 | . 483 |
| June | 84 | 20 | 33.3 | . 457 | . 51 | . 295 |
| July. | 68 | 14 | 23.4 | . 321 | . 37 | . 207 |
| August. | 146 | 9.0 | 19.8 | .272 | . 31 | . 176 |
| September | 270 | 9.6 | 30.9 | . 424 | . 47 | . 274 |
| The year. | 961 | 9.0 | 69.1 | . 949 | 12.88 | . 613 |
| October | 365 | 16 | 45.8 | . 629 | . 73 | . 407 |
| November. | 128 | 23 | 36.8 | . 505 | . 56 | . 326 |
| December. | 78 | 24 | 35.3 | . 485 | . 56 | . 313 |
| Jenuery | 244 | 20 | 37.5 | . 515 | . 59 | . 333 |
| February | 856 | 24 | 121 | 1.66 | 1.79 | 1.07 |
| March. | 814 | 48 | 121 | 1.66 | 1.91 | 1.07 |
| April | 1,730 | 48 | 231 | 3.17 | 3.54 | 2.05 |
| May. . | 370 | 42 | 81.7 | 1.12 | 1.29 | . 724 |
| June. | 54 | 14 | 26.0 | . 357 | . 40 | . 231 |
| July. | 60 | 8.0 | 21.4 | . 294 | . 34 | . 190 |
| August. | 204 | 7.2 | 30.6 | . 420 | . 48 | . 271 |
| September | 778 | 11 | 49.0 | . 673 | . 75 | . 435 |
| The yeer. | 1,730 | 7.2 | 69.3 | . 952 | 12.94 | . 615 |
| October | 54 | 16 | 22.5 | . 309 | . 36 | . 200 |
| November. | 630 | 25 | 101 | 1.39 | 1.55 | . 898 |
| December. | 340 | 33 | 68.3 | . 938 | 1.08 | . 606 |
| Jenuary. . | 302 | 38 | 93.8 | 1.29 | 1.49 | . 834 |
| February. | 112 | 35 | 60.5 | . 831 | . 86 | . 537 |
| March. | 269 | 38 | 84.5 | 1.16 | 1.34 | . 750 |
| April | 551 | 36 | 95.5 | 1.31 | 1.46 | . 847 |
| May. | 36 | 14 | 23.9 | . 328 | . 38 | . 212 |
| June | 221 | 14 | 50.0 | . 687 | . 77 | . 444 |
| July | 418 | 14 | 55.5 | . 762 | . 88 | . 492 |
| August. | 162 | 11 | 25.4 | . 349 | . 40 | . 226 |
| September. | 14 | 5.6 | 8.32 | .114 | . 13 | . 074 |
| The yeer | 630 | 5.6 | 57.3 | . 7 ¢ 7 | 10.70 | . 509 |
| October. | 13 | 6.4 | 9.37 |  |  |  |
| November. | 33 | 13 | 15.9 | . 218 | . 24 | . 141 |
| December. | 177 | 13 | 31.5 | . 433 | . 50 | . 280 |
| January. . | 75 | 16 | 26.6 | . 365 | . 42 | . 236 |
| Februery.... | 290 546 | 22 25 | 50.6 102 | .695 1.40 | .72 .61 | .449 .905 |
| April. | 706 | 29 | 96.2 | 1.32 | 1.47 | . 853 |
| May. | 207 | 19 | 42.1 | . 578. | . 67 | . 374 |
| June | 164 | 12 | 27.9 | .383 | . 43 | . 248 |
| July. | 79 | 10 | 26.0 | . 357 | . 41 | . 231 |
| August... | 2,180 | 18 | $205$ | $2.82$ | 3.25 | $1.82$ |
| September. | 67 | 12 | 21.7 | . 298 |  | . 193 |
| The yeer | 2,180 | 6.4 | 54.8 | . 753 | 10.20 | . 487 |
|  | 2,600 | 17 | 234 | 3.21 | 3.70 |  |
| November | , 103 | 47 | 65.9 | . .905 | 1.01 | . 585 |
| December | 1,020 | 36 | 116 | 1.59 | 1.83 | 1.03 |
| Jenuery. | 144 | 47 | 71.8 | . 986 | 1.14 | . 637 |
| Februery. | 496 | 68 | 161 | 2.21 | 2.30 | 1.43 |
| Merch... | 376 | 54 | 141 | 1.94 | 2.23 | 1.25 |
| April. | 454 | 62 | 106 | 1.46 | 1.63 . | . 944 |
| May . | 421 | 49 | 87.7 | 1.20 | 1.39 | . 776 |
| June. | 111 | 18 | 41.8 | . 574 | . 64 | . 371 |
| July. | 30 | 11 | 16.9 | . 232 | . 27 | . 150 |
| August. | 20 | 7.3 | 9.55 | . 131 | . 15 | .085 |
| September. | 74 | 9.7 | 17.7 | .243 | .27 | .157 |
| The year... | 2,600 | 7.3 | 88.8 | 1.22 | 16.56 | .789 |

Yearly discharge of Northeast Branch Anacostia River at Riverdale, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile | Discharge in second-feet |  | Runoff in inches | Discharge in million gallons per day per square mile |
|  | Mean | $\begin{aligned} & \text { Per } \\ & \text { square } \\ & \text { m1le } \end{aligned}$ |  |  | Mean | Per square milo |  |  |
| 1939 | 69.1 | 0.949 | 12.88 | 0.613 | 68.8 | 0.945 | 12.83 | 0.611 |
| 1940. | 69.3 | . 952 | 12.94 | . 615 | 75.3 | 1.03 | 14.08 | . 666 |
| 1941 | 57.3 | . 787 | 10.70 | . 509 | 46.1 | . 633 | 8.60 | . 409 |
| 1942 | 54.8 | . 753 | 10.20 | . 487 | 85.1 | 1.17 | 15.85 | . 756 |
| 1943. | 88.8 | 1.22 | 16.56 | . 789 | - | - | - | - |

## Northeast Branch Anacostia River at Ryattsville, Md.

Location.- Staff gage, lat. $38^{\circ} 57^{\prime} 00^{\prime \prime}$, Iong. $76^{\circ} 56^{\prime 07 \prime \text {, at highway bridge in Hyattsville, }}$ Prince Georges County, and 0.6 mile upstream fron confluence with Northwest Branch. Datum of gage le 5.02 feet above mean sea level (Corps of Engineers, U. S. Army, bench mark).
Drainage area.- 75 square miles.
Records avaliable. - july 1911 to september 1912.
Extremes.-Maxlmum dally discharge, 1,760 second-feet May 7, 1912; minimum da11y, 2.0 second-feet Sept. 13, 1912.

Monthly discharge of Northeast Branch Anacostia River at Hyattsville, Md.

| Month | Diecharge in second-feet |  |  |  | Runoff" <br> In <br> inches | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Par square mile |  |  |
| 1911 |  |  |  |  |  |  |
| July.. | 11 | 3.5 | 6.15 | 0.082 | 0.09 | 0.053 |
| August. | 404 | 3.7 | 35.2 | . 469 | . 54 | .303 |
| September. | 124 | 9.3 | 24.2 | .323 | .36 | .209 |
| 1911-12 |  |  |  |  |  |  |
| November | 197 | 17.5 | 70.9 | . 945 | 1.05 | . 611 |
| December | 414 | 30 | 91.9 | 1.23 | 1.42 | . 795 |
| January. | 786 | 59 | 169 | 2.25 | 2.59 | 1.45 |
| February | 800 | 21 | 165 | 2.20 | 2.37 | 1.42 |
| March... | 992 | 7.5 | 219 | 2.92 | 3.37 | 1.89 |
| April. | 258 | 57 | 107 | 1.43 | 1.60 | . 924 |
| May. | 1,760 | 44 | 204 | 2.72 | 3.14 | 1.76 |
| June | 886 | 11.0 | 96.0 | 1.28 | 1.43 | . 827 |
| July. | 195 | 8.0 | 48.1 | . 641 | . 74 | . 414 |
| August. | 58 | 4.0 | 16.2 | . 216 | . 25 | .140 |
| September 1-22 | 117 | 2.0 | 21.6 | . 288 | .24 | . 186 |

Northwest Eranch Anacostia River near Colesville, Md.
Location.- Watermstage recorder, lat. $39^{\circ} 03^{\prime \prime} 55^{\prime \prime}$, long. $7700148^{\prime \prime}$, 400 feet upstream from hlghway bridge, lit miles southwest of Colesville, Montgomery County, and iomiles upstream from Sligo Branch. Datum of gage is 264.85 feet above mean sea level, adjustment of 1912. From Apr. 22, 1932 to Apr. 9, 1934, staff gage at same site and dotum. Prior to Apr. 22, 1932 staff gages with various datum planes in same general vicinity.
Drainage area.- 21.3 square miles.
Records avallable.- February 1924 to September 1943.
Extremes.- Maximum discharge, 4,500 second-feet Aug. 23, 1933 (gage height, 9.3 feet, from floodmarks), from rating curve extended above 2,000 second-feet; minimum, 0.4 second-foot Aug. 11, 12, 1930, Sept. 2, 1932.
Remarks.- Subsequent to Aug. 12, 1939 records include inflow pumped fror Patuxent River ₹o augment water supply for Washingt on Suburban Sanitary District. Records of pumpage can be obtained from the washington Suburban Sanitary Comission, Hyattsville, Md.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discherge in million gellons per dey per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max1mum | Minimum | Meen | Per square mile |  |  |
| 1924 |  |  |  |  |  |  |
| Merch. | 304 | 18 | 65.2 | 3.06 | 3.53 | 1.98 |
| April. | 430 | 28 | 64.0 | 3.00 | 3.35 | 1.94 |
| Mey. . | 176 | 28 | 58.3 | 2.74 | 3.16 | 1.77 |
| June. | 188 | 19 | 34.7 | 1.63 | 1.82 | 1.05 |
| July. | 40 | 12 | 18.6 | . 873 | 1.01 | . 564 |
| August. | 285 | 10 | 32.5 | 1.53 | 1.76 | . 989 |
| September | 640 | 10 | 47.7 | 2.24 | 2.50 | 1.45 |
| tober. . . . . . . . . | 1924-25 |  |  |  |  |  |
| November. | 65 | 18 | 29.4 | 1.38 | 1.59 | . 892 |
| December. | 117 | 18 | 21.7 | 1.02 | 1.14 | . 659 |
| December. | 34 116 | 16 | 19.4 | .911 | 1.05 | . 589 |
| Februery | 200 | 20.5 | 32.6 53.4 | 1.53 2.51 | 1.76 | . 989 |
| Merch. | 38 | 15.5 | 20.0 | 2.51 | 2.61 | 1.62 |
| April. | 31 | 13.5 | 17.0 | . 798 | -.89 | . 516 |
| May. | 24 | 8.5 | 13.8 | . 648 | . 75 | . 419 |
| June. | 24 | 3.5 | 6.58 | . 309 | . 34 | . 200 |
| July . | 138 | 2.0 | 17.7 | . 831 | . 96 | .537 |
| August. | 22 | 3.0 | 6.31 | . 296 | . 34 | . 191 |
| September | 34 | 3.5 | 6.95 | . 326 | . 36 | . 211 |
| The yeer | 200 | 2.0 | 20.2 | . 948 | 12.87 | . 613 |
| 1925-26 | 61 | 4.0 | 11.5 |  |  |  |
| November. | 213 | 11 | 25.1 | 1.548 | . 62 | .349 |
| December. | 37 | 1. | 13.8 | 1.18 | 1.32 | -763 |
| January. | 216 | 9.0 | 26.6 | 1.648 | 1.75 1.44 | . 419 |
| Fobruary. | 170 | 13. | 49.3 | 2.31 | 1.44 2.40 | . 808 |
| Merch. | 41 | 13 | 18.0 | 2.345 | 2.40 | . 49 |
| April. | 30 | 10.5 | 14.8 | . 895 | . 78 | . 546 |
| Mey. | 32 | 7.0 | 9.97 | . 463 | . 53 | . 4499 |
| June. | 9 | 4.7 | 6.68 | . 314 | . 35 | . 203 |
| July... | 192 | 3.8 | 12.8 | . 601 | . 69 | . 388 |
| August. | 104 | 2.5 | 12.3 | . 577 | . 67 | . 373 |
| September. | 325 | 3.7 | 31.0 | 1.46 | 1.63 | . 944 |
| The year | 325 | 2.5 | 19.1 | . 897 | 12.15 | . 580 |
|  |  |  |  |  |  |  |
| November... | 469 | 12 | 55.6 | 2.81 | 2.97 | . 543 |
| December. | 81 | 12 | 27.2 | 1.28 | 2.91 | 1.69 |
| January. | 32 | 13 | 18.5 | - 869 | 1.00 | . 562 |
| Fobruary | 192 | 17 | 41.4 | 1.94 | 2.02 | 1.25 |
| Merch. | 58 | 17 | 21.1 | . 991 | 1.14 | 1.254 |
| April. | 378 | 17 | 40.7 | 1.91 | 2.13 | 1.23 |
| May. | 57 | 14 | 29.7 | . 925 | 2.07 | 1.598 |
| June | 23 | 8 | 12.4 | . 582 | . 65 | . 376 |
| July.. | 36 | 5 | 8.90 | . 418 | . 48 | . 270 |
| August. .. | 112 | 6 | 12.1 | . 568 | . 65 | . 367 |
| September. | 119 | 5 | 10.2 | . 479 | . 53 | $\begin{array}{r}.310 \\ .310 \\ \hline\end{array}$ |
| The year | 469 | 5 | 23.6 | 1.11 | 15.03 | . 717 |
| October.. | 258 | 5 |  |  |  |  |
| November. | 168 | 12 | 24.1 | 1.80 | 2.08 | 1.16 |
| December. | 154 | 14 | 34.5 | 1.62 | 1.87 | 1.05 |
| Jenuery. | 44 | - | 18.8 | . 883 | 1.02 | -.571 |
| February. | 362 | $\checkmark$ | 46.1 | 2.16 | 2.33 | 1.40 |
| March.. | 121 | 17 | 31.0 | 1. 46 | 1.68 | -. 944 |
| April. | 173 | 15 | 27.8 | 1.31 | 1.46 | . 847 |
| May.. | 58 | 14 | 22.6 | 1.06 | 1.22 | . 685 |
| June. | 126 | 12 | 21.9 | 1.03 | 1.15 | . 666 |
| July. | 34 | 6 | 10.9 | . 512 | . 59 | . 331 |
| August. | 420 | 6 | 29.6 | 1.39 | 1.60 | . 898 |
| September. | 77 | 10 | 15.9 | . 746 | . 83 | . 482 |
| The year. | 420 | 5 | 26.7 | 1.25 | 17.09 | . 808 |

Monthly discharge of Northwest Brench Anacostie River near Colesville, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1828-29 |  |  |  |  |  |  |
| October | 16 | 9 | 11.2 | 0.526 | 0.61 | 0.340 |
| November. | 28 | 11 | 12.9 | . 606 | . 68 | . 392 |
| December | 36 | 10 | 13.0 | . 610 | . 70 | . 394 |
| January. | 85 | - | 20.2 | . 948 | 1.09 | . 613 |
| February. | 261 | - | 34.3 | 1.61 | 1.68 | 1.04 |
| March.... | 232 | 13 | 45.8 | 2.15 | 2.48 | 1.39 |
| April. | 352 | 13 | 38.4 | 1.80 | 2.01 | 1.16 |
| Mey. . | 18 | 10 | 13.6 | . 638 | . 74 | . 412 |
| June | 344 | 9 | 41.7 | 1.96 | 2.18 | 1.27 |
| July. | 11 | 4 | 7.32 | . 344 | . 40 | . 222 |
| August. | 8 | 3 | 4.26 | . 200 | . 23 | . 129 |
| September. | 16 | 2 | 4.27 | .200 | . 22 | . 129 |
| The jear. | 352 | 2 | 20.4 | . 958 | 13.03 | . 619 |
| October . . . . . | 173 | 6.4 | 17.3 | . 812 | .94 | . 525 |
| November. | 62 | 8 | 13.8 | . 648 | . 72 | . 419 |
| December | 24 | - | 11.5 | .540 | . 62 | . 349 |
| January. | 25 | $\square$ | 11.2 | . 526 | .61 | - 340 |
| Februery. | 123 | 9 | 24.5 | 1.15 | 1.20 | . 743 |
| March. | 120 | 8.1 | 19.6 | . 920 | 1.06 | . 595 |
| April. | 150 | 13.3 | 23.6 | 1.11 | 1.24 | . 717 |
| Mey. | 13 | 7.3 | 9.86 | . 463 | . 53 | . 298 |
| June | 82 | 4.4 | 9.26 | . 435 | - 49 | . 281 |
| July.. | 5.2 | . 8 | 2.97 | . 139 | . 16 | . 090 |
| August. | 1.1 | . 4 | . 72 | . 034 | . 04 | . 022 |
| September | 17 | . 6 | 1.40 | . 066 | .07 | . 043 |
| The year. | 173 | . 4 | 12.0 | . 563 | 7.68 | . 364 |
| October. | 3.2 | 1.0 | 1.84 | . 086 | . 10 | . 056 |
| November. | 5.2 | 1.5 | 3.13 | . 147 | . 16 | . 095 |
| December | 32 | - | 3.91 | . 179 | . 21 | . 118 |
| Januery. | 42 | 2.8 | 5.93 | . 278 | . 32 | . 180 |
| Februery. | 8.1 | 3.5 | 4.52 | . 212 | . 22 | .137 |
| Merch. | 18 | 3.8 | 7.46 | . 350 | . 40 | . 226 |
| April. | 43 | 6.0 | 12.0 | . 563 | . 63 | . 364 |
| May. | 250 | 4.1 | 15.8 | . 742 | . 86 | . 480 |
| June | 109 | 1.4 | 12.0 | . 563 | . 63 | . 364 |
| July... | 363 | 1.2 | 20.4 | . 958 | 1.10 | -619 |
| August... | $100$ | 1.5 | 22.2 | . 573 | . 66 | . 370 |
| September |  | 1.0 | 1.84 | . 086 | .10 | . 056 |
| The yeer | 363 | 1.0 | 8.45 | . 397 | 5.39 | . 257 |
| October. | 10 | 1 | 1.79 | . 084 | . 10 | . 054 |
| November. | 5 | 1.5 | 2.37 | . 111 | . 12 | . 072 |
| Decomber. | 6 | 2 | 3.50 | . 164 | . 19 | . 106 |
| January. | 72 | 5 | 15.7 | . 737 | . 85 | . 476 |
| February. | 80 | 6.5 | 11.5 | . 540 | . 58 | . 349 |
| March. | 280 | 7 | 22.6 | 1.06 | 1.22 | . 685 |
| April. | 39 | 7 | 12.3 | . 577 | . 64 | . 373 |
| May. . | 262 | 6.5 | 25.0 | 1.17 | 1.35 | . 758 |
| June | 94 | 4.5 | 11.1 | . 521 | . 58 | . 337 |
| Juls. | 18 | 2 | 4.77 | . 224 | . 26 | . 145 |
| August... | 11 | . 6 | 1.85 | . 087 | . 10 | .056 |
| September | 14 | . 4 | 1.72 | . 081 | . 09 | . 052 |
| The jeer. | 280 | . 4 | 9.53 | . 447 | 6.08 | . 289 |
| October........... | 307 | . 9 | 28.0 | 1.31 |  |  |
| November. | 311 | 10 | 44.6 | 2.09 | 2.33 | 1.35 |
| December. | 206 | 8.8 | 24.9 | 1.17 | 1.35 | . 756 |
| Jenuery.. | 170 | 13 | 24.2 | 1.14 | 1.31 | . 737 |
| Februery. | 100 | 16 | 26.3 | 1.23 | 1.28 | . 795 |
| Morch.... | 218 | 14 | 34.1 | 1.60 | 1.84 | 1.03 |
| April. | 149 | 19 | 39.8 | 1.87 | 2.09 | 1.21 |
| Mey. . . | 75 | 15 | 26.1 | 1.23 | 1.42 | . 795 |
| June. | 73 154 | 7.5 | 14.7 | . 690 | . 77 | - 446 |
| July.. | 154 | 6.2 | 19.1 | . 897 | 1.03 | . 580 |
| August..... | 1,280 | 4.3 | 57.0 | 2.68 | 3.09 | 1.73 |
| Septomber..... | 54 | 7.9 | 11.9 | . 559 | . 62 | . 361 |
| The year..... | 1,280 | . 9 | 29.3 | 1.38 | 18.64 | . 892 |

Monthly diecharge of Northwest Brench Anacostia River near Colesvilie, Md.--Continued

| Month | Discherge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge In million gellons per dey per equere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1 n1mum | Meen | Per equere mile |  |  |
| 1933-34 |  |  |  |  |  |  |
| October.. | 46 | 8.3 | 11.9 | 0.559 | 0.64 | 0.361 |
| November. | 20 | 9.2 | 10.2 | . 479 | . 53 | . 310 |
| December. | 49 | 9.2 | 12.2 | . 573 | . 66 | .370 |
| Jenuary. | 75 | 9.0 | 19.6 | . 920 | 1.06 | . 595 |
| Fobruery. | 37 | 8.0 | 11.9 | . 559 | . 58 | . 361 |
| Merch. .. | 684 | 10 | 49.2 | 2.31 | 2.66 | 1.49 |
| Apr11. | 124 | 14 | 24.3 | 1.14 | 1.27 | . 737 |
| Mey... | 90 | 13 | 23.3 | 1.09 | 1.26 | . 704 |
| June. | 203 | 8.3 | 25.2 | 1.18 | 1.32 | . 763 |
| july. | 50 | 4.2 | 8.00 | . 376 | . 43 | . 243 |
| Augrst. | 36 | 2.9 | 6.75 | . 317 | . 37 | . 205 |
| Soptember. | 308 | 3.7 | 48.9 | 2.30 | 2.57 | 1.49 |
| The yeer. | 684 | 2.9 | 21.0 | . 986 | 13.35 | . 637 |
| October | 27 | 10 | 13.7 | . 643 | . 74 | . 416 |
| November. | 226 | 10 | 20.8 | . 977 | 1.09 | . 631 |
| December. | 272 | 14 | 29.9 | 1.40 | 1.61 | . 905 |
| Jonuery | 208 | 16 | 33.0 | 1.55 | 1.79 | 1.00 |
| February | 139 | 18 | 46.6 | 2.19 | 2.28 | 1.42 |
| Merch... | 237 | 24 | 40.5 | 1.80 | 2.19 | 1.23 |
| Apr11. | 420 | 21 | 52.4 | 2.46 | 2.74 | 1.59 |
| Mey. | 495 | 16 | 39.9 | 1.87 | 2.16 | 1.21 |
| June. | 102 | 10 | 18.6 | . 873 | .97 | . 564 |
| July. | 68 | 5.8 | 10.6 | . 498 | . 57 | . 322 |
| August. | 7.4 | 3.6 | 5.13 | . 241 | . 28 | . 156 |
| Soptember | 308 | 3.6 | 23.5 | 1.10 | 1.23 | . 711 |
| The yeer. | 495 | 3.6 | 27.7 | 1.30 | 17.65 | . 840 |
| October.......... | 66 | 6.6 | 11.5 | . 540 | . 62 |  |
| November. | 204 | 9.5 | 26.1 | 1.23 | 1.37 | . 795 |
| December. | 36 | 13 | 17.4 | . 817 | . 94 | . 528 |
| Januery. | 610 | 14 | 59.6 | 2.80 | 3.23 | 1.81 |
| February. | 700 | 13 | 97.0 | 4.55 | 4.91 | 2.94 |
| March. | 230 | 23 | 51.4 | 2.41 | 2.78 | 1.56 |
| April | 66 | 18 | 27.4 | 1.29 | 1.44 | . 834 |
| Mey. | 36 | 10 | 17.3 | . 812 | . 94 | . 525 |
| June | 41 | 6.3 | 11.2 | . 526 | . 59 | . 340 |
| July. | 42 | 5.0 | 9.64 | . 453 | . 52 | . 293 |
| August. | 188 | 3.1 | 13.5 | . 634 | . 73 | . 410 |
| September. | 7.8 | 3.3 | 4.81 | . 226 | . 25 | . 146 |
| The year | 700 | 3.1 | 28.7 | 1.35 | 18.32 | . 873 |
| October | 21 | 4.5 | 6.73 | . 316 | . 36 | . 204 |
| November | 8.0 | 5.3 | 6.31 | . 296 | . 33 | . 191 |
| December. | 141 | $4 \cdot 5$ | 25.5 | 1.20 | 1.38 | . 776 |
| Jenuary.. | 286 | 16 | 50.9 | 2.39 | 2.76 | 1.54 |
| Februery | 213 | 21 | 42.0 | 1.97 | 2.05 | 1.27 |
| Merch. | 61 | 19 | 26.1 | 1.23 | 1.42 | . 795 |
| Apr11 | 812 | 15 | 60.7 | 2.85 | 3.18 | 1.84 |
| May. | 53 | 16 | 24.7 | 1.16 | 1.34 | . 750 |
| June | 108 | 11 | 22.7 | 1.07 | 1.19 | . 692 |
| July.. | 42 | 7.0 | 12.1 | . 568 | . 65 | . 367 |
| August. | 373 | 7.0 | 52.5 | 2.46 | 2.84 | 1.59 |
| September | 55 | 8.2 | 12.3 | . 577 | . 64 | . 373 |
| The jear | 812 | 4.5 | 28.5 | 1.34 | 18.14 | .866 |
| October.... | 585 | 8.6 | 54.3 | 2.55 | 2.94 | 1.65 |
| November. | 656 | 16 | 45.1 | 2.12 | 2.36 | 1.37 |
| December. | 29 | 16 | 19.5 | . 915 | 1.05 | +.591 |
| Jenuery. | 65 | 15 | 23.7 | 1.11 | 1.28 | . 717 |
| February. | 148 | 16 | 30.6 | 1.44 | 1.50 | . 931 |
| March. | 82 | 16 | 24.2 | 1.14 | 1.31 | . 737 |
| April. | 39 | 14 | 21.0 | . 986 | 1.10 | . 637 |
| Mey. | 37 | 11 | 15.7 | . 737 | . 85 | . 476 |
| June | 22 | 6.6 | 9.80 | . 460 | . 51 | . 297 |
| July. | 40 | 3.8 | 8.75 | . 411 | . 47 | . 266 |
| August. | 126 | 4.4 | 16.1 | . 756 | . 87 | . 489 |
| September. | 49 | 3.6 | 8.83 | . 415 | . 46 | .268 |
| The year.... | 656 | 3.5 | 23.1 | 1.08 | 14.70 | . 698 |

Monthly discharge of Northwest Branch Anacoetie River near Colesville, Md.--Continued

| Month | Discherge in second-fat |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge <br> in million <br> gellons per <br> dey per <br> square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Meen | Per square mile |  |  |
| 1938-39 <br> October. <br> November. $\qquad$ <br> December. $\qquad$ <br> Januery. <br> February <br> Merch. <br> April. <br> Mey. . . . . . . . . . . . . <br> June. <br> . . . . . . . . . . <br> July. <br> August. <br> September. | $\begin{array}{r} 11 \\ 14 \\ 65 \\ 364 \\ 260 \\ 60 \\ 129 \\ 26 \\ 76 \\ 17 \\ 61 \\ 68 \end{array}$ | $\begin{gathered} 6.3 \\ 6.6 \\ 10 \\ 11 \\ 19 \\ 19 \\ 19 \\ 11 \\ 7.0 \\ 5.3 \\ 3.8 \\ 7.3 \end{gathered}$ | $\begin{gathered} 7.25 \\ 8.49 \\ 18.7 \\ 28.5 \\ 49.9 \\ 31.1 \\ 34.8 \\ 16.0 \\ 12.2 \\ 7.80 \\ 8.88 \\ 12.1 \end{gathered}$ | $\begin{gathered} 0.340 \\ .399 \\ .878 \\ 1.34 \\ 2.34 \\ 1.46 \\ 1.63 \\ .751 \\ .573 \\ .366 \end{gathered}$ | 0.39 .45 1.01 1.54 2.44 1.68 1.82 .87 .64 .42 | $\begin{gathered} 0.220 \\ .258 \\ .567 \\ .866 \\ 1.51 \\ .944 \\ 1.05 \\ .485 \\ .370 \\ .237 \end{gathered}$ |
| The yeer. | 364 | 3.8 | 19.4 |  |  |  |
| October <br> November December Januery. February Merch....... Apr11........ May. June. July August. September | 181 43 25 90 229 103 303 37 16 22 102 44 | $\begin{gathered} 7.4 \\ 7.4 \\ 6.6 \\ 6.5 \\ 6.5 \\ 12 \\ 13 \\ 13 \\ 10 \\ 6.6 \\ 5.1 \\ 5.6 \end{gathered}$ | $\begin{aligned} & 17.4 \\ & 10.6 \\ & 9.12 \\ & 12.2 \\ & 28.1 \\ & 25.3 \\ & 43.3 \\ & 17.4 \\ & 12.1 \\ & 12.9 \\ & 14.9 \\ & 11.7 \end{aligned}$ |  |  |  |
| The year.. | 303 | 5.1 | 17.8 |  |  |  |
| October <br> November <br> December <br> Januery. <br> February <br> March. <br> April. <br> Mey. <br> June. <br> July. <br> August <br> September | 23 161 68 78 44 66 184 19 35 36 54 14 | $\begin{gathered} 5.9 \\ 7.0 \\ 10 \\ 12 \\ 12 \\ 12 \\ 12 \\ 9.0 \\ 7.4 \\ 7.3 \\ 7.8 \\ 3.1 \end{gathered}$ | $\begin{gathered} 10.7 \\ 26.3 \\ 16.8 \\ 23.6 \\ 18.9 \\ 22.6 \\ 25.3 \\ 13.3 \\ 12.6 \\ 13.3 \\ 13.7 \\ 7.10 \end{gathered}$ |  |  |  |
| The year. | 184 | 3.1 | 17.0 |  |  |  |
| October....... <br> November. <br> December. <br> Januery. <br> Februery. <br> March. <br> April. <br> Mey. <br> June <br> July <br> August <br> September. | 7.8 15 46 23 93 99 156 67 43 34 66 18 | $\begin{gathered} 4.7 \\ 6.3 \\ 6.3 \\ 10 \\ 10 \\ 9.5 \\ 11 \\ 9.5 \\ 7.8 \\ 7.1 \\ 8.0 \\ 4.1 \end{gathered}$ | $\begin{array}{r} 5.61 \\ 9.21 \\ 13.3 \\ 12.7 \\ 16.9 \\ 19.8 \\ 25.4 \\ 16.8 \\ 16.4 \\ 15.3 \\ 16.8 \\ 13.1 \end{array}$ |  |  |  |
| The jeer. | 156 | 4.1 | 15.1 |  |  |  |
| October. <br> November. <br> December. <br> Jenuary. <br> Februery. <br> Merch. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September. | $\begin{array}{r} 420 \\ 18 \\ 168 \\ 22 \\ 132 \\ 101 \\ 121 \\ 430 \\ 52 \\ 62 \\ 20 \\ 70 \end{array}$ | $\begin{gathered} 10 \\ 8.6 \\ 9.0 \\ 12 \\ 14 \\ 12 \\ 15 \\ 13 \\ 9.0 \\ 10 \\ 15 \\ 8.5 \end{gathered}$ | $\begin{aligned} & 39.1 \\ & 12.0 \\ & 22.9 \\ & 14.1 \\ & 32.6 \\ & 31.3 \\ & 25.1 \\ & 30.5 \\ & 16.7 \\ & 19.0 \\ & 18.5 \\ & 19.5 \\ & \hline \end{aligned}$ |  |  |  |
|  | 430 | 8.5 | 23.4 |  |  |  |

Yearly discharge of Northwest Eranch Anacostia R1ver near Colesville, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Dlecharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { Inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per square mile |  |  |
| 1925. | 20.2 | 0.948 | 12.87 | 0.613 | 18.5 |  |  |  |
| 1926. | 19.1 | . 897 | 12.15 | . 580 | 23.3 | 1.09 | 11.78 | 0.562 |
| 1927. | 23.6 | 1.11 | 15.03 | . 717 | 23.3 | 1.09 |  |  |
| 1928. | 26.7 | 1.25 | 17.09 | . 808 | 21.7 | 1.02 | 13.88 | . .659 |
| 1929 | 20.4 | . 958 | 13.03 | . 619 | 20.9 | . 981 | 13.32 | .634 |
| 1930. | 12.0 | . 563 | 7.68 | . 364 | 9.20 | . 432 | 5.87 | . 279 |
| 1931. | 8.45 | . 397 | 5.39 | . 257 | 8.36 | . 392 | 5.33 | . 253 |
| 1932. | 9.53 | . 447 | 6.08 | . 289 | 17.0 | . 798 | 10.86 | . 516 |
| 1933. | 29.3 | 1.38 | 18.64 | . 892 | 24.0 | 1.13 | 15.28 | . 730 |
| 1934. | 21.0 | . 986 | 13.35 | . 637 | 23.5 | 1.10 | 14.96 | . 711 |
| 1935. | 27.7 | 1.30 | 17.65 | . 840 | 26.9 | 1.26 | 17.14 |  |
| 1936. | 28.7 | 1.35 | 18.32 | .873 | 27.3 | 1.28 | 17.46 | .887 |
| 1937. | 28.5 | 1.34 | 18.14 | . 866 | 35.2 | 1.65 | 22.42 | 1.07 |
| 1938. | 23.1 | 1.08 | 14.70 | . 698 | 16.0 | . 751 | 10.20 | . 485 |
| 1939. | 19.4 |  |  |  | 19.6 |  |  |  |
| 1940. | 17.8 |  |  |  | 19.2 |  |  |  |
| 1941 | 17.0 |  |  |  | 14.9 |  |  |  |
| 1942. | 15.1 |  |  |  | 19.0 |  |  |  |
| 1943 . | 23.4 |  |  |  |  |  |  |  |
| 1925-1938 |  |  |  |  |  |  |  |  |
| H1ghest. | 29.3 | 1.38 | 18.64 | . 892 | 35.2 | 1.65 | 22.42 |  |
| Average. <br> Lowest | 21.3 | $1.00$ | $13.58$ | $.646$ | $21.1$ | $.991$ | $13.44$ | $.641$ |
| Lowest.. | 8.45 | $.397$ |  | $.257$ | $8.36$ | $.392$ |  |  |

Northwest Branch Anacostia River near Hyattsville, Md.
Location.- Water-stage recorder, lat. $38^{\circ} 5^{\prime \prime} 12^{\prime \prime \prime}$, long. $76^{\circ} 57^{\prime \prime} 59^{\prime \prime}$, at queens Chapel Road Bridge, 1 mlle west of Hyattsville, Prince Georges county and 1 mile downatream
from Sligo Branch. Datum of gage is 17.30 foet above mean sea level, adjustment of 1912. Prior to oct. 22, 1938, wireweight gage at present site and datum.

Drainago area.- 49.4 square miles.
Records avallable.- July 1938 to September 1943.
Extremes.- Maximum discharge, 2,280 second-feet oct. 16,1942 (gage height, 9.92 feet); minimum, 0.8 second-foot Oct. 3, 7, 1941, Aug. 26, 1943

Maximum stage known, about 13.5 feet in August 1933.
Remarks.- Low flow regulated by storage and diversion at Burnt Mills Reservoir (drainage area, 26 square miles) and subsequent to Aug. 12 , 1939 by inflow pumped from patuxent RIver basin as reaured for water supply by Washington Suburban Sanitary District. filtration plant can be obtalned from the Washington Suburban Sanitary Commigalon, Ryattsville, Md.

Monthly discharge of Northwest Branch Anacostia R1ver near Hyattsville, Md.

| Month | Discharge in second-feet |  |  |  | $\left\lvert\, \begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| 1938 |  |  |  |  |  |  |
| July 12-31... | 86 | 2.8 | 14.4 |  |  |  |
| Auguet... | 340 | 3.3 | 26.4 |  |  |  |
| September. | 59 | 3.3 | 10.5 |  |  |  |
| October....... |  |  |  |  |  |  |
| November. | 10 | 3.8 4.8 | 5.62 |  |  |  |
| December. | 138 | $10^{4.8}$ | 26.68 |  |  |  |
| January. | 766 | 12 | 48.5 |  |  |  |
| Fobruary. | 462 | 35 | 97.7 |  |  |  |
| March. | 132 | 27 | 58.6 |  |  |  |
| April. | 274 | $26^{\circ}$ | 69.2 |  |  |  |
| May. | 60 | 11 | 27.7 |  |  |  |
| June. | 65 | 7.2 | 15.6 |  |  |  |
| July. | 59 | 4.2 | 10.1 |  |  |  |
| August. | 119 | 1.5 | 7.37 |  |  |  |
| September | 108 | 1.8 | 11.9 |  |  |  |
| The year. | 766 | 1.5 | 31.9 |  |  |  |

Monthly discharge of Northwest Branch Anacostia River near Hyattsville, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { In } \\ \text { inche } \end{array}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m118 |  |  |
| 1939-40 |  |  |  |  |  |  |
| October.. | 230 | 6.0 | 19.8 |  |  |  |
| November. | 50 | 8.0 | 13.5 |  |  |  |
| December. | 41 | 6.3 | 11.6 |  |  |  |
| January. | 135 | 6.5 | 15.9 |  |  |  |
| February. | 309 | 10 | 49.4 |  |  |  |
| March. | 239 | 24 | 50.1 |  |  |  |
| April. | 897 | 18 | 101 |  |  |  |
| May.. | 86 | 20 | 34.9 |  |  |  |
| June. | 27 | 5.5 | 10.1 |  |  |  |
| July.. | 25 | 3.6 | 6.90 |  |  |  |
| August... September | 130 207 | 3.0 3.2 | 9.48 12.6 |  |  |  |
| The year | 897 | 3.0 | 27.8 |  |  |  |
|  |  | 3.8 | 6.04 |  |  |  |
| November. | 335 | 5.7 | 42.9 |  |  |  |
| December. | 141 | 9.5 | 26.1 |  |  |  |
| January. | 156 | 15 | 43.0 |  |  |  |
| February. | 67 | 17 | 29.8 |  |  |  |
| March.... | 122 | 13 | 37.3 |  |  |  |
| April. | 376 | 13 | 44.4 |  |  |  |
| May. . | 17 | 5.1 | 9.91 |  |  |  |
| June. | 100 | 5.1 | 20.6 |  |  |  |
| July. | 175 | 5.1 | 18.9 |  |  |  |
| August. ${ }_{\text {Septembe }}$ | $\begin{gathered} 71 \\ 7.6 \end{gathered}$ | 3.2 1.7 | $\begin{aligned} & 12.3 \\ & 2.58 \end{aligned}$ |  |  |  |
| The jear. | 376 | 2.7 | 24.4 |  |  |  |
| October.......... |  | . 9 |  |  |  |  |
| November. | 15 | 1.9 | 4.30 |  |  |  |
| December. | 132 | 3.5 | 12.7 |  |  |  |
| January. | 42 | 2.8 | 8.16 |  |  |  |
| February. | 179 | 5.7 | 18.2 |  |  |  |
| March... | 251 | 5.4 | 39.7 |  |  |  |
| April | 256 | 8.4 | 38.1 |  |  |  |
| May. | 117 | 6.2 | 18.3 |  |  |  |
| June. | 160 | 5.2 | 18.0 |  |  |  |
| JulJ..... | 160 978 | 4.0 6.6 | $\begin{aligned} & 23.5 \\ & 66.9 \end{aligned}$ |  |  |  |
| August. . September | $76$ | 6.6 4.0 | $\begin{gathered} 66.9 \\ 8.79 \end{gathered}$ |  |  |  |
| The jear. | 978 | . 9 | 21.7 |  |  |  |
| October. . . . | 946 | 4.4 | 86.0 |  |  |  |
| November. | 37 | 16 | 22.0 |  |  |  |
| December. | 444 | 13 | 46.6 |  |  |  |
| January. | 59 | 17 | 27.5 |  |  |  |
| February. | 248 | 25 | 71.6 |  |  |  |
| March.. | 174 | 19 | 66.6 |  |  |  |
| April. | 259 | 22 | 50.2 |  |  |  |
| May... | 447 | 21 | 49.0 |  |  |  |
| June. | 95 | 6.5 | 18.1 |  |  |  |
| July. | 48 | 3.7 | 7.44 |  |  |  |
| August | 25 | 1.3 | 3.61 |  |  |  |
| September | 172 | 2.0 | 11.0 |  |  |  |
| The year. | 946 | 1.3 | 38.3 |  |  |  |

Yearly discharge of Northwest Branch Anacostia River near Hyattsville, Md.

| Year | Year ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile | Discharge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
|  | Mean | Per square mile |  |  | Mean | Per square mile |  |  |
| 1939... | 31.9 |  |  |  | 32.1 |  |  |  |
| 1940.. | 27.8 |  |  |  | 30.2 |  |  |  |
| 1941. | 24.4 |  |  |  | 19.8 |  |  |  |
| 1942. | 21.7 |  |  |  | 33.1 |  |  |  |
| 1943. | 38.3 |  |  |  | - |  |  |  |

## Northwest Branch Anacostia River at Bladensburg, Md.

Location: - Staff gage, lat. $38^{\circ} 56^{\prime \prime} 45^{\prime \prime}$, long. $76^{\circ} 56^{\prime} 52^{\prime \prime}$, 300 feet upstream from Capltol Fransit Co. rallway bridge and 0.5 mlle northwest of Bladensburg, Prince Georges County. Datum of gage is 3.33 feet above mean sea level (Corps of ingineers, J. S. Ammy, bench mark).
Drainage area. - 52 square miles.
Records avaliable.- July 1911 to September 1912.
Extremes.-Maximum da1Iy discharge, 617 second-feet Feb. 27, 1912; minimum da11y, 3.0 second-feet Aug. 2, 1911.
Remarks.- Medium and high stages on Northeast Branch Anacostia River or extreme high tides may cause backwater at this statzon.

Monthly discharge of Northwest Branch Anacostia River at Bladensburg, Md.


Beaverdam Branch Anacostla Rlver at Kenilworth, D. C.
Locat Ion. - Staff gage, lat. $38^{\circ} 54^{\prime \prime} 5^{\prime \prime \prime}$, long $76^{\circ} 55^{\prime \prime} 5^{\prime \prime \prime}$, at Genllworth Avenue bridge and 0.3 mile north of District of Columbia Iine at Kenilworth. Datum of gage 1 g 2.42 feet above mean sea level (Corps of Engineers, U. S. Amy, bench mark). Drainage area. -14 square miles.
Records aveliable.-JuIy 1911 to September 1912.
Fxtremes:- Meximum daily discharge, 440 second-feet July 18, 1912; minlmun daily, 0.2 second-foot June 14, 1912.
Remarks.- Records may be affected by backwater durlng abnormally high tides.

| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { Inches } \end{array}\right.$ | Discharge in million gallons per dey per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per <br> square <br> mile |  |  |
| 1911 | . |  |  |  |  |  |
| July. | 4.0 | 1.1 | 1.88 | 0.134 | 0.15 | 0.087 |
| August. . | 6.8 | . 5 | 2.30 | . 164 | . 19 | . 106 |
| September..... | 42 | 1.1 | 3.68 | .263 | .29 | .170 |
| October... | 48 | 2.5 | 6.69 | . 478 | . 55 | 309 |
| November...................... | 60 | 4.0 | 14.5 | 2.04 | I. 16 | . 672 |
| December. | 95 | 5.5 | 18.6 | 1.33 | 1.53 | . 860 |
| January. | 64 | 8.7 | 20.7 | 1.48 | 1.71 | . 957 |
| February. | 89 | 6.0 | 21.6 | 1.54 | 1.66 | . 995 |
| March... | 187 | 1.5 | 34.3 | 2.45 | 2.82 | 1.58 |
| April. | 30 | 7.8 | 14.8 | 1.06 | 1.18 | . 685 |
| May... | 76 | 1.8 | 15.3 | 1.09 | 1.26 | . 704 |
| June . . . . . . . . . . . . . . . . . . . . . | 46 | . 2 | 7.14 | . 510 | . 57 | . 330 |
| July . . . . . . . . . . . . . . . . . . . . . . . | 440 | . 5 | 19.4 | 1.39 | 1.60 | . 898 |
| August. . . . . . . . . . . . . . . . . . . . . . . . | 2.2 | .7 | 1.31 | . 094 | . 11 | . 061 |
| September 1-21. . . . . . . . . . . . . . | 14 | . 5 | 1.68 | .120 | .09 | . 078 |

Occoquan Creek near Occoquan, Va.
Location. - Water-stage recorder, lat. $38^{\circ} 42^{\prime} 20^{\prime \prime}$, long. $7^{7} 7^{\circ} 19^{\prime} 35^{\prime \prime}$, $1 \frac{1}{2}$ mileo upstream Irom Sandy Run, and $4 \frac{1}{2}$ miles upstream from Occoquan, Prince william County. Datum of gage is 76.21 feot above mean sea level, datim of 1929.
Drainage area.- 546 square miles.
Records avallable.- February 1913 to May 1916; December 1920 to September 1923; June 1937 to September 1943.
Extremes.- Maximum discharge, 37,000 second-feet oct. 16, 1942 (gage height, 27.6 feet, from floodmark), from rating curve extended above 15,000 second-feet; minimum daily, 1.0 second-foot Dec. 11, 12, 1941.

Flood of April 1937 reached a etage of 24.87 feet, from floodmarks (discharge, 29,200 eecond-feet, from rating curve extended above 15,000 second-feet).
Remarks.- Flow regulated by power plants above etation on Occoquan Creek and Bull Run.


| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Dis charge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max1mum | Min1mum | Mean | Per square mile |  |  |
| 1921-22 |  |  |  |  |  |  |
| October. | 22 | 12 | 16.4 | 0.030 | 0.03 | 0.019 |
| November. | 696 | 25 | 86.1 | . 158 | . 18 | . 102 |
| Decomber. | 546 | 91 | 157 | . 288 | .33 | . 186 |
| January. | 4,220 | 67 | 457 | . 837 | . 96 | .541 |
| Fobruary. | 5,640 | 211 | 1,600 | 2.93 | 3.05 | 1.89 |
| March. | 4,620 | 254 | 1,330 | 2.44 | 2.81 | 1.58 |
| April. | +435 | - | - 198 | . 363 | . 40 | . 235 |
| May... | 5,000 | - | 618 | 1.13 | 1.30 | . 730 |
| June | 4,080 | 81 | 515 | . 943 | 1.05 | . 609 |
| July. | 488 | 62 | 164 | . 300 | . 35 | . 194 |
| August. | 564 | 28 | 81.9 | . 150 | .17 | . 097 |
| September | 2,000 | 27 | 215 | . 394 | . 44 | . 255 |
| The jear. | 5,640 | 12 | 446 | . 817 | 11.07 | . 528 |
| October | 380 | 24 | 50.5 | . 092 | . 11 | . 060 |
| November | 46 | 23 | 32.8 | . 060 | . 07 | . 039 |
| December. | 1,840 | 33 | 162 | . 297 | . 34 | . 192 |
| January. | 3,190 | 104 | 641 | 1.17 | 1.35 | . 756 |
| February. | 1,540 | - | 467 | . 855 | . 89 | . 553 |
| March... | 5,270 | 210 | 1,250 | 2.29 | 2.64 | 1.48 |
| April. | 4,140 | 192 | 745 | 1.36 | 1.52 | . 879 |
| May. | - | 84 | 210 | . 385 | . 44 | . 249 |
| June | 308 | 37 | 106 | . 194 | . 22 | . 125 |
| July. | 902 | 25 | 128 | . 234 | .27 | . 151 |
| August. | 2,090 | 39 | 306 | . 560 | . 65 | . 362 |
| Septembe | 4,680 | 57 | 472 | . 864 | . 96 |  |
| The jear | 5,270 | 23 | 381 | . 698 | 9.46 | . 451 |
| June 9-30...... | 1,340 | 130 |  |  |  |  |
| July..... | 1,752 | 132 | 150 | . 608 | . 32 | . 393 |
| August.. | 9,650 | 55 | 881 | 1.61 | 1.86 | 1.04 |
| September | 1,340 | 46 | 260 | 1.476 | 1.53 | 1.308 |
| October. |  |  |  |  |  |  |
| November. | 3,870 | 256 | 1,219 | 2.23 | 2.57 | 1.44 |
| December. | - 532 | 168 | 277 | 1.29 .507 | 1.44 .58 | . 834 |
| January.. | 2,260 | 214 | 531 | . 973 | 1.12 | . 629 |
| February. | 2,750 | 222 | 623 | 1.14 | 1.19 | . 737 |
| March. | 1,340 | 264 | 470 | . 861 | . 99 | . 556 |
| April. | 1,440 | 116 | 326 | . 597 | . 67 | . 386 |
| May. | 1,583 | 80 | 165 | . 302 | . 35 | . 195 |
| June July | 1,610 | 41 | 152 | . 278 | . 31 | . 180 |
| July... | 972 | 48 | 215 | . 394 | . 45 | . 255 |
| August... | 995 | 32 | 217 | . 397 | . 46 | . 257 |
| September | 64 | 11 | 41.8 | . 077 | . 09 | . 050 |
| The year | 8,090 | 11 | 411 | .753 | 10.22 | . 487 |
| October.... | 48 | 11 |  |  |  |  |
| November. | 356 | 12 | 81.7 | . 150 | . 177 | . 097 |
| December. | 3,290 | 127 | 649 | 1.19 | 1.37 | . 769 |
| January. | 8,730 | 140 | 751 | 1.38 | 1.59 | . 892 |
| February. | 7,370 | 332 | 1,539 | 2.82 | 2.94 | 1.82 |
| March. | 5,290 | 213 | 792 | 1.45 | 1.67 | . 937 |
| April. | 2,680 | 181 | 606 | 1.11 | 1.24 | . 717 |
| May.. | 532 | 52 | 163 | . 299 | .34 | . 193 |
| June. | 1,120 | 38 | 156 | . 286 | . 32 | . 185 |
| July. | 2,260 | 50 | 455 | . 833 | . 96 | . 638 |
| August. | 1,780 | 32 | 229 | . 419 | . 48 | . 271 |
| September.... | 380 | 14 | 60.5 | . 111 | .12 | .072 |
| The jear.. | 8,730 | 11 | 453 | . 830 | 11.27 | .536 |

Monthly diecharge of Occoquan Creek near Occoquan, Va.--Continued

| Month | Diecharge in second-feet |  |  |  | Runoff in Inches | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1n1mum | Mean | $\begin{gathered} \text { Per } \\ \text { square } \\ \text { mile } \end{gathered}$ |  |  |
|  | $\begin{array}{r} 313 \\ 3,840 \\ 1,360 \\ 2,530 \\ 4,170 \\ 5,190 \\ 8,090 \\ 3,050 \\ 579 \\ 1,260 \\ 252 \\ 599 \end{array}$ | 16 58 45 61 105 186 163 143 64 56 34 4 | 62.2 289 159 283 967 807 1,623 519 154 140 68.2 80.0 | $\begin{aligned} & 0.114 \\ & .529 \\ & .291 \\ & .518 \\ & 1.77 \\ & 1.48 \\ & 2.97 \\ & .951 \\ & .282 \\ & .256 \\ & .125 \\ & .147 \end{aligned}$ | 0.13 .59 .34 .60 1.91 1.71 3.31 1.10 .31 .30 .14 .16 | $\begin{gathered} 0.074 \\ .342 \\ .188 \\ .335 \\ 1.14 \\ .957 \\ 1.92 \\ .615 \\ .182 \\ .165 \\ .081 \\ .095 \end{gathered}$ |
| The jear. | 8,090 | 4 | 425 | . 778 | 10.60 | . 503 |
| October......... <br> November. <br> December. <br> January. <br> Pebruary. <br> March. <br> April. <br> May. <br> June <br> July. <br> August <br> September | 211 5,690 2,260 2,400 1,240 3,370 6,960 125 1,160 1,210 130 70 | 31 57 157 208 172 162 136 57 46 60 33 30 | $\begin{aligned} & 65.6 \\ & 748 \\ & 564 \\ & 664 \\ & 366 \\ & 592 \\ & 740 \\ & 78.6 \\ & 190 \\ & 250 \\ & 54.3 \\ & 43.3 \end{aligned}$ | .120 1.37 1.03 1.22 .670 1.08 1.36 .144 .348 .458 .099 .079 | $\begin{array}{r} .14 \\ 1.53 \\ 1.19 \\ 1.41 \\ .70 \\ 1.24 \\ 1.52 \\ .17 \\ .39 \\ .53 \\ .11 \\ .09 \\ \hline \end{array}$ | $\begin{aligned} & .078 \\ & .885 \\ & .666 \\ & .789 \\ & .433 \\ & .698 \\ & .879 \\ & .093 \\ & .225 \\ & .296 \\ & .064 \\ & .051 \\ & \hline \end{aligned}$ |
| The year. | 6,960 | 30 | 362 | . 663 | 9.02 | . 429 |
| October...... <br> November . . . . . <br> December. <br> Jenuary <br> February <br> March. <br> April. <br> May. <br> June <br> July. <br> Augus <br> September. . . . | $\begin{array}{r} 34 \\ 23 \\ 882 \\ 400 \\ 3,170 \\ 4,230 \\ 2,060 \\ 853 \\ 1,000 \\ 1,340 \\ 13,300 \\ 3,950 \end{array}$ | $\begin{aligned} & 23 \\ & 1.5 \\ & 1.0 \\ & 20 \\ & 97 \\ & 81 \\ & 74 \\ & 53 \\ & 40 \\ & 41 \\ & 51 \\ & 55 \end{aligned}$ | 27.9 <br> 3.66 <br> 80.8 <br> 98.4 <br> 413 <br> 910 <br> 308 <br> 134 <br> 148 <br> 174 <br> 7377 <br> 359 | .051 <br> .0067 <br> .148 <br> .180 <br> .756 <br> 1.67 <br> .564 <br> .245 <br> .271 <br> .319 <br> 2.52 <br> .658 | $\begin{aligned} & .06 \\ & .007 \\ & .17 \\ & .21 \\ & .79 \\ & 1.92 \\ & .63 \\ & .28 \\ & .30 \\ & .37 \\ & 2.90 \\ & .73 \end{aligned}$ | $\begin{gathered} .033 \\ .0043 \\ .096 \\ .116 \\ .489 \\ 1.08 \\ .365 \\ .158 \\ .175 \\ .206 \\ 1.63 \\ .425 \end{gathered}$ |
| The jear. | 13,300 | 1.0 | 337 | . 617 | 8.37 | . 399 |
|  | 27,700 | 87 | 2,960 | 5.42 | 6.25 | 3.50 |
| November. | 732 | 163 | 322 | . 590 | . 66 | . 381 |
| December. | 10,000 | 116 | 863 | 1.58 | 1.82 | 1.02 |
| January. | 1,800 | 259 | 470 | . 861 | . 99 | . 556 |
| February | 5,000 | 308 | 1,072 | 1.96 | 2.04 | 1.27 |
| March.. | 4,380 | 213 | 1,072 | 1.96 | 2.26 | 1.27 |
|  | 5,800 | 190 | 707 | 1.29 | 1.14 | . 834 |
| May...... | 2,080 352 | 186 60 | 485 147 | . 888 | 1.02 .30 | .574 .174 |
| July. | 72 | 34 | 48.5 | . 089 | . 10 | . 058 |
| August. | 35 | 22 | 31.0 | . .057 | . 07 | $.037$ |
| The year...... | 27,700 | 22 | 685 | 1.25 | 17.01 | . 808 |

Yearly discherge of Occoquan Creek neer Occoquen, Va.

| Year | Yeer ending Sept. 30 |  |  |  | Calendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Discharge in second-feet |  | Runoffininches | Discharge in million gallons per day per square mile | Discharge in second-feet. |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | D1scharge in million gallon's per dey per square mile |
|  | Mean | Per equare mile |  |  | Mean | Per square mile |  |  |
| 1914. | 396 | 0.725 | 9.88 | 0.469 | 368 | 0.674 | 9.15 | 0.436 |
| 1915. | 479 | . 877 | 11.91 | . 567 | 503 | . 921 | 12.52 | . 595 |
| 1921. | - |  | - |  | 417 | . 764 | 10.36 | . 494 |
| 1922. | 446 381 | . 81.7 | 11.07 9.46 | . 528 | 445 | . 815 | 11.05 | . 527 |
|  | 381 |  | 9.46 | . 451 |  |  | - |  |
| 1938. | 411 | . 753 | 10.22 | . 487 | 291 | . 533 | 7.24 | . 344 |
| 1939. | 453 | . 830 | 11.27 | . 536 | 431 | . 789 | 10.72 | . 510 |
| 1940. | 425 | . 778 | 10.60 | . 503 | 497 | . 910 | 12.40 | . 588 |
| 1941. | 362 | . 663 | 9.02 | . 429 | 257 | . 471 | 6.40 | . 304 |
| 1942. | 337 | . 617 | 8.37 | . 399 | 679 | 1.24 | 16.86 | . 801 |
| 1943.. | 685 | 1.25 | 17.01 | - 808 | - | - | - | - |
| Highest. | 685 | 1.25 | 17.01 | . 808 | 679 | 1.24 | 26.86 |  |
| Averege. | 438 | . 802 | 10.88 | .518 | 432 | -.791 | 10.74 | . 511 |
| Lowest... | 337 | . 617 | 8.37 | .399 | 257 | . 471 | 6.40 | . 304 |

MONONGAHELA RIVER BASIN
Youghlogheny River near Ookland, Md.
Location.- Wire-welght gege, let. $39^{\circ} 25^{\prime \prime} 19^{\prime \prime}$, long. $79^{\circ} 25^{\prime} 32^{\prime \prime}$, et Beltimore \& ohio Rallroad bridge, 50 feet downstream from Little Youghiogheny River end il miles northwest of Oakland, Garrett County. Datum of gage 1s $2,353.11$ feet above mean sea level, unadjusted.
Dreinege aree.- 134 square miles.
Records avallable.- August 1941 to September 1943.
Fxtremes.- Meximum discharge, 3,780 second-feet Dec. 29, 1942 (gege height, 7.59 feet); minlmum observed, 12 second-feet Sept. 24, 28, 1941. Flood of Merch 1936 reeched a stege of 15.3 feet, from floodmerks.

Monthly discharge of Youghiogheny River neer Oakland, Md.

| Month | Discherge in second-feet |  |  |  | Runoff in inches | D1scharge in million gellons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square m1le |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1941-42 |  |  |  |  |  |  |
| November. . . | 138 | 15 | 43.2 | . 322 | . 37 | . 208 |
| December. | 442 | 48 | 147 | 1.10 | 1.22 | . 711 |
| Jenuery. | 1,220 | 59 | 235 | 1.75 | 2.02 | 1.13 |
| February. | 000 | 80 | 206 | 1.54 | 1.77 | . 995 |
| March. | 2,040 | 100 | 351 | 2.62 | 2.73 | 1.69 |
| April. | 2,230 | 76 | 435 | 3.25 | 3.75 | 2.10 |
| May. | 1,710 | 76 | 85 | 2.84 | 3.16 | 1.84 |
| June. | 236 | 57 | 101 | 3.41 | 3.93 | 2.20 |
| July.. | 121 | 19 | 45.3 | . 338 | . 84 | . 487 |
| August. | 1,870 | 19 | 242 | 1.81 | 2.09 | 1.178 |
| Septembe | 488 | 54 | 145 | 1.08 | 1.21 | 1.17 |
| The yeer. | 2,230 | 15 | 232 | 1.73 | 23.48 | 1.12 |
|  |  |  |  |  |  |  |
| November. . . . . . . . . . . . | 1,400 | 72 | 279 | 2.08 | 2.40 | 1.34 |
| December | 3 840 | 143 | 346 | 2.58 | 2.88 | 1.67 |
| Jenuery. | 3,230 | 170 | 687 | 5.13 | 5.91 | 3.32 |
| Fobruery. | 1,590 | 160 | 525 | 3.92 | 4.51 | 2.53 |
| Merch... | 1,570 | 175 | 566 | 4.22 | 4.40 | 2.73 |
| April. | 1,910 | 138 | 448 | 3.34 | 3.85 | 2.16 |
| Mey | 585 | 76 | 201 | 1.50 | 4.32 | 2.50 |
| June. | 267 | 19 | 69.6 | 1.519 | -. 58 | . 369 |
| July. | 795 | 16 | 147 | 1.10 | 1.26 | . 711 |
| August | 1,040 | 55 | 208 | 1.55 | 1.79 |  |
| Soptember | 149 | 13 | 45.7 | . 341 | . 38 | $.220$ |
| The year. | 3,230 | 13 | 336 | 2.51 | 34.01 | 1.62 |

## Youghlogheny River at Friendeville, Md.

Location.- Water-stage recorder, lat. $39^{\circ} 3917^{\prime \prime \prime}$, lone. $79^{\circ}{ }^{\circ} 4^{\prime \prime} 2^{\prime 7 \pi}$, 0.6 mile upstream from highway bridge at Friendsville, Garrett County, and $1 \frac{1}{4}$ miles upstream from Bear Creek. Datum of gage is $1,487.59$ feet above mean sea level, unadjusted. August 1898 to December 1904 and October 1926 to September 1931 chain gages on highway bridge at Friendsville, datum planes of these gages 1,471.35 and 1,471.30 feet, respectively, above mean sea level, unadjusted
Drainage area.- 295 square milos, 298 square miles prior to September 1931.
Fecords avallable.- August 1898 to December 1904 (republished and revised in Report of Flood Conmission of Pittsburg, Pa., 1912), and December 1940 to Septerber 1943, in reports of Geological Survey. October 1926 to September 1931 in reports of Pennsylvania Department of Forests and Waters.
Extremes.- Maximum discharge observed, 10, 000 second-feet Mar. 1, 1902 (gage height 11.5 feet, site and datum then in use); minimum daily, 19 second-feet (regulated) Nov. 18, 1930.

Maximum stage known, 14.2 feet, from floodrarks, Mar. 29, 1924, former site and datum, or about 10 feet, present site and datum, deterined from relat;on curve (discharge not determined).
Remarks.- Low and medium flow regulated by Deep Creek reservoir (drainage area, 68.5 qquare miles) since Jan. 6, 1925. Records of change in contents of reservoir can be obtained from Pennsylvania Electric Co., Oakland, Ma.

| Month | Diacharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per equare mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Por square mile |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1898-99 |  |  |  |  |  |  |
| October.. | 4,250 | 95 | 609 | 2.04 | 2.35 | 1.32 |
| November. | 2,000 | 405 | 794 | 2.66 | 2.97 | 1.72 |
| December. | 3,950 | 405 | 1,146 | 3.85 | 4.44 | 2.49 |
| January. | 4,400 | 710 | 1,471 | 4.94 | 5.70 | 3.19 |
| February. | 4,250 | 545 | 1,489 | 5.00 | 5.21 | 3.23 |
| March.... | 4,720 | 1,180 | 2,028 | 6.81 | 7.85 | 4.40 |
| April. | 2,780 | 345 | 939 | 3.15 | 3.51 | 2.04 |
| May.. | 6,900 | 345 | 1,516 | 5.09 | 5.87 | 3.29 |
| June | 2,250 | 241 | 802 | 2.69 | 3.00 | 1.74 |
| July. | 795 | 158 | 275 | . 923 | 1.06 | . 597 |
| August... | 470 | 95 | 156 | . 523 | . 60 | . 338 |
| September. | 241 | 71 | 129 | . 433 | . 48 |  |
| The year................... | 6,900 | 71 | 945 | 3.17 | 43.04 | 2.05 |
| October...... | 124 | 71 | 85 | . 285 | . 33 | . 184 |
| November | 625 | 124 | 254 | . 852 | . 95 | . 551 |
| December. | 1,400 | 197 | 666 | 2.23 | 2.57 | 1.44 |
| January. | 2,000 | 625 | 1,104 | 3.70 | 4.27 | 2.39 |
| February | 2,640 | 470 | 1,183 | 3.97 | 4.13 | 2.57 |
| March. | 2,920 | 885 | 1,477 | 4.96 | 5.72 | 3.21 |
| April. | 1,400 | 345 | 720 | 2.42 | 2.70 | 1.56 |
| May.. | 545 | 241 | 354 | 1.19 | 1.37 | . 769 |
| June | 545 | 241 | 658 | 2.21 | 2.47 | 1.43 |
| July. | 1,080 | 95 | 282 | . 946 | 1.09 | .611 |
| August. | 405 95 | 95 51 | 172 69 | . 5777 | .67 .26 | .373 .150 |
| The year.................... | 2,920 | 51 | 582 | 1.95 | 26.53 | 1.26 |
| October......... | 197 | 71 | 110 | . 369 | . 43 | . 238 |
| November | 6,900 | 124 | 640 | 2.15 | 2.40 | 1.39 |
| December. | 3,650 | 197 | 1,033 | 3.47 | 4.00 | 2.24 |
| January. | 2,000 | 545 | 805 | 2.70 | 3.11 | 1.75 |
| Fobruary | 1,630 | 625 | 660 | 2.21 | 2.30 | 1.43 |
| March. . | 5,200 | 625 | 1,932 | 6.48 | 7.47 | 4.19 |
| April. | 5,040 | 885 | 2,198 | 7.38 | 8.23 | 4.77 |
| May.. | 3,350 | 345 | 1,197 | 4.02 | 4.64 | 2.60 |
| June. | 2,000 | 241 | 672 | 2.26 | 2.52 | 1.46 |
| July. | 795 | 95 | 187 | . 628 | - 72 | - 406 |
| August.... | 345 | 95 | 147 | .493 .383 | .57 .43 | . 319 |
| September. | 241 | 71 | 114 | . 383 | . 43 | . 248 |
| The year. | 6,900 | 71 | 808 | 2.71 | 36.82 | 1.75 |

Monthly discharge of Youghiogheny River at Friendsville, Md.--Continued

| Month | Diecharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Dl scharge In million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean |  |  |  |
| 1901-2 |  |  |  |  |  |  |
| October. | 95 | 22 | 76 | 0.255 | 0.29 | 0.165 |
| November | 290 | 71 | 135 | . 453 | . 51 | . 293 |
| December. | 6,540 | 241 | 1,756 | 5.89 | 6.79 | 3.81 |
| January. | 3,350 | 405 | 1,030 | 3.46 | 3.99 | 2.24 |
| February. | 3,500 | 625 | 925 | 3.10 | 3.23 | 2.00 |
| March. | 8,160 | 625 | 2,181 | 7.32 | 8.44 | 4.73 |
| April. | 4,720 | 405 | 1,846 | 6.19 | 6.91 | 4.00 |
| May. | 1,400 | 241 | 564 | 1.89 | 2.18 | 1.22 |
| June | 1,280 | 197 | 392 | 1.32 | 1.47 | . 853 |
| July. | 2,640 | 158 | 660 | 2.21 | 2.55 | 1.43 |
| August. | 545 | 71 | 189 | . 634 | . 73 | . 410 |
| September. | 95 | 51 | 69 | . 232 | . 26 | .150 |
| The year. |  |  | 820 | 2.75 | 37.35 | 1.78 |
|  |  |  |  |  |  |  |
| October... November. . | 885 1,880 | 124 | 291 | -. 977 | 1.13 | . 631 |
| December. | 5,360 | 710 | 2,238 | 7.51 | 8.66 | 4.85 |
| January | 4,880 | 405 | 1,417 | 4.76 | 5.49 | 3.08 |
| February | 6,030 | 710 | 2,296 | 7.70 | 8.02 | 4.98 |
| March. | 4,720 | 710 | 1,817 | 6.10 | 7.03 | 3.94 |
| April | 2,640 | 405 | 1,058 | 3.55 | 3.96 | 2.29 |
| Мау. | 1,080 | 158 | . 492 | 1.65 | 1.90 | 1.07 |
| June | 5,200 | 470 | 1,823 | 6.12 | 6.83 | 3.96 |
| July. | 1,880 | 158 | 804 | 2.70 | 3.11 | 1.75 |
| August. | 290 | 95 | 175 | . 587 | . 68 | . 379 |
| September | 158 | 35 | 83 | . 279 | . 31 | . 180 |
| The year |  |  | 1,068 | 3.58 | 48.67 | 2.31 |
| October. | 470 | 35 | 155 | . 520 | . 60 | . 336 |
| November. | 1,180 | 71 | 281 | . 943 | 1.05 | . 609 |
| December. | , 197 | 197 | 197 | . 661 | - .76 | . 427 |
| January. | 5,360 | 197 | 1,113 | 3.73 | 4.30 | 2.41 |
| February. | 3,990 | 290 | 1,571 | 5.27 | 5.68 | 3.41 |
| March. | 3,770 | 470 | 1,458 | 4.89 | 5.64 | 3.16 |
| April. | 1,260 | 405 | -664 | 2.23 | 2.49 | 1.44 |
| May. . | 2,400 | 241 | 838 | 2.81 | 3.24 | 1.82 |
| June | 545 | 197 | 361 | 1.21 | 1.35 | . 782 |
| July. | 345 | 95 | 192 | . 644 | . 74 | . 416 |
| August. | 124 | 35 | 62 | . 208 | . 24 | . 134 |
| September | 51 | 51 | 51 | . 171 | . 19 | . 111 |
| The year. |  |  | 576 | 1.93 | 26.28 | 1.25 |
| October........ | 71 | 51 | 67 |  |  |  |
| November | 71 | 51 | 56 | . 188 | . 21 | .122 |
| December | 4,450 | 71 | 775 | 2.60 | 3.00 | 1.68 |
| October.......... |  |  |  |  |  |  |
| Novermber. | -,786 | 87 | 484 |  |  |  |
| December. | 1,350 | 240 | 512 |  |  |  |
| January. | 4,420 | 120 | 814 |  |  |  |
| February | 1,920 | 214 | 898 |  |  |  |
| March... | 1,920 | 140 | 616 |  |  |  |
| April. | 1,570 | 140 | 500 |  |  |  |
| May.. | 2,170 | 140 | 664 |  |  |  |
| June. | 1,070 | 140 | 347 |  |  |  |
| July. | 174 | 48 | 79.4 |  |  |  |
| August. | 744 | 63 | 199 |  |  |  |
| September. | 110 | 20 | 62.9 |  |  |  |
| The jear.. | 4,420 | 20 | 464 |  |  |  |

Monthly discharge of Youghiogheny River at Friendsville, Md.--Continued


Monthly discharge of Youghiogheny River at Friendsville, Md.--Continued

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runoff } \\ & \text { in } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per squere mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Marimum | Minimum | Mean | Per squere mile |  |  |
| 1941-42 |  |  |  |  |  |  |
| October. | 493 | 144 | 349 |  |  |  |
| November. | 1,030 | 217 | 473 |  |  |  |
| December. | 1,310 | 140 | 425 |  |  |  |
| January.. | - 1,120 | 160 | 406 |  |  |  |
| February. | 1,930 | 210 | 706 |  |  |  |
| March. | 3,110 | 234 | 791 |  |  |  |
| April | 3,810 | 213 | 725 |  |  |  |
| May. | 2,260 | 196 | 813 |  |  |  |
| June. | 367 | 124 | 210 |  |  |  |
| July. | 212 | 45 | 96.9 |  |  |  |
| August. | 2,910 | 50 | 505 |  |  |  |
| September | 864 | 106 | 314 |  |  |  |
| The year. | 3,810 | 45 | 483 |  |  |  |
| October........... | 2,070 | 193 | 534 |  |  |  |
| November. | 1,460 | 288 | 657 |  |  |  |
| December. | 6,120 | 350 | 1,343 |  |  |  |
| January. | 3,000 | 550 | 1,220 |  |  |  |
| February. | 3,030 | 572 | 1,233 |  |  |  |
| March. | 3,000 | 520 | 1,058 |  |  |  |
| April. | 3,220 | 347 | 1,055 |  |  |  |
| May... | 796 | 186 | 397 |  |  |  |
| June | 546 | 57 | 186 |  |  |  |
| July. | 1,320 | 64 | 308 |  |  |  |
| August... | 1,480 | 184 | 415 |  |  |  |
| Soptember. | 460 | 72 | 232 |  |  |  |
| The year. | 6,120 | 57 | 718 |  |  |  |

Yearly discharge of Youghiogheny River at Friendsville, Md


Blg Pinoy Run near Salisbury, Pa.
Location. - Water-stage recorder, lat. $39^{\circ} 43^{\prime 3} 32^{\prime \prime}$, long. $79^{\circ} 02^{\prime \prime} 5^{\prime \prime \prime}$, an elghth of a mile upstream from Little Piney Run and $2 \frac{1}{2}$ miles southeast of Salisbury, Somerset County. Drainage area.- 24.5 square miles.
Records available.- June 1932 to September 1943.
Extremes.- Maximum discharge, 4,300 second-feet Apr. 26, 1937 (gage height, 7.6 feet), from rating curve extended above 320 second-foct on basis of slope-area determination of flood of Mar. 17, 1936 (gage height, 7.5 feet); minimum, 0.10 second-foot Sept. 11-13, 17, 18, 24, 25, 27-29, 1943 (gage helght, 0.98 foot).
Remarks. - Records do not include water diverted 3 miles above station (drainage area, I1. 8 square miles) by city of Frostburg, Md., and from spring 700 feet above station to city of Salisbury, Pa. Recoras of water diverted by city of Frostburg can be obtained from office of Chlef Engineer, Maryland State Department of Health, Baltimore, and that diverted by city of Salisbury, Pa., from water department of that city

Monthly discharge of Big Piney Run near Salishury, Pa.

| Month | Discharge in second-feet |  |  |  | $\begin{aligned} & \text { Runof } \mathrm{f} \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | Minimum | Mean | Per square mile |  |  |
| $\quad$1932 <br> June . . . . . . . . . . <br> July <br> August. . . . . . . . . . . ..September. . . . | $\begin{aligned} & 25 \\ & 23 \\ & 8.3 \\ & 1.4 \end{aligned}$ | $\begin{aligned} & 2.6 \\ & 1.0 \\ & .41 \\ & .25 \end{aligned}$ | $\begin{array}{r} 7.47 \\ 3.86 \\ 1.74 \\ .444 \end{array}$ |  |  |  |
| october. <br> November <br> December. <br> Jenuary. <br> February <br> Merch. <br> April. <br> May. <br> June <br> July. <br> August. <br> September | 126 244 89 100 88 736 376 330 20 33 55 39 | $\begin{aligned} & 13.35 \\ & 5 \\ & 21 \\ & 33 \\ & 22 \\ & 28 \\ & 23 \\ & 2.3 \\ & 1.1 \\ & .5 \\ & 2.4 \end{aligned}$ | 17.5 51.1 24.5 37.4 50.5 123 103 94.2 9.72 5.22 5.12 10.2 |  |  |  |
| The year.. | 736 | . 35 | 44.3 |  |  |  |
|  | 11 19 196 645 32 134 227 15 137 20 62 109 | $\begin{array}{r} .9 \\ 1.1 \\ 4.7 \\ 16 \\ 5.0 \\ 6.0 \\ 15 \\ 4.3 \\ 1.7 \\ .9 \\ .6 \\ .8 \end{array}$ | $\begin{gathered} 2.45 \\ 8.29 \\ 39.5 \\ 81.1 \\ 11.8 \\ 49.1 \\ 62.1 \\ 9.58 \\ 12.1 \\ 2.91 \\ 7.16 \\ 10.5 \end{gathered}$ |  |  |  |
| The year. | 645 | . 6 | 24.8 |  |  |  |
| October. <br> November. <br> December. <br> January. <br> February. <br> March. <br> April <br> May. <br> June . <br> July. <br> August. <br> September. | 45 82 102 319 219 143 224 243 56 19 164 145 | $\begin{gathered} 3.1 \\ 6.3 \\ 8.0 \\ 22 \\ 13 \\ 27 \\ 14 \\ 10 \\ 5.5 \\ 1.6 \\ 1.5 \\ 4.0 \end{gathered}$ | $\begin{gathered} 9.23 \\ 20.4 \\ 35.0 \\ 73.5 \\ 62.2 \\ 74.4 \\ 55.1 \\ 72.6 \\ 18.8 \\ 7.97 \\ 31.3 \\ 23.6 \\ \hline \end{gathered}$ |  |  |  |
| The year. | 319 | 1.5 | 40.3 |  |  |  |
| October <br> November. <br> December <br> January. <br> February. <br> March. <br> April. <br> May. <br> June. <br> July. <br> August. <br> September. . . . . | 12 46 120 132 550 2060 254 28 9.0 39 34 3.8 | $\begin{array}{r} 1.8 \\ 3.1 \\ 6.6 \\ 12 \\ 9 \\ 85 \\ 14 \\ 2.3 \\ .9 \\ .4 \\ .9 \\ .5 \\ \hline \end{array}$ | $\begin{gathered} 4.09 \\ 12.8 \\ 31.9 \\ 47.1 \\ 73.2 \\ 316 \\ 61.5 \\ 9.84 \\ 2.36 \\ 2.82 \\ 4.08 \\ 1.36 \end{gathered}$ |  |  |  |
|  | 2,060 | . 4 | 47.4 |  |  |  |

Monthly discharge of Big Piney Fun near Salisbury, Pa.--Continued

| Month | Discharge in second-feet |  |  |  | $\left\{\begin{array}{l} \text { Runoff } \\ \text { in } \\ \text { inches } \end{array}\right.$ | Discharge in million gallons per day per square mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum | M1nımum | Meen | Per square mile |  |  |
| 1836-37 |  |  |  |  |  |  |
| October... | 244 | 0.6 | 20.2 |  |  |  |
| November. | 164 | 5.3 | 25.2 |  |  |  |
| December. | 148 | 3.4 | 53.2 |  |  |  |
| January. | 629 | 52 | 168 |  |  |  |
| February. | 117 | 22 | 48.9 |  |  |  |
| March. | 268 | 22 | 61.0 |  |  |  |
| April. | 2,000 | 24 | 150 |  |  |  |
| Mey. | 88 | 14 | 33.5 |  |  |  |
| June. | 23 | 2.6 | 9.06 |  |  |  |
| July. | 13 | . 7 | 2.88 |  |  |  |
| August.... | 142 | . 6 | 14.0 |  |  |  |
| September. |  | 1.2 | 9.11 |  |  |  |
| The year..................... | 2,000 | . 6 | 49.6 |  |  |  |
| 1937-38 | 1,300 | 1.2 | 92.4 |  |  |  |
| November. | 1,77 | 13 | 28.8 |  |  |  |
| Decomber. | 211 | 9.5 | 42.0 |  |  |  |
| January. | 86 | 10 | 28.6 |  |  |  |
| February. | 126 | 20 | 45.8 |  |  |  |
| March. | 231 | 21 | 57.4 |  |  |  |
| April. | 64 | 14 | 35.8 |  |  |  |
| May. | 126 | 6.3 | 40.3 |  |  |  |
| June. | 18 | 2.5 | 8.72 |  |  |  |
| July. | 188 | 1.0 | 26.3 |  |  |  |
| August. | 16 | .3 | 3.79 |  |  |  |
| September | 5.1 | . 5 | 1.64 |  |  |  |
| The year | 1,300 | . 3 | 34.4 |  |  |  |
| October........... | 1.3 | . 22 | . 444 |  |  |  |
| November. | 5.2 | . 20 | 1.05 |  |  |  |
| December. | 32 | 2.8 | 10.5 |  |  |  |
| January. | 150 | 2.9 | 29.4 |  |  |  |
| February. | 322 | 38 | 116 |  |  |  |
| March. | 192 | 18 | 73.0 |  |  |  |
| April. | 298 | 29 | 74.8 |  |  |  |
| May.. | 62 | 3.8 | 19.8 |  |  |  |
| June. | 65 | 1.9 | 12.8 |  |  |  |
| July. | 55 | 3.4 | 12.4 |  |  |  |
| August. | 13 | . 69 | 3.20 |  |  |  |
| September. | 12 | .18 | 1.38 |  |  |  |
| The year. | 322 | .18 | 28.9 |  |  |  |
| October....... | 36 | . 40 | 3.78 |  |  |  |
| November. | 24 | 2.0 | 7.51 |  |  |  |
| December. | 24 | 2.8 | 11.0 |  |  |  |
| Jenuary. | 27 | 4.0 | 6.94 |  |  |  |
| February. | 48 | 3.5 | 19.1 |  |  |  |
| March. | 373 | 16 | 95.6 |  |  |  |
| April. | 363 | 27 | 116 |  |  |  |
| May. | 269 | 8.7 | 33.7 |  |  |  |
| June | 156 | 15 | 44.8 |  |  |  |
| July.. | 103 | 2.0 | 16.7 |  |  |  |
| August. | 709 | 1.4 | 60.5 |  |  |  |
| September. | 150 | 5.5 | 35.6 |  |  |  |
| The year | 709 | . 40 | 37.5 |  |  |  |
| October. . 1940-41 | 31 | 3.1 | 7.39 |  |  |  |
| November. . . | 145 | 18.5 | 35.2 |  |  |  |
| December. . | 110 | 25 | 55.0 |  |  |  |
| Jamuary. . . | 60 | 13.0 | 26.3 |  |  |  |
| February . . | 53 | 9.7 | 17.6 |  |  |  |
| March.. | 138 | 10.0 | 48.3 |  |  |  |
| April. | 510 | 8.5 | 65.9 |  |  |  |
| May. . . | 25 | 5.1 | 9.74 |  |  |  |
| June. | 536 | 7.3 | 62.5 |  |  |  |
| July. | 28 | 2.5 | 9.13 |  |  |  |
| August. | 35 | . 75 | 5.89 |  |  |  |
| September | 5.4 | .38 | 1.45 |  |  |  |
| The yeer...... | 536 | . 38 | 28.7 |  |  |  |

Monthly discharge of Big Piney Run neer Salisbury, Pe.--Continued


Yeerly discharge of Big Piney Run neer Salisbury, Pa.

| Year | Year ending Sept. 30 |  |  |  | Celendar year |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diecherge in second-feet |  | $\begin{aligned} & \text { Runoff } \\ & \text { In } \\ & \text { inches } \end{aligned}$ | Discharge in million gellons per day per square mile | Diecharge in second-feet |  | Runoff <br> in <br> inches | Discharge in million gellons per day per squere mile |
|  | Mean | Per equere mile |  |  | Mean | Per squere mile |  |  |
| 1933. | 44.3 |  |  |  | 40.7 |  |  |  |
| 1934. | 24.8 |  |  |  | 26.0 |  |  |  |
| 1935. | 40.3 |  |  |  | 39.0 |  |  |  |
| 1936. | 47.4 |  |  |  | 51.6 |  |  |  |
| 1937. | 49.6 |  |  |  | 55.1 |  |  |  |
| 1938. | 34.4 |  |  |  | 21.6 |  |  |  |
| 1939. | 28.9 |  |  |  | 29.8 |  |  |  |
| 1940. | 37.5 |  |  |  | 43.9 |  |  |  |
| 1941. | 28.7 |  |  |  | 22.6 |  |  |  |
| 1942.. | 36.6 |  |  |  | 58.2 |  |  |  |
| 1943. . . . . . | 53.6 |  |  |  | - |  |  |  |
| Highest. | 53.6 |  |  |  | 58.2 |  |  | - |
| Averege | 38.7 |  |  |  | 38.8 |  |  |  |
| Lowest. | 24.8 |  |  |  | 21.6 |  |  |  |

## MISCELIANEOUS DISCHARGF MEASUREMFNTS

In addition to the records of stream flow obtained at gaging atatione in Maryland and the Potomac River Basin and reported in the preceding pages, measuremente of flow were made at other points, as shown in the following table.

Miscellaneous diecharge measuremente in Maryland and Potomac River Basin during the period 1992-1943

| Dato | Stream | Tributary to or diverting from- | Locality | $\begin{aligned} & \text { Diecharge } \\ & \text { (sec.-ft.) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1933 \text { Nov. } 3 \\ & 1934 \text { Jan. } 18 \end{aligned}$ | East Branch Wicomico River $\qquad$ | WIcomico RIver.. | $\frac{1}{4}$ mile upstream from Pemnsylvania Railroad bridge at Salisbury, Md | $16.8$ |

E1k River Besin




Miscellaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943--Continued

| Dato |  |  | Stream | Pributary to or diverting from- | Locality | $\begin{aligned} & \text { Discharge } \\ & \text { (sec.-ft.) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1930 | Dec. | 15 | Western Run... | Gunpowder Falle | Downstream from Beaver Dam fun near Ashland, Md. | 40.7 |
| 1931 | Jan. | 28 | Beaver Dam Run | Wostern Run.... | At Cockeysville, Md.. | 10.1 |
|  | Mab. | 26 26 | .do | do | . .d | 10.3 |
|  | Apr. | 29 | do | do | . do | 9.1 |
|  | May | 28 | . . . do...... . . | .. . .do.... . . . . . |  | 9.17 |
| 1930 | Dec. | 15 | .do | ....do........... | Mouth neer Ashland, Md. | 10.17 |
| 1931 | Feb. | 17 | F1tzhugh Run. | Gunpowder Falis. | Near Basley, Md | . 34 |
|  | Mar. | 26 | . . . do. . . . . . | . . . .do. | . . . do | -64 |
|  | Apr. | 29 | do | do | . do | . 71 |
|  | May | 28 | , | Peterson Bun. | Near Towson, Md. | . .59 |
| 1931 | Jan. | 28 | Long Quartor Branch | Peterson Run.... | Near Towson, Md. | . 59 |
|  | Feb. | 26 | . . . .do. . . . . | do | ....do............... | . 52 |
|  | Mar. | 26 | do. | do | do | - 90 |
|  | Apr. | 29 <br> 28 | ....do......... | do |  | . 80 |
|  | Jan. | 28 | Dulaney Valiey | Gunpowder Falls. | Near Dulaney Valley, Md. | 1.00 |
| 1931 |  | 26 | Branch |  |  | . 89 |
|  | Mar. | 26 | .do. | do | . . . do | . 91 |
|  | Apr. | 29 | .do.... . . . | do | . . . do | 1.21 |
|  | May | 28 | do. | do |  |  |


|  | Deep Run. Stony Run $\qquad$ | Patapsco River.. <br> ....do.......... <br> . . . .do | Mouth near Elkrldge, Md. <br> Righway bridge 1 mile east of kikridge, Md.. . . . .do. . . . . . . ............ | $\begin{aligned} & 4.70 \\ & 8.22 \\ & 6.11 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |

South River Besin

| 1930 | Oct. | 28 | Bacon Ridge Branch | South Rivor. | Highway bridge $\frac{1}{2}$ m1le east of Chesterfield, Md. | 3.25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1941 | May | 27 | do | ....do..... | do. | 5.03 3.79 |
| 1939 | Sept. Nov. | - 15 | .do | . . . . .do. . . . . | $3 / 8$ mile north of defenee highway near Annapolis, Md. | 7.35 |
| 1940 | Sept. | 12 | da | do | ....do...................... | $\begin{aligned} & 6.70 \\ & 5.88 \end{aligned}$ |
| 1941 | May Sept. | 27 2 | do | .....do. | . . do | $\begin{aligned} & 5.88 \\ & 3.77 \end{aligned}$ |
| 1930 | oct. | 28 | North River... | . . . do | $\frac{1}{2}$ m1lo west of Chesterfleld, Md. | . 74 |
|  | Nov. | 24 | do. | ....co | 1.6 miles upstream from mouth and $7 \frac{1}{2}$ miles west of Annapalis, Md. | 2.02 |
|  |  | 24 | do | ....do. | . 8 mile upstream from mouth just below Defense Highway. | 3.81 |
|  |  | 24 | Unnamed tributary | North River. | From right bank of <br> North River 1.6 <br> miles upstream from <br> mouth of North RIver. | 1.52 |
|  |  | 24 | do | ....do. | From richt bank of North River 1.2 miles upstream from mouth of North River | . 12 |
|  |  | 24 | . do . . . . . . | do | From right bank of North River .9 mile upstream from mouth of North River | . 04 |
| 1941 | May | 27 | Rutland Branch | do | ```.7 mlle upstream from mouth near Annapolis, Md.``` | 1.14 |
|  | Sept. |  | . . . do. . . . . . | ....do | ....do. | 1.07 |
| 1939 | Nov. | 15 | .do | . . . .do. | $\frac{1}{2}$ mile upstream from mouth near Rutland, Md. | 1.77 |
| 1940 | Sept. | 12 | - do. | ....do. | . . do. | 1.59 |
| 1930 | Nov. | 24 | do........ | . . . -do | Mouth near Rutland, Md. | 1.20 |

Miscellaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943-Continued

|  | Dete |  | Stream | Tributary to or diverting from- | Locality | $\begin{aligned} & \text { Discharge } \\ & \text { (sec.-ft.) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1939 | Aug. | 15 | Patuxent River | Chesapeake Eay.. | 1 mile downstream from Hawlings River near Asht on, Md. | 18.8 |
|  |  | 15 | .....do.do......... | .....do. do.......... | .... . do do | 22.9 45.6 |
|  |  | 19 | ....do....... | . .do | .d | 310 |
|  |  | 19 | . . . do. . . . . . . | . . . do........ | .do | 227 |
|  | Sept. | 13 | . ...do....... . | ....do....... | . do | 24.6 |
|  |  | 19 | . . . do. . . . . . | . do | .do | 9.22 |
|  | Nov. | 29 | . . . do........ | . . do. . . . . . . | do | 36.9 |
| 1940 | Feb. | 1 | . . . .do. . . . . . . | ....do. | do | 41.0 |
|  | Mar. | 1 | . . . do. . . . . . | . . . do. | . . . . do | 88.2 |
|  |  | 22 | . ...do....... | . do | . do | 96.6 |
|  | Apr. | 26 | . do. . . . . . | . . . do. | . . . do | 161 |
|  | Msy | 25 | ....do........ | . . . .do. | do | 135 |
|  | June | 26 | . . . do. . . . . . | ....do. | . do | 36.6 |
|  | July | 18 | . ... do. | .do | . .do | 29.0 |
|  |  | 20 | . . . do. | . do | ....d | 24.4 |
|  | Aug. | 2 | ....do. | . do | . d | 15.6 |
|  | Sept. | 12 | . . . do. | do | . . . . do. | 20.6 |
|  |  | 16 | . . . do........ | . do | . . . do | 23.1 |
|  |  | 20 | . . .do. . . . . . . | . .do | . . . .do | 18.0 |
|  | Dec. | 11 | ...do....... | . do | . . . do | 71.3 |
|  |  | 11 | .do | . . . do | . .do | 68.3 |
| 1941 | June | 11 2 1 | .... ${ }^{\text {a do....... }}$ | ....do. | . do .do | 37.4 54.4 |
|  | July | 1 | . . . do. | do | do | 28.7 |
|  |  | 28 | . . do. | do | . do | 16.7 |
|  | Sopt. | 13 | do | . do | do | 10.5 |
|  |  | 15 | do | . | . . . .do | 12.3 |
|  | Oct. | 1 | do | . do | .do | 5.03 |
|  |  | 17 | . . . do........ | . . do | -d | 15.9 |
|  | Dec. | 9 | do | . . do | do | 14.6 |
| 1942 | May June | 12 | ... . ${ }^{\text {do }}$ | . do | do | 44.6 |
|  | July | 22 | ....do....... |  | .do | 26.2 13.2 |
|  | Sopt. | 25 | . . . . do. | . do | .do | 16.9 |
| 1896 | Sept. | 18 | . . . do. | . do | At Laurel, Md | 161 |
| 1897 | Nov. | 25 | . . . do. | .do.......... | - do | 123 |
|  | Feb. | 11 | . . . . do.do......... | . . . do........ : | ...do. . . . . . . . . . . . . | 184 |
|  | Mar. | 12 | . . . . do......... | -. . . . do. |  | 612 |
|  | May | 25 | . . . .do....... . | ... . do. | do | 734 |
|  | Juiy | 13 | ....do....... | . . . do. | d | 539 |
|  |  | 22 | . . . .do........ | . . do. | d | 6,140 |
|  | Sept. | 3 | . . . do........ | . . . do | do.... . . . . . . . . . . | 63 |
| 1898 | Jan. | 28 | . . do........ | . . . do. | .do.... . . . . . . . . . . . | 359 |
|  | May | 19 | . . . .do........ | . ... do.......... |  | 221 |

Potomac River Basin

| 1897 | Sept. |  | North Branch Potomac R1ver | Potomac River. | Noar formania, W. Va... | 54 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1905 | July | 17 | . . . -do.. . . . | d | .do | 38 |
| 1897 | Sept. | 25 | ....do..... | do | 200 yards upstream from Laurel Run near Schell, W. Va. | 136 |
| 1897 | Sept. |  | do | ....dc.......... | Above mouth of Savare River near Bloomington, Md. | 122 |
|  | Oct. | 27 | ....do...... | ....do | .do | 102 |
| $\begin{aligned} & 1942 \\ & 1897 \end{aligned}$ | May. | $\begin{aligned} & 23 \\ & 28 \end{aligned}$ | do | do | At Luke, Md............ | 3,800 |
| $1897$ | Oct. | $\begin{aligned} & 28 \\ & 28 \end{aligned}$ | .do | do | Near Twentyfirst, Md... Near Gerstell, Md..... | $\begin{aligned} & 126 \\ & 138 \end{aligned}$ |
| 1930 | Nov. | 19 |  | ....d | Near Cresaptown, Md.... |  |
| 1925 | Sept. | 3 | . . .do | . . . do.......... | $4 \frac{3}{2}$ miles upstream from Cumberland, Md. | $\begin{aligned} & 36.6 \\ & 55.6 \end{aligned}$ |
|  |  | 3 | . . . do........ | do | . ...do.......... | 56.8 |
| 1923 |  | 11. | . . . .do. . . . . . | . ...do.......... | . ...do. | 62.6 |
|  | Aug. | 25 | . . . do........ | . . . .do........... | Below dam at Cumberland Md. | 57.6 |
|  | Nov. | 6 | do | . . . do. . . . . . . . | . . .do................. | 157 |
|  |  | 12 | . . . .do......... | do | .do..... | 130 |
|  | Sept. | 12 | Potomac Rlver. |  |  | 54.6 |
| 1895 |  |  | Potomac R1ver. | Chesapeako Bay.. | At Great Cacapon, W.Va. above mouth of Cacapon Ryver | 331 |
|  | July | 18 | ....do........ | do | . . . .do.. | 543 |
|  | Aug. | 26 | . . . .do......... | do. | . do. | 132 |

Miscellaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943--Continued

|  | Date |  | Stream | Tributary to or diverting from- | Locality | $\begin{aligned} & \text { Discharge } \\ & \text { (sec.-ft?) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1897 \\ & 1922 \\ & 1925 \end{aligned}$ | Oct. | 11 |  |  | At Hancock, Md........... <br> At W1111amsport, Md..... <br>  <br> At Harpers Ferry, W. Va. above mouth of <br> Shenandoah River | 202 |
|  | Nov. | 15 |  |  |  | 310 |
|  | Sept. | 4 |  |  |  | 63.4 |
|  |  | 13 |  |  |  | 290 |
| 1894 | July | 2 |  |  |  | 1,220 |
| $\begin{aligned} & 1897 \\ & 1930 \end{aligned}$ | Oct. Nov. | 13 | . . . .do........ | . do | . . do................. | 377 |
|  |  | 6 | do | do | do | 329 |
|  |  | 4 | do | . . . do. . . . . . . . | At Brunswick, Md | 576 |
|  |  | 6 | do | . . . do | . . . do. . | 833 |
| 1942 | oct. | 17 | Boundaxy Charnel of Potomac River | . . . .do........... | Near Memorial 8ridge, Washingt on, D. C. | 6,780 |
| 1897 | Sept. | 24 | Buffalo Creok. | North 8ranch Potomac River. | At mouth near Bayard, W. Va. | 23 |
| 1905 | JuІy | 16 | Difficult Creek | ....do.......... | At mouth 4 miles downstream from Gormania W. Va. | 10 |
| 1931 | June | 18 | Stony River... | . . . do. | Solow Stony River Dam, <br> W. Va.(gate closed) | 2.8 |
|  |  | 18 | do | d | (4 inch eate opening) | 19.0 |
|  |  | 18 | do........ | . . . do........... | (8) inch gate opening) | 36.8 |
|  |  | 18 18 | . . . . .do. ${ }^{\text {do........ }}$. | ....do............ | $\left(\begin{array}{l}10 \\ \text { inch } \\ \text { inch gate opening } \\ \text { gate opening }\end{array}\right.$ | 46.8 57.0 |
| 1905 | July | 16 | do | do | BrIdge near Gormania, W. Va. | 78 |
| $\begin{aligned} & 1897 \\ & 1931 \end{aligned}$ | Sept. June | 25 | do | do | Mouth near Schell, W.Va. | 38 |
|  |  | 18 | Unnamed tributary | Stony River..... | Mouth just below stony River Dam | 2.2 |
| 1897 | Sept. |  | Abram Creak... | North 8ranch Potomac River | 100 yards above rallroad bridge near Harrison, W. Va. | 7.4 |
| 1924 | Nov. | 1 | Savage River.. | do | 600 feet upstream from Westernpart dam at Bond, Md. | 7.57 |
|  |  | 1 | do | do | 300 feet upstream from Westernport dam at sond, Md. | 5.36 |
|  |  | 1 | .do | .do........ . | 100 feet downstream from Westernport dam at sond, Md. | 6.20 |
|  |  | 1 | do | ... -do......... | . .do.... . . . . . . . . . . . . | 3.90 |
| 1897 | Oct. | 27 | do | do | $\frac{1}{8}$ mile upstream from mouth and upstream from Pledmont water supply intake. | 11 |
|  | Sept. |  | do. . . . . . . | ....do.......... | At mouth near $8100 \mathrm{ming}-$ ton, Md. | 7 |
|  |  | 28 | Georges Creek. | .do. | At Cumberland \& Perneylvania Railroad bridge at Westernport, Md. | 6 |
|  |  | $\begin{aligned} & 29 \\ & 28 \end{aligned}$ | New Creek..... <br> Wills Creek... | . do | Mouth near Keyser, W. Va. Above paper mill near | $12^{3.5}$ |
|  |  |  |  |  |  |  |
| 1898 | May | 12 | .do. | do | At pulp mill bridge, Cumberiand, Md. | 381 |
|  |  | 13 | do | do.......... | . . . .do.............. | 368 |
| 1923 | Aug. | 25 | . do | . . . .do. . . . . . . . . | At Cumberland, Md....... | 78 |
|  | Nov. | 6 | . . . do. . . . . . . | do | ....do.................. | 57 |
| $\begin{aligned} & 1925 \\ & 1905 \end{aligned}$ | Sept. | 11 | do | do.......... | do | 14.5 |
|  | July | 18 | Town Drain.... | Wills Creek.... | Mechanics street bridge, Cumberland, Md. | 18 |
| 1939 | Sept. 3 |  | Outfall sewer. | North Branch Potomac River | South Cumberland, Md.... | 13.0 |
| 1930 | Nov. | 18 | Chesapeake \& Ohio Canal.. | Potomac RIver... | At heading in Cumberland Md. | 18.0 |
| 1931 | Max. | 12 | ....do.. | do | . . . do | 18.8 |
|  | May | 14 | . . . do. . . . . . | do | do | 48.5 |
|  | Sept. | 19 | . . . . do.do......... . | . . .do. . . . . . . . . . | .do | 32.0 14.2 |
| 1932 | Feb. | 29 | . do. | . .do | .do | 14.5 |
|  | Apr. | 23 | . do | do | - do | 73.7 |
|  | July | 28 | . .. .do.... . . . | d | . . . do................... | 52.2 |
|  | Sept. | 17 | do | . . . do. . . . . . . . | . . . do. . . . . . . . . . . . . . . | 25.5 |
| $\begin{aligned} & 1933 \\ & 1923 \end{aligned}$ | June |  | . . . do. . . . . . | . . . do. . . . . . . | . . .do................... | 21.1 |
|  | Aug. | 25 | . . . do. . . . . . . | . . . do. . . . . . . . . | Opposite gaging station on North 8 ranch potomac River near Cumberland, Md. | 116 |
| 1929 | July | 19 | . . . do........ | ....do.......... | ....do................... | 46.7 |
|  | Sept. | 26 9 | .do. | .do............. | . . . do. . . . . . . . . . . . . . . . . . . . | 39.2 27.6 |

Miscellaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943--Continued

|  | Date |  | Stream | Tributary to or diverting from- | Locality | $\begin{aligned} & \text { Discharge } \\ & \text { (sec.-ft.) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1930 | Jan. | 10 | Chesapoake \& Ohio Canal | Potomac River... | Opposite gaging station on North Branch Potomac River near Cumberland, Md. | 21.0 |
|  | Mar. | 13 | . . . do.. | do |  | 32.7 |
|  | Apr. | 30 | do | .do.......... | ....d | 28.0 |
|  | May | 27 | do | . do | .do | 49.8 |
|  | July | 23 | do | do | .do | 32.7 |
|  | Nov. | 17 | . do. | . do | d | 28.6 |
| 1931 | Jan. | 15 | . do. | . . do. | do | 10.2 |
|  | Mar. | 12 | .do | -do | do | 23.1 |
|  | May | 14 | .do | d | d | 48.5 |
|  | July | 20 | do | . . . .do.......... | do. . . . . . . . . . . . . . . . | 21.2 |
|  | Sept. | 19 | do | . . .do... . . . . . . | do | 27.4 |
|  |  | 19 | do | do | .do | 25.8 |
|  |  | 25 | -do | do | . . . do | 27.4 |
|  | Dec. | 4 | do | do | d | 17.0 |
| 1932 | Feb. | 29 | .do | do | do | 14.5 |
|  | Oct. | 20 | do | do | Opposite gaging station on Potomac River at Hancock, Md. | 14.0 |
| 1933 | May | 13 | do | do | Hancock, Ma. | 10 |
|  | June | 5 | do | . . .do........... | - . . -do | 38.4 |
|  |  | 7 | . . . do |  | do | 10 |
| 1930 | Nov. | 6 | . da. | . do | At Harpers Ferry, W. Va. | 50.0 |
|  |  | 6 | do | d | At Brunswick, Md........ | 35.8 |
| 1905 | oct. | 30 | . do | do | Opposite gaging station on Potomac River at Point of Rocks, Md. | 78.8 |
|  | Nov. | 9 | . . . do. | do | - | 90.0 |
| 1926 | Oct. | 27 | . . do. | do | .d | 47 |
| 1930 | June | 6 | . . . do. | . do | . do | 83 |
|  | Nov. | $1{ }^{1}$ | do. | - . . do......... . . | . . .do................. | 50.5 |
| 1931 | Oct. | 23 | . do. | do | At Lock 7 at Glen Echo, Md. | 21.7 |
| 1933 | oct. | 4 | do | ....do.......... | . . . do | 20 |
|  | Nov. | 2 | . do. | - do | do | 15 |
| $\begin{aligned} & 1934 \\ & 1941 \end{aligned}$ | Sept. | 9 | . do. | do | do | 20 |
|  | Sept. | 22 | . do. | do | At Sycamore Island near Washington, D. C. | 64.2 |
|  |  | 23 | .do. | do | - | 45.7 |
|  | Oct. | 21 | . . . dio. | do | . . .do. . . . . . . . . | 157 |
|  | Dec. | 17 | . . do. | .do | Above Lock 5 near Washington, D. C. | 8.9 |
| 1942 | July | 24 | do | do | Warlngton, D. 0. | 146 |
|  | Sept. | 23 | do. | ....do........... | do | 169 |
| $\begin{aligned} & 1943 \\ & 1930 \end{aligned}$ | Feb. | 19 25 | . .do. | . ....do. ${ }^{\text {do.......... }}$ |  | $264^{.29}$ |
|  |  | 25 | .d |  | at chain Bridge, Washington, D. C. | 264 |
|  | June | 5 | .do. | . . do. | . . . .do. | 340 |
|  | July | $\begin{aligned} & 14 \\ & 22 \end{aligned}$ | . . .do. | . . . do | . do | 242 |
|  |  | $\begin{aligned} & 22 \\ & 22 \end{aligned}$ | - . . . do. | . do | .do | 306 |
|  |  | 29 29 | . . . .do. | . . do | d | 317 |
|  |  | 29 | . . . do. | . . . do. | do | 283 |
|  | Aug. | 15 | . do. | .do | - do | 277 |
| 1931. | July | 10 27 | .do.. | do. | .do | 374 |
|  | Aug. | 28 | .do... | . . . . . do. | .... do. | 372 351 |
|  | Nov. | 23 | . . . .do. | . . . .do. | -do | 303 |
| 1932 | Mar. | 30 | . .do. | . . . do. | . . . . do. | 339 |
|  | Apr. | 4 | - do | . . . do. | . . . do. | 301 |
|  | July | 19 | do | . . . do. | . . . do | 379 |
| 1933 | Apr. | 26 | do | . . . do. | . . . do. | 282 |
|  | Nov. | 2 | . . . . do..... . | . . . . do. | . . . . do. | 298 |
| 1934 | June | 15 | . do. | . . . . do. | . . . do. | 270 |
|  | Nov. | 20 |  | . do. | . . . . do. | 262 |
| 1935 | Sept. | 9 |  | . . do. | . . . . do. do. | 301 307 |
| 1936 | May | 1 | . . . do. | . . . do. | . do | 241 |
|  | Sept. | 24 | . . . do. | . . . do. | -do | 261 |
|  | Oct. | 13 | . do | . . . . do | . . . do | 338 |
| 1938 | Aug. | 11 | .do. | . . . . do. | . . . do................... | 288 |
|  | June | 27 11 | . do. | . do.... . . . . . | . . . do. . . . . . . . . . . . . . . | 278 |
| 1939 | Mar. | 20 | .do....... . | do. | .....do. | 325 356 |
|  | July | 10 | . do | .do |  | 380 |
|  | Aug. | 28 | do | do | do | 336 |
|  | Sept. | 30 | . do |  | do | 180 |
| 1940 | Feb. | 17 | . do | . do | do | 196 |
|  | June | 28 | do | . do | -do. | 284 |

Miecellaneoue discharge measuremente in Maryland and Potomac River Basin during the period 1892-1943--Continued

Potomac River Basin--Continued


Miscelleneous discharge meesurements in Maryland and Potomec River Basin during the pariod 1892-1943--Continued


Miscellaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943--Continued


Miscellaneous discharge measuremente in Maryland and Potomac River Baein during the period 1892-1943--Continued


Miscollaneous discherge measurements in Maryland end Potomac River Basin during the period 1892-1943--Continued

|  | Date | St ream | Tributery to or diverting from- | Locality | Diecharge (sec.-ft.) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1941 | Sept. | Buck Creek.... | South Fork Shenencooh River | . 8 mile east of Lyndhurst, Ve. | 0.78 |
|  |  | Unnamed tributary |  | 1 mile west of Waynesboro, Ve. | 2.54 |
|  |  | Spring Brench | South River..... | At mouth, .7 mlle west of Waynesboro, Ve. | 1.8 |
|  |  | Unnamed tributery | do | 1 mlle west of Waynesboro, Va. | 2.54 |
| 1928 | May 16 | Kainer Spring. | ....do.......... | Near Weynesboro, Va. | 3.7 |
|  | Aug. 13 | . . . do........ | ....do | do | 3.5 |
| 1941 | Sept. 15 | ....do. | d | do | 1.00 |
| 1928 | Mey 16 | Baker Spring. | . . . do | do | 10.8 |
|  | June 28 | ....do........ | . . . do........ . . | do... . . . . . . . . . . . . | 9.3 |
|  | July 31 | .do | . . ..do.......... | ...do..................... | 10.6 8.0 |
|  | Aug. 13 | do | ....do........... | d | 8.0 |
|  | June 28 | Loth Spring... | do. . . . . . . . | do | .78 |
| 1936 | Oct. 30 | $\begin{aligned} & \text { Beagles dap } \\ & \text { Fun } \end{aligned}$ | . . . do. . . . . . . . . | Ramsey Mountain, about 4 miles northeast of Waynesboro, va. | . 64 |
| 1897 | Oct. 3 | Elk Run....... | South Fork Shenandoah RIver | Near Elikton, Va......... | 5.5 |
|  |  | Hawksbill Creek | - | Near Luray, Va............ | 71 |
| 1930 | Apr. 18 | Hite ${ }^{\text {s }}$ Spring. | Hewksbill Creek. | 1责 miles eest of Lurey, Va. | 6.6 |
|  |  | Yager's Spring |  | 1 mile north of Luray, Va. | 12.1 |
|  |  | Harnsberger's Springs, Nos. $1 \& 2$ | .do.......... | South of Lurey, Va....... | 1.0 |
|  |  | Hernsberger's Spring No. 3 | . . . do. . . . . . . . | 10. | . 8 |
|  |  | $\begin{aligned} & \text { Price's Spring } \\ & \text { No. 1 } \end{aligned}$ | . . . .do. . . . . . . . | 2 miles southwest of Lurey, Ve. | 3.1 |
|  |  | $\begin{aligned} & \text { Price's Spring } \\ & \text { No. } 2 \end{aligned}$ | do | - . ${ }^{\text {do }}$ | 1.4 |
| 1941 | Oct. 1 | Mayors Rock end Stony Man Springs | Dry Run. | At Lurey Reservoir 2.6 milee southeest of Lurey, Va. | .19 |
|  |  | Hel ghts Springe | South Forl | 1.2 miles northeast of Lurey, Va. | 1.58 |
| 1897 | Oct. | Flint Run..... | South Fork Shenendcah River | Near mouth 5 miles upstream from Front Royal, Va. | 3.2 |
|  |  | Gooneys Creek. | . . . .do.......... | Near mouth 5 miles upstream from Front Royal, Va. | 2.3 |
| 1941 | Oct. | North Fork Shenandoah River | Shenandoah River | J. S. Highway 11, 0.4 mile upstreem from Smithe Creek | 20.6 |
| 1931 Oct. |  | ....do........ | . ...do.......... | Brocks Gap near Cootes Store, Va. | 7.3 |
| 2895 | Aug. | .do. | do | 2/3 mile upstream from confluence with South Pork, neer Riverton, Ve. | 362 |
| $\begin{aligned} & 1897 \\ & 1930 \end{aligned}$ | $\begin{array}{ll} \text { Oct. } & 4 \\ \text { Nov. } & 6 \end{array}$ | . . . do......... | . ...do.......... | . .do..................... | 140 |
|  |  | . . . do. . . . . . . | do.......... | Highway bridge et Rivert on Station of Southern Rellroad | 103 |
| 1931 | Mar. 3 | Ebbing and Flowing Spring | Unnared tributary of Linvilie Creak | 4휼 miles southwest of Broadway, Va. | 1.4 |
| 1941 |  | Dry Fork...... | North Fork Shenandoah River | H1ghwey 808, 0.4 mlle eest of Lacey Springe, Ve. | 7.45 |
|  |  | Smiths Creek.. | ...do.......... | U. S. Highway 211, 1.2 miles eest of New Market, Ve. | 11.5 |
|  |  | Inflow of Mount Jeckson Reoervolr | Smiths Creek.... | 2 miles southeast of Mount Jeckson and 1.3 miles upstream from mouth | . 01 |
|  |  | M111 Creek.... | .do | J. S. Highway 11 at mill at south edce of Mount Jackson and 0.1 mile upstream from mouth | 3.79 |
|  |  | Little Stony Creek | Stony Creek..... | 8 miles west of Woodstock and 1.8 miles upstream from mouth | . 63 |

Miscellaneous discharge measurements in Maryland and Potomac River Besin during the period 1892-1943--Continued


Miscollaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943--Continued

| Date |  |  | Stream | Tributary to or diverting from- | Locality | $\begin{aligned} & \text { Discrarge } \\ & (\mathrm{sec} \cdot-\mathrm{ft} .) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1931 \\ & 1932 \end{aligned}$ | Oct. | 6 | Agees 8ranch.. | Owens Creek | At mouth near Lantz, Md. | 0.13 |
|  | Aug. | 3 | do | ....do | ....do. | . 17 |
| 1933 | Sept. | 16 30 | . . . . .do.......... | . ....do............. | -do | 3.032 |
|  | June | 2 | . . .do....... | .... .do | .do | 1.33 |
| 1943 | Aug. | 4 | Carroll Creek. | Monocacy River.. | At weir operated by Camp Detrick, near Frederick, Md. | 3.26 |
|  |  | 4 | ....do......... | do | .do............... | 3.26 |
| 1897 | Oct. | 14 | d | do | At Zents mill race, Frederick, Md. | 5.6 |
|  |  | 14 | .do | ....do. | At Frederick, Ma........ | 6 |
|  |  | 14 | Broad Run ... | Potomac Rlver... | Near Edwards Ferry, Md.. |  |
| 1941 | Oct. | 17 | Goose Creek... | .do... . . . | 3.3 miles west of Middleburg and 0.3 mile upstream from Cromwell Run | . 21 |
| 1943 | Sept. |  | do | do | HIghway 626, 2 miles northwest of Middleburg, Va. | 3.18 |
| 1913 | July | 16 | . do. | . . . do........... | At former caging station near Leesburg, Va. | 40.5 |
| $\begin{aligned} & 1915 \\ & 1897 \end{aligned}$ | June | 18 | do | d | ....do. . . . . . . . . . . . . . | 363 |
|  | Oct. | 14 | do | do | $3 / 4$ mile upstream from mouth, near Fdwards Ferry, Md. | 19 |
| 1943 | Sept. | 29 | Little River.. | Goose Creek..... | Upstream from diversion dam, 1 mile west of | 1.21 |
|  |  | 28 | Proad Run.... | Potomac RIver... | H1ghway 7, $8 \frac{1}{2}$ m11es southeast of Leesburg, Va. | . 005 |
| 1897 | oct. | 15 | Seneca Creok.. | .do. | At Seneca mill race, Seneca, Md. | 25 |
| 1930 | June | 30 | . do. | do | Seneca, Md | 1.2 |
|  |  | 30 | Great Seneca Creek | Seneca Creek.... | Dews onville, Md......... | 1.6 |
|  |  | 30 | Little Seneca Creek | do. | .do. | . 08 |
| 1933 | Nov. | 2 | Dalecarlia <br> Power Plant <br> Tailrace | Potomac RIver... | Tailrace near Chain 8ridge, Washington, D. $C$. | 154 |
| 1934 | June | 15 | . . . do. | do | .do | 120 |
|  | Nov. | 20 | . do | . do | do | 171 |
| 1935 | May | 28 | .do | do |  | 159 |
|  | Sept. | 9 | . . . .do........ | .do | do | 157 |
| 1938 | Oct. | 11 | . . . do. | . . . do. | .do. | 161 |
| 1939 | Mar. | 20 | .do. | . . . do. | . do. | 250 |
|  | July | 10 | . . . do. . . . . . . | . . .do.... . . . . | . do. | 156 |
|  | Aug. | 28 | . . . do. . . . . . . | . . . do. . . . . . . | do. | 116 |
|  | Sept. | 30 | . . . do. . . . . . . | . . . do | . . . do | 149 |
| 1940 | Fob. | 17 28 | . . . . .do. . . . . . . . | . . . . do.do. | . . . . do do | 196 |
|  | Dune. | 18 | . . . . do | . . . . .do |  | 122 |
| 1941 | Apr. | 29 | do | do | d | 160 |
|  | Sept. | 22 23 | do | do | do | 156 |
| $\begin{aligned} & 1942 \\ & 1938 \end{aligned}$ | Apr. | 3 | . . . do. | do |  | 215 |
|  | Sept. | 18 | Rock Creek.... | . . . .do.......... | At East-West Highway near Wa shinct on, D. C. | 8.42 |
|  |  | 18 | . . . do. . . . . . . | do | Near Kalmia Street, Wa shington, D. C. | 9.86 |
| 1941 | Nov. | 13 | .do | do | ....do............ | 6.65 |
|  |  | 13 | do | -...-do........... | At Rock Bridre, Washington, D. C. | 7.21 |
| 1938 | Sept. |  | . . . do........ | do. | Below Plerce Mill, Wa shinet on, D. C. | 10.8 |
| 1939 | Aug. | 8 | .do. | do | ....do............. | 13.2 |
|  | Nov. | 13 | .do. | do | .do | 7.13 |
| 1938 | Sept. | 18 | . do | do | Below Piney Branch, Washington, D. C. | 11.4 |
| $\begin{aligned} & 1939 \\ & 1941 \\ & 1897 \end{aligned}$ | Aug. | 8 | . . . .do....... . | do. | . . do....... | 15.3 |
|  | Nov. | 13 | ....do. | . do | do | 7.36 |
|  | Aug. | 18 | . do | do | At Zoological Park, Washington, D. C. | 26 |
|  | Nov. | 21 | .do........ | .do. | . . . do. . . . . . . . . . | 37 |
| 1898 | Jan. | 28 | . . . do. . . . . . . | .do | . . . do | 89 |
|  | Mey | 18 | .do | do | do | 95 |
| 1900 | Apr. | 24 | . do | do | d | 77 |
| 1902 | Feb. | 27 | do | ....do........... | ....do.................. | 1,810 |

Miscellaneous discharge measurements in Maryland and Potomac River Basin during the period 1892-1943--Continued.

| Date |  |  | St ream | Tributary to or diverting from- | Locality | $\begin{aligned} & \text { Discharge } \\ & (\mathrm{sec}-\mathrm{ft} .) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1940 | May | 10 | Rock Creek.... | Potomac River... | 500 feet upstream from Connecticut Avenue bridge, Weshington, D. C. | 42.9 |
| 1908 | oct. | 3 | do | .do. | At Massachusetta Avenue bridge, Washingt on, D. C. | 28.7 |
|  | Nov. | 11 | do | . . . .do.......... | ....do. | 28.4 |
|  | Dec. | 10 | . . . do | do | do | 33.9 |
|  | Dec. | 12 | d | do | do | 154 |
| 1909 | Jan. | 24 | do | . do | . do | 178 |
|  |  | 24 | do | . ${ }^{\text {o }}$ | . . do | 165 |
|  | Feb. | 11 | . .do. . . . . | .do. . . . . . . | . . . do | 169 |
|  |  | 11 | . .do. . . . | . .do.... . . . . . | . . . do. | 129 |
|  |  | 15 | do | do | . . . do | 77.6 |
|  | Apr. | 13 | . do | do | . . . do | 66.1 |
|  |  | 13 | do | . . . .do.... . . . . . | . do | 61.7 |
|  | May | 17 | . | . . . do. . . . . . . . | do | 45.7 |
|  | Nov. | 29 | . . . do | . . . do... . . . . . . | . ..do.......... | 17.5 |
| 1938 | Sept. | 18 | do | do | Bridle path bridge upatream from Q Street, We shingt on, D. C. | 12.9 |
| 1939 | Аนร. <br> Nov. <br> Nov. |  | do | do | . . . do. ................. | 14.6 |
|  |  | 13 | do . | ..do........... | . .do | 9.21 |
| 1938 |  | 2 | Indian Creek.. | Northeast Branch Anacostia River | Near Berwyn, Md......... | 6.52 |
| 1939 | Dec. Jan. | 15 18 | .do. | . . . . do.do.............. | .do | 8.19 9.75 |
|  |  | 30 | .do | .do.......... | do | 574 |
|  | Feb . | 2 | .do | . do | do | $41.1$ |
|  |  | 3 | . . . do | . ...do.......... | . . . do. | $559$ |
|  |  |  | do | . ...do.......... | - . . do. . . . . . . . . . . . . . . | 366 |
|  |  | 6 27 | ....do.do.......... | . do | .do | 1038 |
|  | Apr. | 4 | ....do | do | . . .do. . . . . . . . . . . . . . | 30.4 |
|  | May | 2 | . do. | do | . . . do. | 30.4 |
|  |  | 13 | - do | do | do | 6.46 |
|  | July | 11 | .do........ | . . . do.......... | . . . .do | 7.32 |
|  | Feb. | 3 | Paint Branch.. | . do | Highway bridge at College Park, Md. | 1,040 |
|  |  | 3 | .do | do | . . . do. . . . . . . . . . | 583 |
|  |  | 3 | .do | .do | do | 319 |
|  |  | 4 | . do | .do. . . . . . . . | co | 228 |
|  |  | 4 | . ...do. | .do... . . . . . . | . do. | 102 |
| 1940 | June | 19 | Northwest Branch Anacostia River | Anacostia River. | . 5 mile south of NoIwood, Md. Cone pump in operation at M1nk Hollow) | 7.93 |
|  |  | 20 | ....do........ | do. | (two pumps in operation)........... | 14.1 |
|  |  | 21 | .do. . . . . . | . . . do. . . . . . . . | (no pumps)........... | 2.28 |
| 1930 | Aug . | 5 | . . . do. . . . . . |  | $\frac{1}{2} m_{110}$ upstream from dam at Burnt Mills, Md. | 1.0 |
| 1938 | Sept. | 19 | Washingt on Suburben Sanitary Commission Pumping Station discharge | Northwest Branch Anacostia R1ver | Diversion from Patuxent River Basin by Mink Hollow Pumping Station near Ashton, Md. | 11.7 |
|  |  | 19 | ....do........ | do | . do | 14.6 |
|  |  | 19 | - . . do........ | do.......... | d | 7.07 |
|  |  | 19 | . ...do. . . . . . | ....do......... | ....do............... | 6.25 |
| 1939 | Feb. | 28 | Fourmile Run.. | Potomac River... | old Glebe Road bridge near Alexandria, Va. | 357 |
|  |  | 28 | . do........ | . do. . . . . . . . . | . . . .do............... | 169 |
|  |  | 28 | . . . do | . . .do | . do | 93.2 |
|  | $\begin{aligned} & \text { Mar. } \\ & \text { Feb. } \end{aligned}$ | 7 | . . . do. . . . . . | . . . do | . . . do | 47.4 |
|  |  | 28 | . . . .do. . . . . . | . . . do. | South Arlingt on Ridge Road near Alexandria, Va. | 386 |
|  |  | 28 | . . . do. . . . . . | .do. | . . . do. | 220 |
|  |  | 28 | do | do | . . . do. . . . . . . . . . . . . . . | 135 |
|  | Mar.Feb. | 1 | ....do. | . ...do | . . . do | 58.9 |
|  |  | 28 | Long Branch... | Fourmile Run... | Mouth at South Glebe Road bridge near Alexandria, Va. | 60.7 |
|  |  | 28 | .do. | . do. |  | 20.5 |
|  |  | 28 | .do. |  |  | 22.3 |
|  | Mar. | 1 | do | do | d | 5.53 |

Miscellancous diecharge measuraments in Maryland and Potomac Rivar Basin during the period 1892-1943--Continued

Potomac Rivar Basin--Continued


Monongahela River Basin

| 1935 | May | 22 | Youghiogheny Rivar | $\begin{aligned} & \text { Monongahala } \\ & \text { R1var } \end{aligned}$ | At Sang Run, Md........ | 786 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 22 | . . . do...... | - | ....d | 1,140 |
|  | July | 27 | do | do | ....do... ................. | 154 |
|  | Sept. | 9 | do | . ...do.......... |  | 692 |
| 1931 | Det. | 27 | .do........ | - do | At Friendsville, Md | 330 |
| 1932 | May | 21 | do | do |  | 675 |
| 1942 | Juna | 29 | Pennsylvania Electric Co. Tailraca | Deep Creek...... | At Pannsylvania Flactric Co. on Deep Creek, 7 miles north of Oakland, Md. | 272 |
| 1932 | Mar. | 2 | Big Piney Run. | Cassalman River. | Upstream from city of Frostburg pumping plant, 5 miles northweet of Frostburg, MC. | 1.5 |
|  | Sapt. | 5 | do | . do. | . ...do.............. | . 2 |
| 1936 | Mar. | 17 | . . . do........ | .do.......... | At water supply dam for city of Frostburg, Md. | 2,120 |
| 1937 | Sept. | 24 | Salisbury Spring | Big Piney Rur... | $2 \frac{1}{1}$ miles southeast of Salisbury, Pa., and 700 faet upstraam from gaging station on B1g Piney Run | . 094 |
| 1938 | May | 13 | do | do | . ...do. | . 166 |
| 1939 | Dec. | 13 | do | do | -do | . 138 |
|  | July | 12 | . ...do....... | . . . do... . . . . . . | do | -113 |
| 1940 | Aug. | 8 | . ...do. . . . . . | . . . .do. . . . . . . . . | do | -109 |
| 1941 | Mar. | 22 | .do | do | . . . do. . . . . . . . . . . . . . . | . 106 |
|  | May | 31 | . do | do | . . . do................... | . 079 |
|  | Aug. | 1 | . . . do | do | d | . 073 |
| 1943 | Apr. | 9 | . do | do | do | . 086 |
|  | July | 10 | . . . .do. . . . . . . | . . . .do.......... | . . . .do. . . . . . . . . . . . . . . | . 079 |

List of all gaging stations with location key............................................. 291


## WICOMICO RIVER BASIN

. Ea'st Branch Wicomico River near Salisbury, Md ..... F-12
RLK RIVER BASIN
2. Big Flk Creek at Fik Mills, Md. ..... B-11
SUSQUEHANNA RIVER BASIN
3. Broad Creek at Mill Green, Md. ..... B-10
Octoraro Creek noar Rising Sun, Md. ..... B-10
octoraro Creek at Rowlandsvillé, Md ..... B-10

- Deer Creek above Kellogg Branch, at Rocks, Md. ..... B-9
- Deer Creek at Rocks, Md
B-10

8. Deer Creek near Churchville, Md.
GUNPOWDER RIVER BASI
9. L1ttle Gunnowder Falls at Laurol Brook, Ma$B-9$
$B-9$
$B-9$
10. Little Gunpowder Falls near Belair. Md.
Little Gunpowder Falls near Bel
Gunpowder Falls at Glencoe, Md. ..... B-8
PATAPSCO RIVER BASIN
North Branch Patapsco R1ver near Reistorstown, Md... ..... B-8
Morth Branch Patapgco piver near Marriottaville, Md. ..... $-8$
Patapsco River at Woodstock, Mo. ..... C-8
SOUTH RIVER BASIN
North River near Annapolis, Ma ..... D-9
Bacon RIdge Branch at Chesterfield, Md. ..... D-9
PATUXEIST RIVER BASIN
11. Patuxent River near Burtonsville, Md$C-8$
$C-8$
12. Little Patuxent River at Guilford, Md. ..... C-8
13. Little patuxent River at Savage, Md. ..... C-8
POTOMAC RIVER BASIN
14. North Branch Potomac River at Bloomington, Md ..... B-2
North Branch Potomac R1ver at Pledmont, W. Va North Branch Potomac River at Pinto. Md

North Branch Potomac River at Cumberland, Ma.

North Branch Potomac River near Cumberland, Md.

    Potomac RIver at Paw Paw, W. Va.
    
    Pciomac River at Hancock, Md.
    
    Potomac RIver at Shepherdstow, W. Va
    
    Potomac River at Point of Rocks, Md.
    
    Potomac River near Washington, D. C
    
    Savage River at Bloomington, Md.
    
    Georges Creek at Franklin, Md..
    
    Georges Creek at Westermport,
    New Creek near Keyser, W. Va.

    Wills Creek near Cumberland, Md.
    
    Chesapeake is Ohlo Canal at Cumberland, Md.
    
    Evitts Creek near Bedford Valley, Pa
    
    Evitta Creak near Cumberland, Md.
    
    Patterson Creek near Headsville, W. Va.
    
    Patterson Creek at Alaska, W. Va
    
    South Branch Potomac River near Pranklin, W. Va.
    
    South Branch Potomac R1ver near Petersburg, W. Va.
    
    South Branch Potomac River near Springfield, W. Va.......
    
    South Fork of South Branch Potomac River near Moorefield, W. Va
    
    Town Creek near Oldtown, Md
    
    Cacapon Rlver at Yellow Sprine, W. Va
    
    Cacapon River at Capon Bridee, W. Va.
    
    Cacapon River near Great Cacapon. W. Va.
    
    Licking Creek noar Sylvan, Pa
    
    - Back Creek near Jones Sprines, W. Va.
    
    2. Back Creek near Hedresville, W. Va.
    53. Conococheague Creak at Fairview, Md..
54. Opequon Creek near Martingburg, W. Va
55. Antietam Creek near Sharpsburg. Md.
56. Chesapeake \& Oh1o Canal at Point of Rocks, Md.
57. North RIver near Burketown, Va.
58. North River at Port Republic, Va
59. South Fork Shenandoah River near Lymwood, Va.
60. South Fork Shenandoah River near Luray, Va......

. Shenandoah River at Millville, W. Va

## POMOMAC RIVER BASIN--Continued

63. Cooke Creek at Mount Crawford, Va ..... F-3
64. Middle River near Grottoes, Va. ..... F-3
65. Lewie Creek near Staunt on, Va ..... 6-2
66. South River at Pasic City, Va. ..... $0-3$
$0-3$
6B. South River at Harrieton, Va.. ..... G-3
67. South River at Port Republic, Va ..... F-3
68. Elk Run at Fikton, Va ..... $\mathrm{F}-3$
69. Hawksbill Creek near Luray, Va. ..... E-4
Hawksbill Creek near Luray, Va...................... ..... E-3
70. North Fork Shenandoah River near Strasburg, Va. ..... D-4
71. North Fork Shenandoah River near Rivert on, Va. ..... D-5
72. Cedar Creek near WInchester, Va ..... D-5
73. Paseage Creok at Buckton, Va ..... D-5
74. Catoctin Creek near Jefferson, Md. ..... C-6
7B. Monocacy River at Bridgeport, Md. ..... A-7
75. Monocacy River near Frederick, Md ..... $\mathrm{B}-7$
$\mathrm{~B}-7$
B0. Monocacy R1ver at Jug Bridge near Frederick, Md.
B0. Monocacy R1ver at Jug Bridge near Frederick, Md. ..... $B-7$
$\mathrm{~A}-7$
B2. Linganore Creek near Frederick, Md. ..... B-7
76. Goose Creek near Leesburg, Va.
$\mathrm{D}-6$
$\mathrm{C}-7$
B4. Oreat Seneca Crook noar Gaithorsburg, Md.
77. Seneca Creek at Dawsonville, Md ..... C-7
78. Difficult Run near Great Falls, Va ..... D-7
B7. Rock Creek at Sherrili Drive, Washington, D. C. ..... D-B
BR. Rock Creek at Q Streot (Lyone M111), Wash1ngton, D. C. ..... D-B
79. Northeast Branch Anacostia River at Riverdale, Md ..... D-B
80. Northeast Branch Anacostia River at Ryattsvilie, Md. ..... $D-B$
$D-8$
81. Northwest Branch Anacostia River near Colesvilie, Md ..... D-8
82. Northwest Branch Anacostia River at Bladensburg, Md. ..... D-8
83. Beaverdam Branch Anacostia RIver at Kenilworth Ave., Waohington, D. C....... ..... D-8
84. Occoquan Creek near Occoquan, Va ..... $\mathrm{F}-7$
MONONGAHRLA RIVER BASIN
85. Youghiogheny River near Oakland, Md.
B-I
B-I
86. Youghiogheny River at Friendsville, Md ..... B-1
9B. B1g Piney Rus near Salisbury, Pa. ..... A-2
OAOINO STATIONS ESTABLISHED SINCE SEPT. 30, 1943
87. Bynum Run at Belair, Md. ..... $\mathrm{B}=10$
88. Cattail Creok at Roxbury Mille, Md ..... $\mathrm{C}-\mathrm{B}$
89. Little Falle at Blue Mount, Md. ..... B-9
90. Little Falle Branch near Bethoeda, Md ..... D-B
91. Patapeco River at Hollofield, Md. ..... C-B
92. Patuxent River at Laurel, Md. ..... C-8
93. Patuxent River near Jnity, Md. ..... C-8
94. Sawmill Creok at Olenburnie, Md ..... $\mathrm{C}-9$
$\mathrm{E}-2$
10B. Weetern Run at Weotern Run, Md. ..... B-9
95. Opequon Creek near Berryville, Va ..... C-5


## Abrams Creek, Va., discharge

 measurements of.Abrams Creok, W Va., discharge measurements of...........
Accotink Creek, Va., discharge measurements of ......... Acees Branch, Ma., di
Alaska, W. Va., Patterson Creek at. Anacostia River, Boaverdam Branch, Kenilworth Ave., Washington, D. C..

Northeast Branch, at Ryattsville, Md.

Northeast Branch, at Riverdalo, Md
Northwest Sranch, at Bladensburg, Md................. 264
Northwest Branch, near Colesville, md.....
Northwest Franch, near Hyattsville, Md..
.257-262 Hyattsville, Md..................262-263 discharge measurements of 2BB Arnapolis, md., North River near.... 53-55 Antictam Creck near Sharpsburg, Md...158-164 ischarge measurements of.......... 283
Appondix
290-292
Aquia Creok, Va., discharge measurements of 2B9

Fack Creek near Hedgesville, W. Va...153-154 near Jones Springs, W. Va.........152-153 in Va., discharge measurements of 282 Bacon Ridige Branch at Chesterfield, Md.

56
discharge measurements of.
Baker Sprine, Va., discharge measurements of.

285
Basic City, Va., South River at..... 198
Beylor Spring, Va., discharge measurements of..........
Peagles Gap Run, Va., discharge measurements of.. 2B4

Beaverdam Rranch Anecostia River at Kenilworth Ave., Washington,

Beaverdam Run, Md., discharge mesasurements of .......
Beavers Run, Pa., di scharge measurements of.............. near.....................................118-121
Belair, Md•, L1ttle Gunpowder Fslls near..

36-37
Pibliography.
3-14
1.1. Elk Creek at Elk M11ls, Md...... 18-20
disclarge measurements of..
276
Plo Piney Run, Md., discharge measurements of..

289
near Salisbury, Pa......................272-275
Big Spring Run, Md., discharge measurements of................. 282
Eladensburc, Md., Northwest Branch Anacostia RIver at

264
Bloomington, Md., North Branch Potomac RIver at.

68-72
Savare River at........................104-10B
Boundary Channel of Potomac River, D. C., discharge measurements of ............................... 279
Bridgeport, Md., Monocacy River at..221-222 Broad Creok at M111 Green, Md....... 20-22 Froad Run, Ma., discharge measurements of
in $V$., discharge measurdments creek, Va., discharge measurements of.
.287,2B9
Buck Creek, Va., discharge moasurement passare ............ 285
Buckton, Va., passage Creek at.......217-220 Buffalo Branch, Va., discharge measurements of

2B4
Buffalo Creek, W. Va., discharge measurements of

279
Bull Run, Va., discharge measurements of.
Bullskin Run, W. Va., dischargo measurements of289

286
Pagemeasurements or.....................atoctin Creek near 286Codar charge measurements of-2 21
Codar Creek, Va., discharge measurements of. ..... 286
near winchester, $V a$. ..... 215-217
Cedar Run, Va., discharge measurements of.... ..... 289
Chesapeake \& Ohio Caral atCumberland, Md.117-118
dscharge measurements orfeeder, W. Va., discharge281
spillway, Md., discharge ..... 281
at PoInt of Rocks, Md ..... 64-165
Chesterfleld, Md., Becon R1dge56
Branch at....................... Christians Creek, Va., discharee ..... 284
Churchville, Md., Deer Creek at ..... 30-32
Colesv1l1e, Md., Northwest Branch257-262
Conococheraue Creek at Falrview,Md..154-158
Cischarge measurements of . ..... 282
Cooks Creak at Mount Crawford, Va ..... 189
Cootes Store, Md., North ForkShenandoah RIver at............ 205-209Crooked Run, Va., dischargemeasurements of286
Crystal Run, Va., discharge meosurements of. ..... 286
Cumberland, Md., Chesapeake \& Ohio Canal at. .117-118
Evitts Creek, near. ..... $.121-122$
North Branch Potomac River at.... 76-77North Branch Potomac River near.. 7B-81wills Creek near113-117
Dalecarlia power plant Tallrace,D. C., discharge measurements$2 B^{\prime 7}$
Dawsonville, Md., Seneca Creek at....245-248Deep Run, Md., discharge measure-merts of .......................... 277
Deer Croel near Churchyille MC..... ..... 30-32
above Kellogg Branch, at Rocks, ..... 25
at Rocks, Md. ..... 276
Difficult Creek, W. Va., discharge ..... 279
Difficult Run near Great Falls, Va..248-250Dryfrork, Va., discharge measure-ments of........................285
Dry River, Va., discharge measure- ments of ..... $2 B 4$
Dulaney Valley Branch, Md. discharge measurcments of ..... 277
East Branch Wicomico River near ..... 15-17Salisbury, Md........................
discharce measurements of. ..... 276
Ebbing and Flowing Spring, $V a$. ..... 285
Elk M111s, Md., Bis Elk Creek at ..... 18-20
Elkton, Va., Elk Run at ..... 204
Elk River Basin, gaging-station records in.................. ..... 18-20
discharge measurements in ..... 276
204
discharge measuroments of ..... 285
Evitts Creek near Bedford Valley, Pa ..... 118-121


Page
Monocacy River at Bridgeport, Md.....221-222 near Freder1ck, Md...................222-230 at Jug Bridge near Frederick, Md..230-233 discharge measurements of

286
Monongahela RIver Basin, discharge
measurements in..
289
gaging-station records in.........268-275
Moorefield, W. Va., South Fork of
South Branch Potomac River

$.136-139$
Mossy Creok, Va., discharge measurements of

283
Mount Crawford, Va.,Cooks Creek at.. 189
Mount Jackson Reservoir, Va.,
Inflow of, discharge measurements of .......................

285
Naked Creek, Va., discharge measurements of.
New Creek near Keyser, W. Va.........112-113 discharge measurements of..

279
North Branch Patapsco Rlver near
Marrlottsville, Md............. 43-46
near Roisterstown, Md............. 39-43
North Branch Potomac River at
Bloomington, Md..
68-72
at. Cumberland, Md.................. 76-77

at Pledmont, W. Va.
72-74
at Pinto, Md. $75-76$
In W. Va., discharee measurements


278
Northeast Branch Anacostia River at
Hyattsville, Md...
257

Northwest liranch Anacostia River at Bladensbure, Ma...

264
near Colegville, Md......................257-262
near IVyattsville, Md.................262-263
discharge messurements of.........
North Fork Shenandoah River at
Cootes Store, Va................205-209
discharge measurements of......... 285
near Fiverton, Va...................214-215 near Strasburé, Va...
$.209-213$
North Fork of South Branch Potomac
River at Cabins, W. Va........125-136
discharge mensurements of........ 281
North River near Annapolis, Ma...... 53-55

at Port Republic, Va............... 170
discharge measurements of...
unnamed tributary, discharge
messurements of ...................277,283
in Va., dischsrge measurements of 283
in W.Va., discharge measuremente of
283
Oaklsnd, Md. Youghiogheny Fiver near 268 Occoquan Creek near Occoquan, Va....265-268 Octoraro Creek near Rieing Sun, Ma.. 22-25
at Rowlandsvきlle, Md............... 25-26
Oldt own, Md., Town Creek near........139-141
opequon Creek near Martinsbure,W.Va. 158
in Va., discharge reasurements of.
282
Outiall sewer, discharge measure-
ments of

279
Owens Creek at Lantz, Md............233-236
discharge measurements of.
286
Paint Branch, Md., discharge
measurements of
288
Parker Creek, Va., discharge measurements of

286
Passage Creek at ivckton, Va........217-220
discharge measurements of. 286
Patapsco River Rasin, discharge messurements in...

277
caging-station records in
$39-52$
Patapsco River, North Eranch, near Marriottsville, Md.

43-46
near Relsterstown, Md.............. 39-43
at Woodstock, Md..
$37-49$
47
Patterson Creek at Alaska, W. Va 124
discharge measurements of 122-123 near Headsville, W. Va....
Patuxent River Basin, discharge
measurements in.........
patuxing-station records in.........
discharce meaeurements of
56-68
56-63

Paw Paw, W. Va, Potamac River at... 278
Pennsylvania Electric Company
Tailrace, Md., dischargo measurements of.........
Potomec River near...............125-129
Pledmont, W. Va., North Branch Potomec River at

72-74
Pingy Run near Sykesville, Md........ 50-52
Pinto, Md., North Brench Potomac
75-76
Point of Rocka, Md., Chesapeake \& Ohio Canal at.......................164-165
Potomac River at.................... 89-100
Port Republic, va., North Rivar at.. 170
South River at.........................203-204
Potomac River Basin, discharge
measurements in..........
.278-289
gaging-station racords in........ 68-268
Potomac River, discharge measure-
ments of. ..........................

Boundary Chamel of, D.C.
discharge measurements of..... 279
at Hancock, Md...................... . . 83-85
at Paw Paw, W. Va..................... 81-85
at Point of Rocks, Md............. 89-100
at Shepherdstown, W. Va.......... 86-89
near Washingt on, D. C...............101-104
North Branch, at Bloomington, $68-72$ at Cumberland, Md.............. . $76-77$
nesr Cumberland, Md............. 78-81
at Pledmont, W. Va.............. 72-74
at Pinto, Md...................... 75-76
in W. Va., discharge
measuremente of..
278
North Fork of South Branch, at Cabine, W. Va....................... $35-136$ discharge measurements of..... 281
South Eranch at Franklin, W. Va..124-125 discharge measurements of..... 281 near Petersburg, W. Va......... 125-129 near springfield, W. Va........129-135
South Pork of South Branch, near Moorefield, w. Va.................136-139 discharge measuremants of..... 281
Powells Creek, Va., discharge measurements of.

289
Price's Springs, Va., discharge
measurements of.................. 285
Purslane Run, W. Va., discharge
measurements of................... 281
Q Street (Lyons M1ll) Washingtion, D. C., Rock Craek at.............254-255

Quantico Creek, Va., discharge meaeurements of .................. 289

Reardon Spring, Va., discharge measuremente of.................. 282
Redbud Run, Va., diecharge measure- 283
Relsteratown, Md., North Branch
Patapsco River near........... 39-43
Rising Sun, Md., Octoraro Craek near 22-25 Riverdale, Md., Northeast Branch

Anscostia River at...............255-257
Riverton, Va., North Pork Shenan-
doah River near..................214-215
Rock Creek, D. C., discharge messurements of.......
at Q street (Lyons M111)
Washingto on, D....................254-255
at Sherrill Driva, Washington, D. C.......................... Kellogg Branch at............... 26
Deer Creek at........................... 26-30
Rowlandsville, Md., Octoraro Creek at. ................................... 25-26
Rutland Branch, MC., discharge measurements of.

277
Salisbury, Md., East Branch Wicom1co River near.................. 15-17
Salisbury, Pa., Bly Piney Run near.-272-275 Salisbury Spring, Pa., discharge messurements of289

Sevage River at Bloomington, Md.....104-108
dischargs meaeuraments of.......... 278
Savage, Md., IIttle Patuxent Rlver at 67-68

Page
Seneca Creek at Dawsonville, Md.....245-248
discharge measuremente of......... 287
Sharpsburg, Md., Antletam Creek
near..............................
Shenandoah River, Va., discharge
measurements of M1llville, ..............
$.158-164$
283
at Millville, W. Va................182-188
North Fork, at Cootes Store, Va..205-209 near Rivert on, Va...............214-215 near strasburg, Va................209-213 discharge measurements of..... 285
South Fork, discharge measurements of.
-
郎 083
near Front Royal, Va.............177-182
near Luray, Va.......................174-177
near Lynnwood, Va..................171-174
Sherrill Drive, Washington, D.C.,
Rock Creek at.....................250-254
Shopherdstown, W. Va., Potomac River at.........................
Sideling Hill Creek, W. Va, C dis-
charge meseurements of....
86-89

Sir Johns Run, W. Va., discharge measurements of

281

Skidmore Fork, Va., discharge measurements of..................

282

Sleepy Creek, W. Va., diecharge mes surements of

283
sloan Run, Va., discharge messure
282
ments of............................
286
Smiths Creok, Va., discharge measurements of.

285
South Branch Potomac River at Franklin, W. Va...................224-125
near Petereburg, W. Va............. 125-129
near Springfield, w. Va............129-135
discharge measurements of ......... 281
North Fork of, discharge measurements of . 281

South Fork of, near Moorefield,
W. Va. . . . . . . . . . . . . . . . . . . . . . . 136-139
discharge measurements of..... 281
South Fork Shenandoah River near Front Royal, Va.

281
as runt Royal, Va..................177-182
near Luray, Va Ve...............174-177
near Iymnwood, Va.....................171-274
discharge measurements of ........ 283
unnamed tributary, discharge measurements of
South River Basin, discharge measurements 1

285
gaging-station records in....................... 53-56
South River at Basic City, Va....... 198
at Marr st port Republic......................198-202
at Port Republic. Va...............................203-204
at Wagnesboro, Va.............
discharge measurements of.......... 284
unnamed tributary, discharge measurements of

285
Spring Branch, Va., discharge measurements of .....................
Springifold, W. Va., South Branch
Staunton, Va., Lew1s Creek near......193-194
State Tubercuioeis Sanitarium at Sabillasville, Md., diversion for, discharge measurements of......................... measurement s of ............... Man Springe and Mayors Rock, Va., discharge measurements of. 285
Stony River, W. Va., discharge
ineaeurements or. ..... 279
measurements of............. ..... 279
Stony Run, Md., discharge measure- ments of . . .................... ments of. . . ......................... discharge measurements of... ..... 277 burg, VB., North Fork Shenan- ..... 281
Strasburg, ..... $.209-213$
Susquehanna River Basin, diecharge messurements in. ..... 276
gaging-station records in. ..... 20-32
Sykesville, Md., Piney Run nea ..... 50-52
Sylvan, Pa., Licking Creek near.....148-151
Tonoloway Creek, Md., dischargemeasurements of ...............282
Town Creek near Oldtown, Ma.. ..... 139-141
in W. Va., discharge measure-ments of281
Town Drain, discharge measurements of ..... 279
Trout Rur, W. Va., discharge mak- surements of. ..... 282
Tuscarora Creek, Md., diecharge ..... 286
me in W. Va., discharge measure- ments of ..... 283
Waites Fun, W. Va., discharge mea- surements of . . . . . . . . . . . . . . ..... 282
Warm Spring Run, Md., discharge measurements of. ..... 282
Wappon Fun, Va., discharge mea- suremente of ..... 286
Washington, D. C., Beaverdam Branch Anscostia River at Kenilworth Avenue, ..... 264
Rock Creek at e streot (Iyons M111) ..... 254-255
Rock Creok at Sherrill Drive.....250-254
Potomac River near. ..... 101-104
Washingt on Suburban SanitaryCommission Pumping Station,discharge measurements of.288
Waynesboro, $V_{8}$. South River at... ..... 194-197
Westernport, Md., Ceorges Creek at. ..... 112
Western Run, Md., discharge mea- ..... 276-277Whiskey Creek, Va., discharge mea. .
surements of................... ..... 284
Wicomico River Basin, discharge ..... 276
gaging-station records in........ ..... 15-17
Wicomico River near Salisbury, Md. East Branch. ..... 15-17
discharge measurements of ..... 276
-117
discharge measuremente of ..... 279
Winchester, Va., Cedar Creek near....215-217Woodstock, Md., Patapsco River at... 47-49

Yager's Spring, Va., discharge measurements of...........285
Yellow Spring, W. Va., Cacapon$.142-143$
Youghiogheny River at Friendsville, Md. ..... 269-272
near Oakland, Md. ..... 268


[^0]:    Location.- Chain gage, lat. $39^{\circ} 39^{\prime} 53^{\prime \prime}$, long. $76^{\circ} 19^{\prime} 30^{\prime \prime}$, at highway bridge in Mill
    Green, Harford County, and 8 miles upstream from mouth.
    Drainage area.- 16.4 square miles
    Records avallable. - December 1904 to March 1909.
    Extremes.- Maximum daily discharge observed, 509 second-fect Feb. 26, 1908; minimum dally observed, 8 second-feet Oct. 18, 1905.

[^1]:    Location.- Chain gage, lat. $39^{\circ} 36^{\prime 0} 7^{\prime \prime}$, long. $7695.39^{\prime \prime}$, at highway bridge 3.0 miles north of Churchville, Harford County, and 0.9 mile upstream from Coolbranch Run. Drainage area.- 141 square miles.
    Records avallable.- December 1904 to March 1909.
    Extremes:- Maximum daily discharge, 8,460 second-feet Feb. 26, 1908; minimum da1ly, 80 second-feet July 20, 21, Aug. 22-24, Oct. 17-24, 1908.

[^2]:     from Burnslde Bridge, and 1 mile southeast of Sharpsburg, Washington County. Datum of gage is 311.00 feet above mean saa level, adjustment of 1912 . Prior to July 14 , 1933, staff gage at surnside 8ridge, present datum. From June 24, 1897 to Aug. 5, 1905, staff gage just below M1ddle Eridge, 1.2 miles upstream, datum unknown.
    Drainage area.- 281 square miles. Prior to Auguet 1928,278 square miles.
    Records avallable. - June 1897 to August 1905, Aucust 1928 to September 1943.
    Fxtremes.-1g28-43: Maximum discharge, 6, 880 second-feet Apr. 27, 1937 (gage height, 10.7 faet), from rating curve extended abova 4,300 second-feet; minimum, 35 secondfeet (resulatad) Jan. 15, 1931; minimum dally, 50 sacond-feet Sept. 29, 1930, Fab. 1, Oct. 4, 1931.

    Maximum staga know, 11.9 feet sometime in July 1928, from floodmarks.
    Remarks - Flow partially regulated by power plant at 8raathedville. Records include pumpaga from the Potomac Rivar for municipal supply of Hagerstown. This water later enters Antietam Crack above station as sewage. Pumpage and sewage-flow records can ba obtained from the office of Chiaf Engineer, Maryland State Department of Health, Baltimora. Small amount of watar divertad for supply of Mt. Alto Sanatorium in Pennsylvania; sewage is discherged into Conococheegue Creek Basin.

