GEOLOGICAL SURVEY CIRCULAR 377

FLOODS OF AUGUST 1955
IN THE NORTHEASTERN STATES

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Prepared by Water Resources Division

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PREFACE

This preliminary report on the floods of August 1955, has been prepared by the U. S. Geological Survey, Water Resources Division, C. G. Paulsen, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch. Much of the collection of the basic streamflow records by the Geological Survey has been made in financial cooperation with public agencies in the States in the area of major flooding, under the direction of the following district engineers: Massachusetts, Rhode Island, H. B. Kinnison; Connecticut, B. L. Bigwood; New York, A. W. Harrington; New Jersey, O. W. Hartwell; Pennsylvania, J. W. Mangan.

Because of the urgent need to perform the field work and the office computations as promptly as possible, many hydraulic engineers from all sections of the country were brought to the flood area. The assignment of the additional personnel, much of the work of processing computations of peak discharges by indirect methods, and the assembling of this report were performed by hydraulic engineers of the branch staff, under the supervision of Tate Dalrymple, chief, Technical Standards Section.

Several Federal and State agencies contributed technical data. The isohyetal maps were adapted from maps furnished by the U. S. Weather Bureau. Damage figures are those provided by the Business and Defense Services Administration.

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Prepared by Water Resources Division

ABSTRACT

The floods of August 1955 were an unprecedented disaster in a large area of the northeastern United States. They rank among the most destructive in the country's history. Augmented by the antecedent hurricane storm of August 11-15, the rainfall of August 17-20 accompanying hurricane Diane reached maximum values of 17 to 19 inches in south-central Massachusetts. Record-breaking floods resulted within a broad region extending from southeastern Pennsylvania to eastern Massachusetts.

The floods were outstanding in four categories: The large geographic area covered by floods of such magnitude; the extensive damage and loss of life ranking with the greatest recorded in this country; the degree to which prior records were exceeded; and the distribution which was such that the greatest floods occurred predominately on the smaller streams. Property damage has been estimated to be about half a billion dollars and was mostly concentrated in the heavily industrialized valleys of New England. A death toll of 179 persons was attributed to the floods. Peak discharges exceeded previously established maxima by 2.2 and 2.3 times respectively, on Blackstone River at Woonsocket, R. I., and Quinebaug River at Putnam, Conn.; 4.1 times on Naugatuck River near Thomaston, Conn.; and 4.5 times on Bush Kill at Shoemakers, Pa. A unit runoff of 2,300 cubic feet per second per square mile occurred from 2.50 square miles on Powdermill Brook near Westfield, Mass. Although the floods were generally greatest on the smaller streams, Connecticut River at Hartford reached the third highest stage since settlement and Delaware River between Port Jervis and Trenton exceeded the previous historic flood of 1903.

This advance report has been prepared to supply preliminary information needed for immediate planning. It has been released pending preparation of a more comprehensive report covering a three-month period of floods within an area from Massachusetts to North Carolina. Included herein, for the region from Massachusetts to Pennsylvania, are general descriptions of the floods, peak discharges for the present and previous record floods at gaging stations, peak discharges at many miscellaneous sites in the areas of greatest flooding, and detailed stage and discharge data at 51 selected gaging stations.

INTRODUCTION

The floods of mid-August 1955 in the northeastern part of the United States rank among the most destructive floods experienced in the country. Caused by storms of tropical origin, the floods were of disaster proportions in a broad arc from south of Philadelphia to Boston. The loss of life and the property damage were great because of the relatively thick settlement of the valleys and the concentration of industries along the streams.

Actually, there were two sets of floods in August 1955. The first, resulting from hurricane Connie, occurred mostly in the coastal plain, from North Carolina to New England, on August 12-13. The second set of floods were those of August 18-19, following hurricane Diane. They affected a zone farther inland but essentially concentric with the coastline (see fig. 1).

This report covers the floods of August 18-19, principally, because of the great destruction wrought by those floods and because the need exists for some data on them at an early date. Reference is made in the report to a limited amount of data for the earlier floods in August as collateral information--the first floods set the stage for the second floods and in some places the first floods were the greater.

The technical evaluation of the floods of August 18-19 and the reporting of them were complicated by the occurrence of other major floods in the northeastern States on October 15-16, and by lesser floods on October 5, on October 30, and on November 5. In addition, the eastern part of North Carolina had severe floods September 20. The complex interrelations of the four major floods, the overlapping areas involved, and the timing of the floods, made a comprehensive preliminary report impracticable. A report is in preparation (December 1955) that will cover the three-month flood period and the area from North Carolina to Massachusetts.

The purpose of this advance report is to present a sampling of the streamflow records in the area of severe flooding in the August 18-19 floods. Peak stage and discharge data are presented for most of the gaging stations and for many miscellaneous sites in the report area. Maxima are shown also for the highest previous floods of record, to provide a basis for evaluating the present floods. Detailed data are listed for selected gaging stations, that will enable the user to construct accurate discharge hydrographs. Several assemblies of information are shown in graphical form but detailed analyses of the flood data have not been made. The data for the present flood are preliminary and are subject to possible revision following further review.

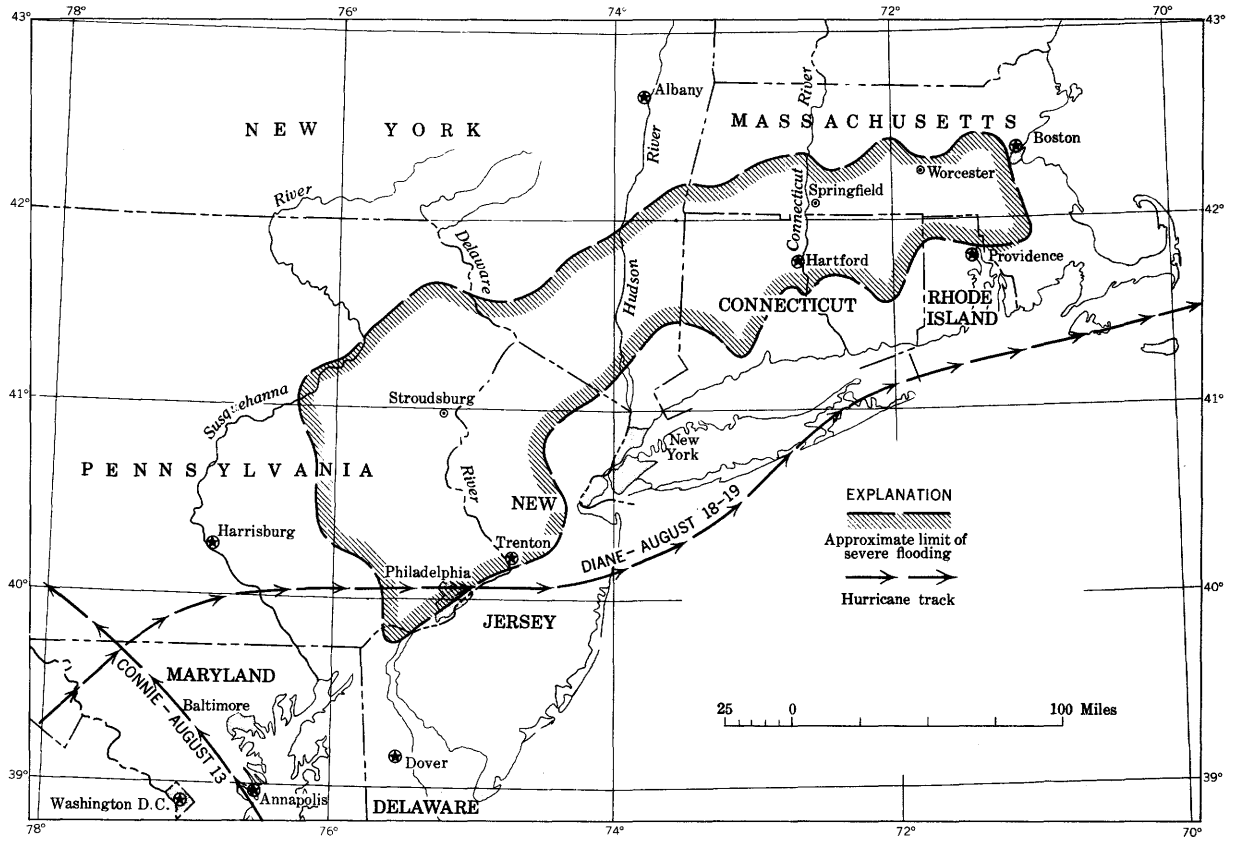

Figure 1.--Map of the area of severe flooding August 18-19, showing tracks of the August hurricanes, Connie and Diane.

GENERAL FEATURES OF THE FLOODS

The Storms

As the summer of 1955 progressed, it was marked by above-average temperatures and by the lack of rainfall. Drought conditions developed in large areas of New England and the Middle Atlantic States, and by the end of July the outlook for adequate water supply and abundant crops was poor. Light to moderate rains occurred in the period August 5-8 over most of the northeastern States, but drought conditions continued.

The drought was dramatically broken by the heavy rains that accompanied the passage of hurricane Connie August 12 and 13. The storm entered the mainland at the North Carolina capes and followed a general northwesterly course across central and western Pennsylvania to the westerly tip of New York (fig. 1). In the period August 11-15, rainfall was heavy over a large area and some totals were outstanding: in western Massachusetts and in western Connecticut, more than 8 inches; in the Catskill Mountains region, more than 15 inches at one station, nearly 13 inches on Long Island; as much as 11 inches in northern New Jersey; and more than 12 inches in southeastern Pennsylvania. The distribution of the rainfall is shown in figure 2.

On August 18 and 19, hurricane Diane moved northward across Virginia with diminishing wind velocities, turned sharply to the east across the southern edge of Pennsylvania and across New Jersey south of Trenton as shown in figure 1, then went to sea, just skirting Long Island and the southern New England coast.

The rainfall associated with the Diane storm was heaviest along an inland arc from Philadelphia to the Boston area. Amounts of rain were large in eastern Pennsylvania, notably in the Pocono Mountains region, and in the southern part of the Catskill Mountains region. The greatest rainfall occurred in a band along the southern third of Massachusetts and in northwestern Connecticut: over 16 inches south of Boston; more than 17 inches near Worcester; and nearly 20 inches in the Westfield River basin, west of Springfield. The distribution of the rainfall in the period August 17-20 is shown in figure 3.

For more detailed information on the Diane storm and on precipitation in the northeastern States, the investigator is referred to publications of the U. S. Weather Bureau 1/.

The Floods

Damaging floods occurred in many streams as a result of the Connie storm and these will be described in the comprehensive flood report now in preparation. That the floods were not worse may be ascribed to the antecedent dry condition of the soil and the relatively

1/U. S. Weather Bureau, 1955, Preliminary report of hurricane Diane and floods in Northeast--August 1955; Hurricane rains and floods of August 1955, preliminary precipitation data.

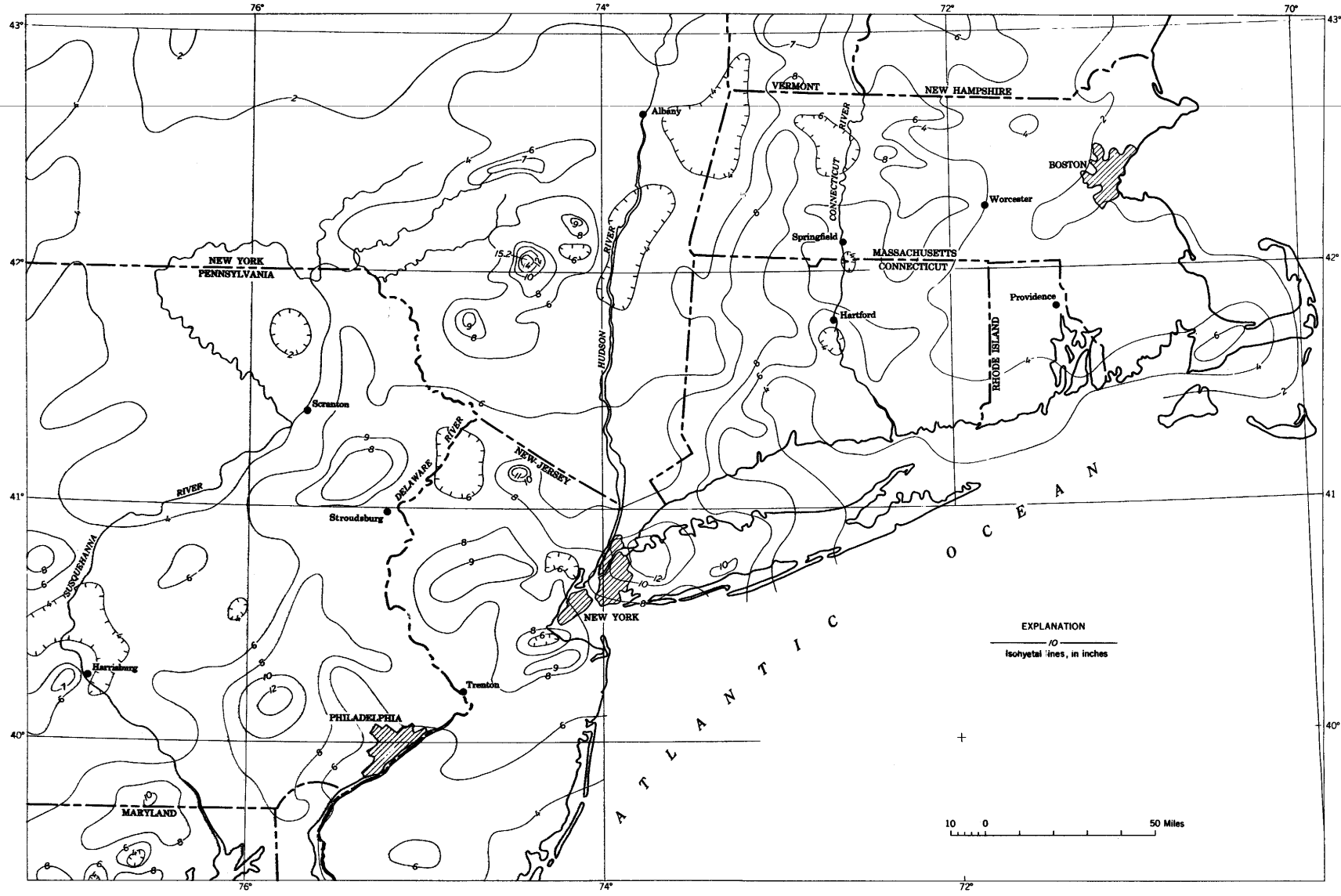

Figure 2.--Map of the flood area, showing total rainfall in the period August 11-15, 1955. (Adapted from map furnished by U. S. Weather Bureau).

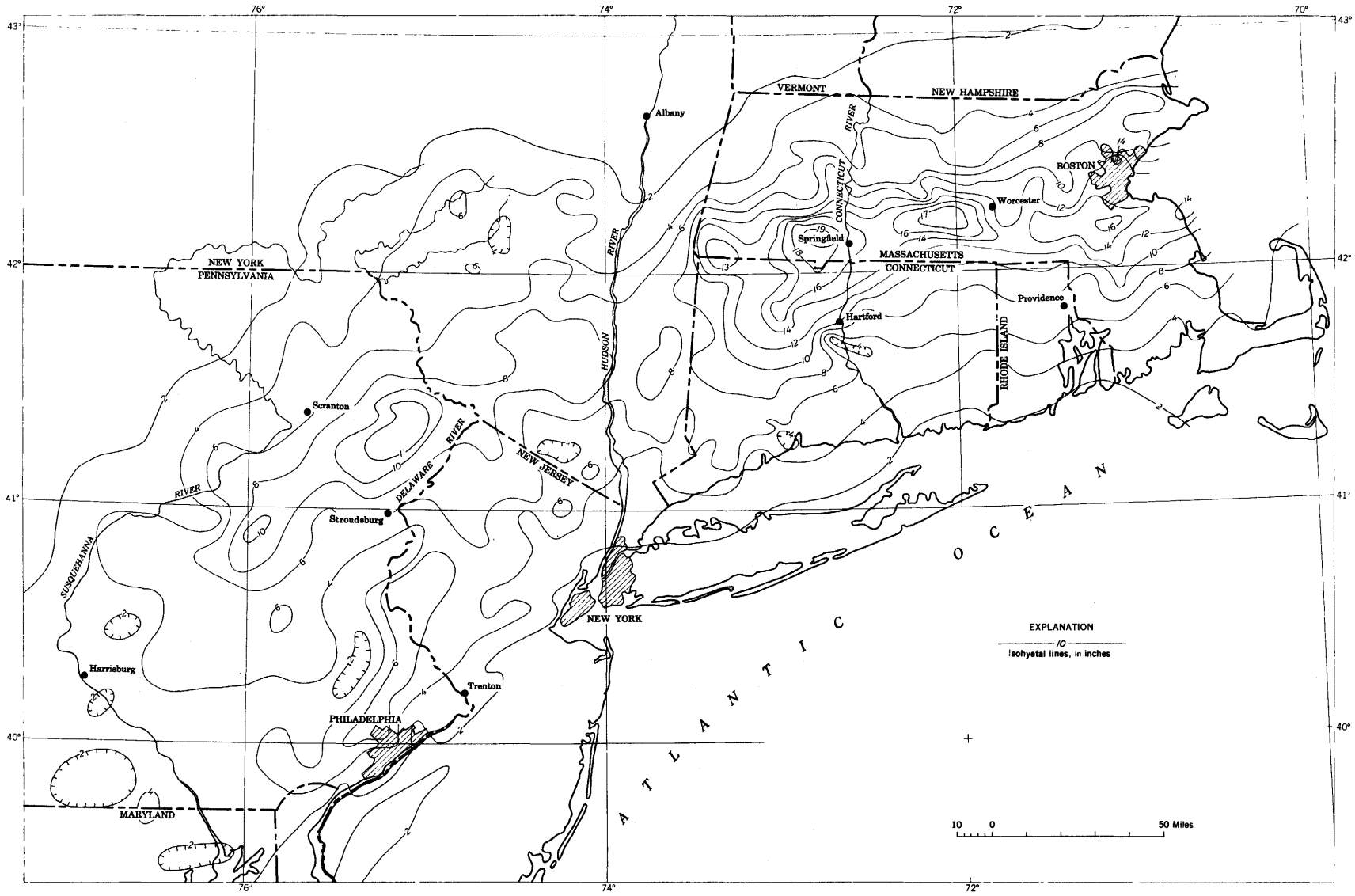

Figure 3. --Map of the flood area, showing total rainfall in the period August 17-20, 1955. (Adapted from map furnished by U. S. Weather Bureau).

large amount of infiltration. The soil became saturated, however, and the base flow in the streams was notably higher after Connie had passed.

What can be described only as a special kind of calamity occurred in the northeastern States, August 18 and 19, 1955. As the torrential rains fell on an almost saturated soil in an area of rapid runoff, the streams rose with terrifying rapidity, overflowed their banks, and flooded the steep valleys of Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania.

The flood waters ravaged everything in their paths. In the forests the hillsides were eroded and many landslides occurred and in the fields the soil and crops were replaced by sand, gravel, and rocks as the waters cut new stream channels and reshaped old channels. Roads were completely destroyed for miles and hundreds of miles of roads required major repairs. Bridge piers and abutments were undermined and debris caught on them--debris including trailer trucks, railroad cars, and houses. Hundreds of bridges were destroyed and communication by highways became a major problem.

The disruption of rail communication likewise was a major problem. The railroads suffered great losses of track, bridges, rolling stock, and other items. Several branch lines had not been repaired by December 1955 and possibly will not be put back into service.

The early settlers built their homes in the valleys near the streams and the communities developed deep in the valleys. The floods smashed these homes and factories and villages. The dams that provided the hydraulic head for power became breached and added the contents of their reservoirs to the natural runoff. Where the flood waters coursed, nothing was spared--houses, stores, banks, supply yards, factories, schools, churches, and even cemeteries were destroyed. The debris resulting from this destruction became the ally of the water and helped to destroy things farther downstream.

Water mains, power lines, telephone and telegraph lines were damaged by the floods, and only radio remained as a means of communication in many places.

Normal activities practically ceased along the valleys. The first need was to evacuate people; nevertheless many perished. Public agencies and private groups acted swiftly and the story of the heroism and the rescues is an epic that is not a part of a report like this; nor is the story of the tremendous cleanup and rehabilitation job that was done.

From the hydrologic viewpoint, the floods of August 18-19 were outstanding. New maximum stages and discharges were recorded and determined at many gaging stations, some of the stations having relatively long records. Based on the statements of old residents and on the historical records, the floods in some areas were the greatest known and rank among those that are identified as rare. It is evident, however, that consideration will have to be given to the possible occurrence again of floods of this magnitude. The hydrologic data obtained during and after the floods can provide the basis of design for future development in much of the area that was flooded.

The chief characteristic of the August 18-19 floods was that they were tributary floods. None of the larger rivers in the area was wholly involved. Reference to figure 1 will show that the flood zone was in an irregular arc essentially normal to the large streams: the Connecticut, the Hudson, the Delaware, the Lehigh, and the Schuylkill. Where a sizable stream was almost wholly in the area of heavy rainfall, like Westfield River, Naugatuck River, and Brodhead Creek, the peak discharges and the amounts of damage were appalling. One can only speculate about what could have happened had the heavy rainfall occurred along the main stem of one of the larger rivers.

The rainfall pattern shows orographic influences where the moisture-laden air swirling in from the sea was forced to rise over the several mountain masses in the area. The relatively complex topography of the northeastern States also caused a high variability in the rainfall and the runoff within comparatively short distances. There are examples of extremely high flows in one basin and practically no storm reaction in the adjoining basin. This variability makes simple hydrologic comparisons somewhat difficult. Studies have not been made as yet that might show the regional characteristics of the floods, but it is suggested that the user consider the regional aspect rather than just the information collected at any one place. What happened in one small area could have been a topographic and geologic characteristic, but also might have been a freak of the storm.

In New England, maxima at many gaging stations exceeded those established in the flood of September 1938, which has been used extensively as the basis for the design of hydraulic structures. At stations along the main Delaware River all previous records were broken, and at places in northeastern Pennsylvania the flood of May 1942 was surpassed.

New England

At the northeasterly end of the flood area in Massachusetts, new highs occurred on such streams in the relatively flat coastal areas as Concord River, Charles River, Neponset River, Taunton River, and others. Damage was mostly from inundation, as compared with damage from fast-moving water.

Blackstone River heads in one of the areas where extremely heavy rainfall occurred during the Diane storm (see fig. 3), and the valleys in the basin are highly industrialized. Failures of dams augmented the natural peaks and the damage effect increased downstream. Velocity damage was great. Horseshoe Dam went out at Woonsocket and that city suffered a major disaster. The peak discharge of Blackstone River at Woonsocket was 2.2 times the peak during the 1938 flood and the stage was 7.4 feet higher.

All the streams that head in Massachusetts and flow generally southward into Connecticut, along the entire northern boundary of Connecticut, had severe floods. The upper tributaries and the entire main stem of Quinebaug River were subjected to new maximum flows. Nearly all the dams on French River were destroyed or badly damaged; the failure of one dam breached

U. S. Highway 20, at West Auburn. Another large washout on this principal east-west route occurred at Charlton City, Mass., where a sudden surge occurred in Cady Brook as a result of the destruction of Glen-echo Dam, about 2 miles upstream. The flood wave carried through to Southbridge, about 7 miles down-stream, where Cady Brook joins Quinebaug River. At Southbridge the discharge of Cady Brook was about 26,300 cubic feet per second (cfs), from a drainage area of 12.0 square miles.

Putnam, Conn., was badly damaged by Quinebaug River. The gaging station there showed a peak dis-charge of 48,000 cfs, which was 2.3 times that in the 1938 flood, and the stage was about 7.0 feet higher than in 1938. Events of similar magnitude occurred through-out the Quinebaug basin, except for the tributaries from the east, which had relatively minor floods. Small tributaries of Willimantic River also were very high.

In the Chicopee River basin (which is tributary to Connecticut River), Chicopee River, Ware River, and Swift River did not reach flows as great as those in September 1938. Quaboag River and its tributaries, however, had extremely high peaks. For instance, Quaboag River at West Brimfield had a peak discharge of 12,800 cfs--about 1.5 times the 1938 peak. The discharge from small tributaries was very large, with unit discharge of about 800 cfs per square mile from drainage areas of less than 8 square miles. Blodgett Mill Brook caused a large amount of damage to the Massachusetts Turnpike, which was under construction. U. S. Highway 20 was inundated at several places, and dams, factories, houses, and all lines of communica-tion received large amounts of damage.

The same pattern was repeated to the south in Con-necticut, where Scantic River at Broadbrook, Conn., had a peak flow nearly twice that recorded in 1938. Farther to the south, along the east side of Connecticut River, the flood effect was much less.

The main stem of Connecticut River itself had what might be called a midbasin flood; that is, the drainage area above the center of Massachusetts contributed relatively little flood water. Most of the flow in the middle reaches of the Connecticut came out of Chicopee River, Westfield River, Farmington River, and other tributaries, between Northampton, Mass., and Hart-ford, Conn. The discharge of these tributaries was enough to make the flood peak third highest at Hartford, in a record that dates from the time of the early settle-ments in New England. There was inundation of the flood plains along the main channel with considerable rural damage, but damage was reduced at a number of communities because of the dikes that had been con-structed after earlier floods. It is estimated that Hart-ford itself was saved a large amount of destruction by the flood-protective works along Park River, which reached a peak of 16,200 cfs, about 3 times as high as in 1938.

The major damage in western Massachusetts oc-curred in the Westfield River basin. It was in this ba-sin that the maximum rainfall(nearly 20 inches) for the Diane storm was measured (see fig. 3), and this cloud-burst fell on the large area that had an 8-inch rainfall in the Connie storm. Damage throughout the basin was of disaster proportions. Spectacular damage was caused by small tributaries with precipitous slopes. Long stretches of valley roads disappeared completely. Tobacco crops and harvested leaf tobacco in the flood plains along lower Westfield River and tributaries were total losses in extensive areas. The typical assortment of flood damages occurred and reached a maximum in the industrial city of Westfield.

In the Westfield River basin the Knightville flood control dam cut off the contribution from 162 square miles (the dam had not been built in 1938). Despite this reduction in effective drainage area, the gaging station on Westfield River near Westfield, Mass., had a peak flow of 70,300 cfs as compared with 55,500 cfs in 1938, and the stage was 4.8 feet higher. The highest known unit discharge in the entire flood area of the northeast occurred in Powdermill Brook near Westfield, where a determination of peak discharge showed 2,300 cfs per square mile from a drainage area of 2.50 square miles.

Farmington River basin was one of the most seriously affected areas in the flood. West Branch Farmington River heads in Massachusetts, flows southward into west-central Connecticut, and empties into Connect-icut River not far above Hartford. The main stem and all tributaries of Farmington River had flood flows of disaster proportions. Winsted, Conn., the scene of some of the most spectacular damage, is in this basin. Here, Mad River overflowed its constricted channel and destroyed much of the commercial and industrial part of the city. The flow of Mad River near Winsted was computed to be 10,200 cfs from a drainage area of 19.7 square miles. The combination of high rainfall and a narrow, populated valley caused a large amount of damage, and a number of deaths occurred.

Rates of discharge were very high in the upper trib-utaries of Farmington River. In the vicinity of Bark-hamsted Reservoir, Valley Brook near West Hartland, Conn., had a unit peak discharge of 1,150 cfs per square mile, from a drainage area of 7.20 square miles; East Branch Salmon Brook at North Granby, Conn., had a unit discharge of 1,080 cfs per square mile from 13.2 square miles.

Naugatuck River is the principal stream in west-central Connecticut. Tributaries in the upper half of the basin and the main stem throughout had record high rates of discharge. The valley of the Naugatuck is highly industrialized and the damage of all sorts was tremendous. The roll of disaster cities is a roll of all the communities along the main valley: Torrington, Thomaston, Waterbury, Naugatuck, Seymour, Ansonia, and others.

The flow of Naugatuck River near Thomaston was 41,600 cfs from a drainage area of 71.9 square miles; this was 4.1 times greater than the peak flow of the 1948 flood, which was the highest in the period of rec-ord starting in 1930. The stage of 24.0 feet near Thomaston was twice that of the 1948 flood.

The same story was repeated down the entire valley. At the city of Naugatuck, Naugatuck River reached a flow of 106,000 cfs at a stage of 25.7 feet, as compared with 28,500 cfs and 12.4 feet respectively, in the 1948 flood,the previous high in a record extending back to 1918. There is no record of floods, either measured or historical along the main stream and along most of the tributaries that compares with this tremendous flow of water.

Although small tributaries in the headwaters of the Housatonic River basin were fairly high and those tributaries coming in from the east had destructive flows, the upper Housatonic itself did not have an outstanding flood. At Falls Village, Conn., for instance, the discharge of 22,700 cfs was slightly lower than the previous high in the period of record starting in 1912.

The middle reaches of Housatonic River, however, had new peaks and a considerable amount of flood destruction. At Gaylordsville, Conn., the peak discharge of 51,800 cfs was 1.6 times the peak that occurred in 1938. One of its tributaries, Tenmile River, also had a new peak discharge with about the same relation to the 1938 peak.

Shepaug River, which lies between the Housatonic and the Naugatuck, had a tremendous flood. The discharge at the gaging station near Roxbury was 50,300 cfs, as compared with 10,500 cfs in 1938. This new peak was at a unit rate of 378 cfs per square mile from a drainage area of 133 square miles.

A similar relationship existed on Pomperaug River, which is tributary to Housatonic River. At Southbury, the peak discharge was 29,400 cfs, 4.0 times the 1938 peak, and the stage was about 5.8 feet higher than in 1938.

Farther downstream, at the gaging station at Stevenson, the peak discharge of Housatonic River was high, being slightly less than that in 1936, which happened to be the year of the previous high discharge at that point.

Except for the destructive flows in the Woonsocket area, streamflow during the Diane flood was generally moderate to low in Rhode Island and in the southern part of Connecticut. The exceptions to this would be the main stems of the larger streams which carried large amounts of flood water to Long Island Sound, streams such as Thames River, Connecticut River and Housatonic River. The flood debris from these streams prevented use by boats of some harbors along the Connecticut shore. Wreckage, and even salvagable materials, floated to the Long Island shore where it was deposited on the beaches in large quantities.

New York

The area of severe flooding extended into New York, but damage was limited mostly to a narrow band from the vicinity of Poughkeepsie to Port Jervis, and in the Wallkill River basin. The usual flood damage occurred but the total in New York was the least among the six States most affected by the floods of August 18-19.

East of Hudson River, outstanding floods occurred on Wappinger Creek and Bashbish Creek. Several bridges were destroyed in the Copake Falls area where Bashbish Creek produced a peak discharge of about 10,800 cfs from 15.8 square miles. At the gaging station on Wappinger Creek near Wappingers Falls, a new peak was established for the record started in 1928.

An area of major flooding was the Rondout Creek and Wallkill River basins, on the west side of Hudson River. Tributaries of Rondout Creek were particularly high and considerable damage occurred in the Ellenville, N. Y., area. A new peak discharge occurred at the gaging station on Rondout Creek at Rosendale for a record of 29 years.

Extensive areas of rich bottom lands were inundated in the Wallkill River basin, resulting in the loss of a large part of an onion crop, one of the specialties of the region. New peak discharges were recorded at six of the eight gaging stations in the basin.

Highly destructive flows occurred in all the streams tributary to Rondout Creek and Neversink River in the valley which extends from Kingston, N. Y., to Port Jervis, N. Y. At the gaging station at Godeffroy, the flood peak of Neversink River was 33,000 cfs, about 1.6 times the previous peak. U. S. Highway 209 was inundated at many places and many small-stream bridges were destroyed.

New Jersey

Among the six States in the flood area, New Jersey was fourth in flood damage, in descending order. The principal areas of flooding were in part of the Passaic River basin, the lower part of the Raritan River basin, and the main Delaware River and its northern tributaries. Except along the Delaware, the damage was essentially scattered and no deaths were reported in New Jersey. There was a considerable amount of damage in the village of Branchville as a result of the destruction of a dam on a relatively small stream.

In north-central New Jersey, a new peak discharge was established at only one gaging station, that on Wanaque River at Monks. The peak flow at this station was 3,400 cfs, as compared with 2,660 cfs during the previous highest flood.

New peaks were established at three gaging stations in the Raritan River basin. One was the 18,000 cfs reading at the gaging station on South Branch Raritan River at Stanton, which was about 1.7 times the previous peak.

The most notable feature of the August floods in New Jersey was the great flood on Delaware River. At all five gaging stations between Port Jervis, N. Y., and Trenton, N. J., new peaks were established, both in stage and discharge, exceeding even the historical flood of 1903. Many communities were damaged extensively by both quiet inundation and fast-moving water. Three bridges across Delaware River were destroyed: the bridge between Easton, Pa., and Phillipsburg, N. J.; the old bridge between Portland, Pa., and Columbia, N. J.; and the bridge between Point Pleasant, Pa., and Byram, N. J. It is noteworthy that the old covered bridge at Portland and Columbia was started in 1831 and was completed in 1869. It withstood all floods until the disaster in August 1955, and even then it gave way only when it was about three-quarters submerged.

At Port Jervis, N. Y., the peak stage of Delaware River was about 0.8 feet higher than in October 1903 and the discharge was computed to be 14 percent higher. At the last gaging station downstream, at Trenton, the stage was 0.1 feet higher than in 1903. A stage 2 feet higher occurred in 1904 as a result of an ice jam. The memories of old residents and the historical records indicate that in discharge the 1955 flood was the greatest on Delaware River since the country was first settled.

Pennsylvania

The area of severe flooding in Pennsylvania during the floods of August 18-19, 1955, extended from Lackawanna, Susquehanna, and Schuylkill Rivers to Delaware River. A large part of the damage occurred in the Pocono Mountains region, but a considerable amount occurred elsewhere.

Flood flows were particularly high in the Lackawaxen River basin. The peak flow of East Branch Wallenpaupack Creek at Greentown, Pa., was 33,300 cfs from 33.9 square miles, which gives a unit discharge of 982 cfs per square mile. Ten people died at Greentown in the portion of the community that was on the flood plain.

For the first time in many years, and one of the few times that it has occurred, Wallenpaupack Lake overflowed, but discharge from the lake did not begin until after the peak had passed in Lackawaxen River, into which the lake drains.

The village of Hawley, Pa., was severly damaged. One of the outstanding areas of destruction for the entire flood was at Newfoundland, Pa., where essentially the entire community was swept by the waters from Wallenpaupack Creek. The dreadful monotony of such destruction is indescribable.

All small and large tributaries (in Pennsylvania) of Delaware River from Port Jervis to Delaware Water Gap, had very high and very destructive flows. Practically every bridge along U. S. Highway 209 in that reach was destroyed or heavily damaged. The flow of Bush Kill at Shoemakers, Pa., reached a peak of 23,400 cfs, which was 4.5 times the previous peak (1920) in the period of record starting in 1908.

The most spectacular phase of the floods in Pennsylvania occurred in the Brodhead Creek basin, the upper part of which is in the Pocono Mountains. Flood flow in all parts of the basin was highly destructive and damage of all kinds occurred from Canadensis to Minisink Hills. The scene of the greatest single tragedy of the August floods, was just a few miles above Stroudsburg, Pa., where more than 30 persons, mostly children, lost their lives at a camp on the banks of Brodhead Creek. The main line of the Delaware, Lackawanna, & Western Railroad was destroyed at a number of places and service was not resumed for about two months. Damage to the railroad amounted to millions of dollars.

At Analomink, Pa., the peak flow of Brodhead Creek was computed to be 72,200 cfs from a drainage area of 124 square miles, giving a unit discharge of 582 cfs per square mile. This was a far greater flood flow than any before, even back into the historical records.

The flood in the Lehigh River basin was a major flood. It was principally an upper basin flood but new records were established at all gaging stations along the main stem of the Lehigh except the one farthest downstream, at Bethlehem, Pa. A flow of 58,300 cfs was computed at Tannery, Pa. This rate of discharge was about twice that previously recorded in the 41 years of record at the station, and the stage was 5.7 feet higher.

Similar high flows occurred in other important tributaries of Delaware River; for instance, Neshaminy Creek near Langhorne, Pa., had a peak of 49,300 cfs, about twice the previous high in the 20 years of record.

The northern tributaries of Schuylkill River contributed large amounts of runoff and a considerable amount of damage occurred. For the Schuylkill, it was mostly a tributary flood, but a new high was recorded on the main stem at Berne, Pa. The damage area extended into the city of Philadelphia although the destruction there was not great.

In the Susquehanna River basin, most of the heavy damage was concentrated in the Scranton and Wilkes-Barre area, caused mostly by small streams. One of the outstanding flows occurred on Roaring Brook at Dunmore, Pa., where the peak discharge of 18,500 cfs gave a unit rate of 374 cfs per square mile from 49.4 square miles.

Damaging flows occurred in tributaries of Susquehanna River as far south as Bloomsburg, but the rise on the Susquehanna itself was only relatively moderate.

Summary of Flood Damage

The damage caused by the floods of August 18-19 in the northeastern States has been estimated to be in the magnitude of half a billion dollars. Early estimates ran six times as high, but they were made at a time when the damage could not be assessed accurately. The estimates of flood damages vary with different methods of evaluation, particularly with respect to intangible damage.

The Corps of Engineers is making detailed damage surveys but these were not available for inclusion in this report. A summary prepared by the Business and Defense Services Administration as listed in their press release 2/ is presented in table 1. The figures in table 1 are subject to modification as the full story of the flood damage is revealed.

Data are not available at the moment on the number of highway bridges destroyed or on many other specific items.

FLOOD DATA

Data on the floods of August 1955 in the northeastern States were collected at many gaging stations operated by the U. S. Geological Survey in the six-State area. The basic records are continuous records of stage and discharge, which may be combined for varying periods and in various ways to suit the needs of the user. To supplement the records for the gaging stations, peak discharge also was determined at many miscellaneous sites, where there were no gaging stations. The location of the gaging stations and the miscellaneous sites are shown on plate 1.

Stage and discharge data have been assembled in the following sections of this report. Data for selected gaging stations are presented as it is not possible to show in this preliminary report the records for all

2/ Press release BD-574, Business and Defense Services Administration, U. S. Dept. of Commerce, Washington, D. C., October 31, 1955.

Table 1.--Summary of damages and casualties caused by floods of August 18-19, 1955, in the Northeast.

[Data provided by Business and Defense Services Administration, U. S. Dept. of Commerce]

Classification	Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania	Total
Industrial-----	$55,000,000	$5,700,000	$83,871,000	$382,000	$1,250,000	----------	$146,203,000
					----------	a 20,684,000	20,684,000
Commercial --	5,410,000	2,200,000	42,601,000	1,354,000	----------	----------	51,565,000
Roads --------	23,476,000	900,000	26,233,000	6,380,000	8,500,000	16,937,000	82,426,000
Dwellings-----	b 198,000	3,000,000	23,953,000	968,000	12,954,000	6,034,000	47,107,000
Utilities ------	25,000,000	6,200,000	29,702,000	5,000,000	3,986,000	9,419,000	79,307,000
Agricultural --	1,329,000	---------	2,424,000	2,200,000	10,000	1,082,000	7,045,000
Miscellaneous-	----------	---------	6,461,000	----------	c 825,000	d16,051,000	23,337,000
Total-------	$110,413,000	$18,000,000	$215,245,000	$16,284,000	$27,525,000	$70,207,000	$457,674,000
Dwellings destroyed ---	97	34	563	26	93	----------	813
			Casualties				
Deaths	12	1	77	1	0	88	179
Major injuries	77	32	6,773	6	10	94	6,992

[a] Industrial and commercial.
[b] Appears to be low.
[c] Railroad damage.
[d] Includes $14,618,000 railroad damage.

gaging stations in the flood area. Graphs of data are presented to show the interrelation of the flows at the many points where discharge was determined, but comprehensive analyses were not made.

The problem of obtaining records of stage and discharge at some of the gaging stations was made more difficult by the destruction of part or all of the station facilities. The floods destroyed gage houses, cableways, controls, and associated parts of station installations. At several places, the recorders were swept away.

Measurement of Flood Discharges

Whenever possible, the discharge of streams at gaging stations is measured by current meter, at both high or low stages. Current-meter measurements were made at some of the gaging stations during the August floods. It was impossible to reach them all at or near the peak stage, because of road conditions and because of the number of engineers available.

At many gaging stations, and at all miscellaneous sites, the peak discharge during the floods was determined by what are known as indirect methods. Such determinations are made by one or more of the following methods: Slope area, contraction, culvert flow, flow over dam, and flow over embankment.

The field work associated with the indirect determinations was accomplished after the August floods had subsided. Using the methods listed above, it was possible to obtain a wealth of peak-flow information at many places where the data could not have been obtained by other means.

Summary of Stages and Discharges

A summary of stages and discharges that occurred in the August floods has been prepared, presented on the succeeding pages as table 2. The summary lists the gaging stations and miscellaneous sites in downstream order. The reference numbers refer to the sites as identified on the general map, plate 1.

For gaging stations, the highest flood in the period of record is shown. At some stations, the highest stage and highest discharge may not have occurred during the same flood. Any greater flood outside the period of record is listed if known.

At points where peak-discharge was not determined by gaging-station operations, a headnote is used to show the method of determination.

Table 2. --Summary of stages and discharges in the Northeast during the floods of August 1955

[Station description and hydrograph data are given in this report for the gaging stations indicated by an asterisk (*). Maximum discharges for the floods of August 1955 were obtained from gaging station records or by special methods as indicated by the following symbols: A, slope-area measurement; B, contracted-opening measurements; C, computation of flow through culvert; D, computation of flow over dam; E, computation of flow over embankment]

No. on pl 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	MERRIMACK RIVER BASIN										
1	Assabet River at Maynard, Mass.	116	1941-55	Sept. 13, 1954	6.47	1,870	16.1	Aug. 20, 7:30 to 8 p.m.	8.96	4,270	36.8
2*	Concord River below River Meadow Brook, at Lowell, Mass.	405	1936-55	July 29, 1938	8.11	3,790	a 12.1	Aug. 23, 8 to 10 p.m.	8.97	4,540	a 14.6
	CHARLES RIVER BASIN										
3*	Charles River at Charles River Village, Mass.	184	1937-55	July 27, 1938 March 1936	9.00 -	3,110 3,170	16.9 17.2	Aug. 23, 2 to 3 p.m.	9.24	3,220	17.5
4	Mother Brook at Dedham, Mass.	-	1931-55	July 28&29, 1938	91.84	909	-	Aug. 24, 5 to 8 a.m.	92.90	960	-
5	Charles River at Waltham, Mass.	251	1931-55	Mar. 19, 1936	4.79	2,540	10.1	Aug. 19, 3:30 p.m.	5.35	2,490	9.92
	NEPONSET RIVER BASIN										
6	Neponset River at Norwood, Mass.	35.2	1939-55	May 9, 1954 July 24, 1938	10.90 b11.05	430	12.2	Aug. 19, 6:30 p.m.	b 14.65	1,450	41.2
	TAUNTON RIVER BASIN										
7	Taunton River at State Farm, Mass.	260	1929-55	Dec. 8, 1945, May 18, 1954	11.57	3,190	12.3	Aug. 22, 7 to 8 p.m.	13.02	4,280	16.5
8	Wading River at West Mansfield, Mass.	19.2	1953-55	May 9, 10, 1954	4.89	188	9.79	Aug. 20, 4:30 to 6:30 p.m.	6.22	517	26.9
9	Wading River near Norton, Mass.	42.4	1925-55	Mar. 12, 13, 1936	10.01	1,030	24.3	Aug. 20, 7 a.m.	10.98	1,170	27.6
	PROVIDENCE RIVER BASIN										
10	Kettle Brook at Worcester, Mass.	31.3	1923-55	Mar. 18, 1936	b 8.58	2,520	80.5	Aug. 19, 12 m.	b 12.78	3,970D	127
11	Quinsigamond River at North Grafton, Mass.	25.5	1939-55	Sept. 12, 1954	3.50	395	15.5	Aug. 20, 12 m.	5.15	840	32.9
13	Mumford River at East Douglas, Mass.	27.8	1939-51	Mar. 22, 1948	5.10	420	15.1	Aug. 19	b 12.0	2,140D	77.0
14	Blackstone River at Blackstone, Mass.	259	-	March 1936	-	11,800	45.6	Aug. 19	-	18,800D	72.6

15	Branch River at Forestdale, R.I.	93.3	1940-55	Sept. 12, 1954 March 1936	9.12 -	2,900 5,800	31.1 62.2	Aug. 19, 10:30 p.m.	10.52	4,240	45.4
16*	Blackstone River at Woonsocket, R.I.	416	1929-55	July 24, 1938	14.43	15,100	36.3	Aug. 19, 10 p.m.	21.8	c32,900A	-
	THAMES RIVER BASIN										
17	Crystal Lake Brook near West Stafford, Conn.	5.83	---	---	-	-	-	About Aug. 19	-	784A	134
18	Willimantic River near Stafford Springs, Conn.	53.5	---	---	-	-	-	About Aug. 19	-	14,500A	271
19	Roaring Brook near West Wilmington, Conn.	18.0	---	---	-	-	-	About Aug. 19	-	2,920C	162
20*	Willimantic River near South Coventry, Conn.	121	1931-55	Sept. 21, 1938	18.08	15,500	128	Aug. 19, 4 p.m.	18.66	24,200B	200
21	Hop River near Columbia, Conn.	76.2	1932-55	Sept. 21, 1938	16.25	6,450	84.6	Aug. 19, 2:15 p.m.	b 15.10	4,620	60.6
22	Safford Brook near Woodstock Valley, Conn.	4.08	1950-55	Sept. 11, 1954	5.89	566	139	Aug. 19, 6:45 a.m.	6.68	1,000CE	245
23	Mount Hope River near Warrenville, Conn.	29.1	1940-55	Sept. 11, 1954	9.20	1,500	51.5	Aug. 19, 8:30 a.m.	10.41	5,590B	192
24	Natchaug River at Willimantic, Conn.	169	1930-55	Sept. 21, 1938	16.39	32,000	189	Aug. 19, 11 p.m.	5.68	d 1,470	d 147
25	Shetucket River near Willimantic, Conn.	401	1904-5, 1919-21 1928-55	Sept. 21, 1938	27.6	52,200	130	Aug. 19, 11:30 p.m.	17.36	d 21,300	d 88.0
26	Little River near Hanover, Conn.	29.8	1951-55	Sept. 12, 1954	5.32	935	31.4	Aug. 19, 8:30 p.m.	6.48	1,400	47.0
27	Wales Brook near Wales, Mass.	3.71	---	---	-	-	-	Aug. 19	-	1,080A	291
28	Hamilton Reservoir Outlet near Holland, Mass.	24.2	---	---	-	-	-	Aug. 19	-	6,540B	270
29	Quinebaug River at Fiskdale, Mass.	67.5	---	September 1938	-	7,000	e 103	Aug. 19	-	15,400A	228
30*	Quinebaug River at Westville, Mass.	93.8	1939-55	Mar. 22, 1948 September 1938	6.93 -	1,500 8,400	16.0 89.6	Aug. 19, 6:30 p.m.	16.11	17,500A	187
31	Upper Sibley Pond Outlet at Charlton City, Mass.	2.23	---	---	-	-	-	Aug. 19	-	1,240DE	556
32	Cady Brook at Southbridge, Mass.	12.0	---	---	-	-	-	Aug. 19	-	f 26,300A	-

See footnotes at end of table, p. 29.

Table 2. --Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	THAMES RIVER BASIN--Continued										
33	Cohasse Brook at Southbridge, Mass.	2.87	---	---	-	-	-	Aug. 19	-	1,280D	446
34	Lebanon Brook at Southbridge, Mass.	10.0	---	---	-	-	-	Aug. 19	-	1,140D	114
35	Alder Meadow Brook near Spencer, Mass.	2.18	---	---	-	-	-	Aug. 19	-	1,530A	702
36	French River at North Oxford, Mass.	24.1	---	Mar. 18, 1936	-	2,030	84.2	Aug. 19	-	8,540AD	354
37	South Fork Little River at outlet of Granite Reservoir at South Charlton, Mass.	7.97	---	---	-	-	-	Aug. 19	-	2,060DE	258
38	Little River at Buffumville, Mass.	27.7	1939-55	Sept. 12, 1954	7.33	1,220	44.0	Aug. 19, 4:30 p.m.	15.53	8,340D	301
39*	French River at Webster, Mass.	85.3	1948-55	Sept. 12, 1954 Mar. 19, 1936	11.64 -	2,320 4,700	27.2 55.1	Aug. 19, 6 p.m.	26.05	14,400D	169
40	Quinebaug River at Quinebaug, Conn.	157	1931-55	Sept. 21, 1938	16.21	14,100	89.8	Aug. 19	b 18.96	49,300A	314
41	Quinebaug River at Putnam, Conn.	331	1929-55	Sept. 21, 1938	19.45	20,900	63.1	Aug. 19	b 26.5	48,000A	145
42	Five Mile River at Killingley, Conn.	58.2	1937-55	July 24, 1938	8.52	2,480	42.6	Aug. 20, 4 p.m.	5.76	1,120	19.2
43	Quinebaug River at Dyer Dam site near Danielson, Conn.	465	---	Mar. 19, 1936	-	22,800	49.0	About Aug. 19	-	43,900B	94.4
44	Moosup River at Moosup, Conn.	83.5	1932-55	Mar. 12, 1936	8.35	4,260	51.0	Aug. 20, 7 a.m.	5.17	1,520	18.2
45*	Quinebaug River at Jewett City, Conn.	711	1918-55	Mar. 19, 1936	24.0	29,200	41.1	Aug. 20, 5-6 p.m.	29.0	40,700D	57.2
46	Yantic River at Yantic, Conn.	88.6	1930-55	Sept. 21, 1938	14.66	13,500	152	Aug. 19, 11:30 p.m.	7.53	1,950	22.0
	CONNECTICUT RIVER BASIN										
47*	Connecticut River at Montague City, Mass.	7,865	1904-55	Mar. 19, 1936	49.2	236,000	30.0	Aug. 14, 1 to 1:30 p.m.	19.75	42,800	5.44
48	Mill River at Northampton, Mass.	52.8	1938-55	Mar. 31, 1951	9.38	3,840	72.7	Aug. 19, 7 a.m.	11.78	6,300D	119

49	Manhan River at outlet of White Reservoir near Westhampton, Mass.	4.41	---	---	-	-	-	Aug. 19	-	1,080	245
50	Manhan River at Russellville, Mass.	15.1	---	---	-	-		Aug. 19	-	g9,350A	619
51	Bachelor Brook near South Hadley, Mass.	31.1	---	---	-	-	-	Aug. 19	-	g5,320B	171
52	Stony Brook at South Hadley, Mass.	19.2	---	---	-	-	-	Aug. 19	-	1,920D	100
53	Ware River near Barre, Mass.	55.0	1946-55	Mar. 23, 1948	5.93	1,450	26.4	Aug. 20, 8 to 8:30 a.m.	5.53	1,120	20.4
54	Ware River at Twomile Bridge near Ware, Mass.	191	---	---	-	-	-	Aug. 19	-	9,530BE	49.9
55*	Ware River at Gibbs Crossing, Mass.	199	1912-55	Sept. 21, 1938	18.2	22,700	114	Aug. 19, 10 a.m.	12.83	12,200A	61.3
56	Swift River at West Ware, Mass.	188	1910-55	Mar. 19, 1936	15.00	7,590	40.4	Aug. 19	5.68	h955	-
57	Fivemile River at outlet of Brooks Pond near North Brookfield, Mass.	13.2	---	---	-	-	-	Aug. 19	-	1,730D	131
58	Lamberton Brook near West Brookfield, Mass.	4.47	---	---	-	-	-	Aug. 19	-	4,140A	926
59	Quaboag River at Warren, Mass.	134	---	---	-	-	-	Aug. 19	-	g4,730B	35.3
60	O'Neil Brook at West Warren, Mass.	2.04	---	---	-	-	-	Aug. 19	-	1,670A	819
61*	Quaboag River at West Brimfield, Mass.	151	1909-55	Sept. 21, 1938	11.8	8,470	56.1	Aug. 19, 8:30 a.m.	14.79	12,800A	84.8
62	Blodgett Mill Brook near West Brimfield, Mass.	7.38	---	---	-	-	-	Aug. 19	-	5,860A	794
63	Foskett Mill Stream near Fentonville, Mass.	6.65	---	---	-	-	-	Aug. 19	-	g3,900D	586
64	Chicapee Brook at South Monson, Mass.	4.68	---	---	-	-	-	Aug. 19	-	1,700	363
65	Conant Brook near South Monson, Mass.	7.94	---	September 1938	-	1,230	155	Aug. 19	-	5,600D	705
66	Broad Brook near Belchertown, Mass.	7.07	---	---	-	-	-	Aug. 19	-	4,740A	670
67	Twelvemile Brook near North Wilbraham, Mass.	8.56	---	---	-	-	-	Aug. 19	-	g8,690A	-

See footnotes at end of table, p. 29.

Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	CONNECTICUT RIVER BASIN--Con.										
68*	Chicopee River at Indian Orchard, Mass.	688	1928-55	Sept. 21, 1938	-	45,200	65.7	Aug. 19, 4 p.m.	22.14	h 40,500D	h 80.7
69	Mill River at Springfield, Mass.	33.9	1938-51	---	-	-	-	Aug. 19, several hours in morning	b 12.02	1,960	57.8
70	Westfield River at Knightville, Mass.	162	1909-55	Sept. 21, 1938	bi 29.58	37,900	234	Aug. 28, 10 a.m.	6.67	j 4,680	-
71*	Middle Branch Westfield River at Goss Heights, Mass.	52.6	1910-55	Mar. 12, 1936 Sept. 21, 1938	13.87 10.61	- 19,900	- 378	Aug. 19, 4 a.m.	11.33	16,500A	314
72	Walker Brook at Chester, Mass.	17.7	---	---	-	-	-	Aug. 19	-	5,220A	295
73*	West Branch Westfield River at Huntington, Mass.	93.7	1935-55	Sept. 21, 1938	15.5	21,800	233	Aug. 19, 4:30 a.m.	15.27	26,100A	279
74	Stage Brook near Russell, Mass.	5.21	---	---	-	-	-	Aug. 19	-	4,910A	942
75	Black Brook near Russell, Mass.	2.97	---	---	-	-	-	Aug. 19	-	1,760D	593
76	Potash Brook at Blandford-Russell town line, Mass.	1.53	---	---	-	-	-	Aug. 19	-	1,210A	791
77	Westfield River at Woronoco, Mass.	351	---	---	-	-	-	Aug. 19	-	m 61,500D	m 325
78	Cobble Mountain Reservoir tributary near Granville, Mass.	.66	---	---	-	-	-	Aug. 19	-	415C	629
79	Cooks Brook at West Parish, Mass.	.32	---	---	-	-	-	Aug. 19	-	218CE	681
80	Dickinson Brook near Granville, Mass.	6.42	---	---	-	-	-	Aug. 19	-	5,750A	896
81	Westfield Little River at Stevens Paper Co. dam, at Westfield, Mass.	77.7	---	---	-	-	-	Aug. 19	-	n 21,700D	-
82	Powdermill Brook near Westfield, Mass.	2.50	---	---	-	-	-	Aug. 19, about 1 a.m.	-	5,740CE	2,300

83	Great Brook at Southwick, Mass.	19.3	---	---	-	-	-	Aug. 19	-	o 3,610CE	187
84*	Westfield River near Westfield, Mass.	497	1914-55	Sept. 21, 22, 1938	29.40	55,500	112	Aug. 19, 7 to 8 a.m.	34.2	p70,300D	-
85*	Connecticut River at Thompsonville, Conn.	9,661	1928-55	Mar. 20, 1936	16.6	282,000	29.2	Aug. 19, 7 p.m.	10.93	174,000	-
86	Clay Brook near Suffield, Conn.	.69	---	---	-	-	-	About Aug. 19	-	531C	770
87	Stony Brook near Suffield, Conn.	36.9	---	---	-	-	-	About Aug. 19	-	17,300A	469
88	Scantic River at Scitico, Conn.	66.0	---	---	-	-	-	About Aug. 19	-	15,400B	233
89*	Scantic River at Broad Brook, Conn.	98.4	1928-55	Sept. 21, 1938	16.08	7,360	74.8	Aug. 19, 6 p.m.	19.9	13,300A	135
90	Fall River at Otis Reservoir Outlet near Cold Spring, Mass.	17.2	---	---	-	-	-	Aug. 19	-	1,320	76.7
91	Silver Brook at West New Boston, Mass.	6.52	---	---	-	-	-	Aug. 19	-	4,370A	670
92	Clam River at West New Boston, Mass.	29.3	---	---	-	-	-	Aug. 19	-	12,100A	413
93*	West Branch Farmington River near New Boston, Mass.	92.0	1913-55	Sept. 21, 1938	12.94	g 18,500	g 247	Aug. 19, 4:45 a.m.	14.06	34,300A	373
94	West Branch Farmington River near Riverton, Conn.	128	---	---	-	-	-	About Aug. 19	-	57,200A	447
95	Mad River near Winsted, Conn.	19.7	---	---	-	-	-	About Aug. 19	-	10,200A	518
96	Colebrook Brook near Winsted, Conn.	2.84	---	---	-	-	-	About Aug. 19	-	1,660A	585
97	Highland Lake outflow at Winsted, Conn.	7.30	---	---	-	-	-	About Aug. 19	-	4,050AD	555
98	Sandy Brook near Robertsville, Conn.	31.1	---	---	-	-	-	About Aug. 19	-	10,100B	325
99*	Still River at Robertsville, Conn.	84.4	1948-55	Dec. 31, 1948	10.12	9,550	113	Aug. 19, 8 a.m.	16.48	44,000A	522
100	West Branch Farmington River at Riverton, Conn.	216	1928-55	Sept. 21, 1938	17.95	37,100	172	Aug. 19, 7 a.m.	b20.3	101,000	468
101	Morgan Brook near Winsted, Conn.	6.39	---	---	-	-	-	About Aug. 19	-	2,510C	393
102	Hubbard River near West Hartland, Conn.	19.9	---	---	-	-	-	About Aug. 19	-	10,500C	528

See footnotes at end of table p. 29.

Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	CONNECTICUT RIVER BASIN--Con.										
103	Valley Brook near West Hartland, Conn.	7.20	---	---	-	-	-	About Aug. 19	-	8,260A	1,150
104	Beaver Brook near Barkhamsted, Conn.	5.31	---	---	-	-	-	About Aug. 19	-	3,350C	631
105	Farmington River near Collinsville, Conn.	360	---	Sept. 21, 1938	-	54,000	150	About Aug. 19	-	140,000A	389
106*	Burlington Brook near Burlington, Conn.	4.12	1931-55	Sept. 21, 1938	7.24	676	164	Aug. 19, 4 a.m.	9.22	1,720D	410
107	Pequabuck River at Forestville, Conn.	45.2	1941-55	Dec. 31, 1948 September 1938	6.70 b 7.3	3,260 3,800	72.1 84.1	Aug. 19, 7:30 a.m.	13.22	11,700A	259
108	East Branch Salmon Brook at North Granby, Conn.	13.2	---	---	-	-	-	About Aug. 19	-	14,300A	1,080
109	West Branch Salmon Brook at West Granby, Conn.	11.7	---	---	-	-	-	About Aug. 19	-	10,500A	897
110	Salmon Brook near Granby, Conn.	60.6	1946-55	Dec. 31, 1948	13.55	3,440	56.8	Aug. 19, 4 a.m.	23.58	r 40,000	660
111*	Farmington River at Rainbow, Conn.	584	1928-55	Sept. 22, 1938 Jan. 1, 1949	- 13.83	29,900 -	51.2 -	Aug. 19, 10-11 p.m.	23.5	69,200D	118
112	South Branch Park River at Hartford, Conn.	40.6	1936-55	Sept. 21, 1938	13.6	3,600	88.7	Aug. 19	b 19.65	7,000	172
113	North Branch Park River near Hartford, Conn.	18.6	---	---	-	-	-	About Aug. 19	-	7,980A	429
114	North Branch Park River at Hartford, Conn.	25.3	1936-55	Jan. 25, 1938	11.6	3,000	119	Aug. 19	b 18.8	10,000	395
115	Park River at Hartford, Conn.	74.0	1936-55	Jan. 25, 1938	9.16	5,650	76.4	Aug. 19	b 16.36	16,200A	219
116	Hockanum River near East Hartford, Conn.	74.5	1914-21 1928-55	Sept. 21, 1938	b 13.78	5,160	69.3	Aug. 19, 12:30 p.m.	10.46	2,740	-

117	Salmon River near East Hampton, Conn.	105	1928-55	Sept. 21, 1938	10.96	12,400	118	Aug. 19, 1 p.m.	6.02	4,870	46.4
118	East Branch Eightmile River near North Lyme, Conn.	22.0	1937-55	Sept. 21, 1938	7.00	2,950	134	Aug. 19, 8:30 p.m.	3.49	467	21.2
119	West Branch Eightmile River at North Plain, Conn.	18.6	1937-55	Sept. 21, 1938	-	1,810	97.3	Aug. 19, 6 a.m.	5.80	750	40.3
	MENUNKETESUCK RIVER BASIN										
120	Menunketesuck River near Clinton, Conn.	11.6	1941-55	Sept. 11, 1954	8.51	1,600	138	Aug. 19, 4 p.m.	3.43	195	16.8
	QUINNIPIAC RIVER BASIN										
121	Quinnipiac River at Wallingford, Conn.	109	1930-55	Sept. 21, 1938	9.55	5,230	48.0	Aug. 20, 5 a.m.	9.01	3,790	34.8
	HOUSATONIC RIVER BASIN										
122	Housatonic River near Great Barrington, Mass.	280	1913-55	Jan. 1, 1949	12.08	12,200	43.6	Aug. 19, 5:30 p.m.	9.65	6,060	21.6
123	Blackberry River at Canaan, Conn.	48.2	1949-55	Nov. 26, 1950	9.37	2,550	52.9	Aug. 19, 7:30 a.m.	13.01	14,200A	295
				Dec. 31, 1948	12.0	-	-				
124	Housatonic River at Falls Village, Conn.	632	1912-55	Jan. 1, 1949	b22.9	23,900	37.8	Aug. 19	b22.8	22,700BD	35.9
125	Salmon Creek near Lime Rock, Conn.	30.1	---	---	-	-	-	About Aug. 19	-	6,300B	209
126	Birdseye Brook near Cornwall, Conn.	3.88	---	---	-	-	-	About Aug. 19	-	1,300A	335
127	Furnace Brook at Cornwall Bridge, Conn.	13.5	---	---	-	-	-	About Aug. 19	-	4,060C	301
128	Tenmile River near Gaylordsville, Conn.	204	1929-55	Sept. 22, 1938	12.77	12,500	61.3	Aug. 19	b 14.9	17,400	85.3
129*	Housatonic River at Gaylordsville, Conn.	994	1900-14,	Jan. 1, 1949	14.85	32,300	32.5	Aug. 19, 5 p.m.	18.58	51,800	52.1
			1940-55	Sept. 22, 1938	b14.5	37,000	37.2				
130	West Aspetuck River near Merryall, Conn.	16.6	---	---	-	-	-	About Aug. 19	-	1,830A	110
131	Still River at Danbury, Conn.	38.3	---	---	-	-	-	About Aug. 19	-	2,770A	72.3
132	Still River near Lanesville, Conn.	68.5	1931-55	Sept. 22, 1938	10.88	4,410	64.4	Aug. 19, 11 p.m.	11.20	3,900	56.9
133	Bantam River at Litchfield, Conn.	20.6	---	---	-	-	-	About Aug. 19	-	10,100A	490
134	Shepaug River near Roxbury, Conn.	133	1930-55	Sept. 21, 1938	b12.8	10,500	78.9	Aug. 19, 8 a.m.	b17.2	50,300A	378

See footnotes at end of table, p. 29.

Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	HOUSATONIC RIVER BASIN--Continued										
135	Sprain Brook near Hotchkissville, Conn.	6.91	---	---	-	-	-	About Aug. 19	-	2,980A	431
136	Nonewaug River near Woodbury, Conn.	25.6	---	---	-	-	-	About Aug. 19	-	12,300CE	480
137*	Pomperaug River at Southbury, Conn.	75.3	1932-55	Sept. 21, 1938	16.0	7,420	98.5	Aug. 19, 6:30 a.m.	21.8	29,400A	390
138	Transylvania Brook near Southbury, Conn.	2.45	---	---	-	-	-	About Aug. 19	-	839A	342
139	Housatonic River at Stevenson, Conn.	1,545	1928-55	Mar. 12, 1936	b23.5	69,500	45.0	Aug. 19, 11 p.m.	23.42	69,300	44.9
140	West Branch Naugatuck River near West Torrington, Conn.	24.2	---	---	-	-	-	About Aug. 19	-	11,900D	492
141	East Branch Naugatuck River near Torrington, Conn.	10.2	---	---	-	-	-	About Aug. 19	-	6,210A	609
142*	Naugatuck River near Thomaston, Conn.	71.9	1930-55	Dec. 31, 1948	12.03	10,200	142	Aug. 19, 5:30 a.m.	24.0	41,600A	579
143	Leadmine Brook near Thomaston, Conn.	24.0	1930-55	Sept. 17, 1934	b11.2	3,080	128	Aug. 19, 5 a.m.	b15.2	10,400B	433
144	Branch Brook near Thomaston, Conn.	21.0	---	---	-	-	-	About Aug. 19	-	10,300C	490
145	Naugatuck River near Waterbury, Conn.	138	---	---	-	-	-	About Aug. 19	-	75,900	550
146	Hancock Brook near Waterbury, Conn.	12.9	---	---	-	-	-	About Aug. 19	-	4,870A	378
147	Steel Brook at Oakville, Conn.	12.9	---	---	-	-	-	About Aug. 19	-	5,890C	457
148	Mad River at Waterbury, Conn.	18.0	---	---	-	-	-	About Aug. 19	-	2,070D	115
149	Hop Brook near Naugatuck, Conn.	16.5	---	---	-	-	-	About Aug. 19	-	2,650C	161

150	Naugatuck River near Naugatuck, Conn.	246	1918-24, 1928-55	Dec. 31, 1948	12.40	28,500	116	Aug. 19	b25.7	106,000A	431
	SAUGATUCK RIVER BASIN										
151	Saugatuck River near Westport, Conn.	77.5	1932-55	Mar. 12, 1936	11.30	5,310	68.5	Aug. 19, 10:30 a.m.	8.04	2,530	32.6
	STREAMS ON LONG ISLAND										
152	Cedar Swamp Creek at Glen Cove, N. Y.	r11	1938-55	Feb. 7, 1941	4.99	782	-	Aug. 12, 1:15 a.m.	5.623	1,040	-
153	Mill Neck Creek at Mill Neck, N. Y.	r11.5	1937-55	Sept. 15, 1944	-	104	-	Aug. 12, 3 a.m.	1.576	135	-
154	Carlls River at Babylon, N. Y.	r35	1944-55	Sept. 11, 1954	1.495	106	-	Aug. 12, 11 p.m.	1.745	132	-
155	Massapequa Creek at Massapequa, N.Y.	r38	1936-55	Jan. 7, 1944	1.616	151	-	Aug. 12, 7:30 p.m.	1.791	180	-
156	East Meadow Brook at Freeport, N.Y.	r31	1937-55	Feb. 15, 1944	2.192	297	-	Aug. 12, 9:45 a.m.	3.64	r355	-
157	Pines Brook at Malverne, N. Y.	r10	1937-55	Sept. 11, 1954	r2.56	r133	-	Aug. 12, 7 a.m.	2.755	191	-
	HUDSON RIVER BASIN										
158	Batavia Kill at Hensonville, N. Y.	13.5	---	---	-	-	-	Aug. 13	-	5,520	409
159	Nauvo Stream at Windham, N. Y.	3.88	---	---	-	-	-	Aug. 13	-	1,700	438
160	Batavia Kill near Ashland, N. Y.	51.2	---	Dec. 11, 1952	-	7,090	138	Aug. 13	(s)	-	-
161	Schoharie Creek at Prattsville, N.Y.	236	1907-55	Sept. 21, 1938	bi15.6	-	-	Aug. 13, 4:45 p.m.	13.83	20,700	87.7
				Nov. 25, 1950	i15.50	49,500	210	Aug. 18, 3 p.m.	12.27	15,700	66.5
163	Durham Kill near Oak Hill, N. Y.	5.82	---	---	-	-	-	Aug. 13	-	2,860	491
164	Catskill Creek at Oak Hill, N. Y.	98	1929-55	Nov. 25, 1950	14.08	12,500	128	Aug. 18, 1:15 p.m.	7.77	2,790	28.5
165	Bashbish Creek at Copake Falls, N.Y.	15.8	---	---	-	-	-	Aug. 19	-	r10,800	684
166	Esopus Creek at Coldbrook, N. Y.	192	1914-55	Mar. 30, 1951	20.70	59,600	310	Aug. 19, 2:30 a.m.	12.30	13,600	70.8
167	Rondout Creek near Lowes Corners, N, Y.	38.5	1937-55	July 22, 1938	i8.2	7,600	197	Aug. 18, 11:45 p.m.	8.02	5,640	146
				Mar. 30, 1951	b,i9.60	-	-				
168	Chestnut Creek at Grahamsville, N.Y.	20.9	1938-55	Nov. 25, 1950	t 4.27	3,800	182	Aug. 18, 11 p.m.	4.68	3,800	182
169*	Rondout Creek near Lackawack, N. Y.	100	1906-55	Aug. 26, 1928	-	26,700	267	Aug. 19, 1:15 a.m.	5.76	u2,360A	u421
170	Sandburg Creek at Spring Glen, N.Y.	27.3	---	June 1, 1952	-	1,850	67.8	Aug. 19	-	3,210	118
171	West Branch Beer Kill near Ellenville, N. Y.	19.7	---	---	-	-	-	Aug. 19	-	3,110A	158

See footnotes at end of table, p. 29.

Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	HUDSON RIVER BASIN--Continued										
172	Fantine Kill at Ellenville, N. Y.	2.46	---	---	-	-	-	Aug. 19	-	1,410A	573
173	Stony Kill near Granite, N. Y.	6.32	---	---	-	-	-	Aug. 19	-	3,520	557
174	Peters Kill near Accord, N. Y.	5.53	---	---	-	-	-	Aug. 19	-	2,550	461
175*	Rondout Creek at Rosendale, N. Y.	386	1926-55	Aug. 27, 1928	21.9	27,300	70.7	Aug. 19, about 6 a.m.	23.93	u30,900B	u106
176	Clove River at Clove Acres outlet, at Sussex, N. J.	19.7	---	---	-	-	-	Aug. 19	-	5,780	293
177	Wallkill River near Unionville, N.Y.	144	1937-55	Dec. 31, 1948	11.4	5,000	34.7	Aug. 19, 9 p.m.	13.35	6,880	47.8
178	Rutgers Creek at Gardnerville, N.Y.	59.7	1943-55	Dec. 31, 1948	8.88	3,600	60.3	Aug. 19, about 9 a.m.	12.38	8,490A	142
179	Pochuck Creek near Pine Island, N.Y.	98.0	1937-55	Sept. 22, 1938	7.80	2,070	21.1	Aug. 20, 7 a.m.	8.43	2,870B	29.3
180	Quaker Creek at Florida, N.Y.	9.74	1937-55	Sept. 21, 1938	6.0	1,050	108	Aug. 19, 4:15 a.m.	5.27	619	63.6
181	Wallkill River at Pellets Island Mountain, N. Y.	385	1920-55	Mar. 14, 1936	25.0	12,400	32.2	Aug. 21, 9:30 a.m.	21.76	10,100	26.2
182	Wallkill River near Philipsburg, N.Y.	419	1936-55	Dec. 31, 1948 Mar. 13, 1936	9.94 11.3	7,380 -	17.6 -	Aug. 21, 1 p.m.	11.33	9,200	22.0
183	Shawangunk Kill at Ganahgote, N. Y.	147	---	June 1, 1952	-	10,500	71.4	Aug. 19	-	15,700	107
184*	Wallkill River at Gardiner, N. Y.	711	1924-55	Mar. 7, 1945 June 1, 1952	k18.83 14.88	- 21,200	- 29.8	Aug. 19, 10:30 a.m.	19.77	30,600	43.0
185*	Wappinger Creek near Wappingers Falls, N. Y.	182	1928-55	Sept. 22, 1938	18.02	15,900	87.4	Aug. 19, about 3 p.m.	19.60	18,600CE	102
186	Fishkill Creek at Beacon, N. Y.	186	1944-55	Jan. 25, 1953	7.28	3,220	17.3	Aug. 20, 4 a.m.	12.13	8,800	47.3
187	Woodbury Creek near Mountainville, N.Y.	17.5	---	---	-	-	-	Aug. 19	-	1,520A	86.9

188	Moodna Creek at Firthcliffe, N. Y.	162	---	---	-	-	-	Aug. 19	-	11,000	67.9
	HACKENSACK RIVER BASIN										
189	Hackensack River at Rivervale, N. J.	58.0	1941-55	Apr. 1, 1951	5.70	1,350	23.3	Aug. 19, 7 p.m.	4.27	900	15.5
190	Pascack Brook at Westwood, N. J.	29.6	1934-55	July 23, 1945	6.76	1,610	54.4	Aug. 19, 7 p.m.	6.07	r1,150	38.9
191	Hackensack River at New Milford, N.J.	113	1921-55	Mar. 31, 1951	6.14	3,660	32.4	Aug. 19, 1 p.m.	4.40	2,230	19.7
	PASSAIC RIVER BASIN										
192	Passaic River near Millington, N. J.	55.4	1903-6, 1921-55	Mar. 8, 1904	i7.50	2,000	36.1	Aug. 19, 2-4 p.m.	7.88	977	17.6
193	Passaic River near Chatham, N. J.	100	1903-11, 1937-55	Jan. 9, 1905	i8.3	r3,000	30.0	Aug. 14, 2 p.m. Aug. 19, 5 a.m.	6.31 b6.31	1,390 1,390	13.9 13.9
194	Rockaway River above reservoir at Boonton, N. J.	116	1937-55	June 2, 1952	6.62	3,250	28.0	Aug. 19, 7:30 p.m.	5.43	2,190	18.9
195	Whippany River at Morristown, N.J.	29.4	1921-55	Aug. 26, 1928 Mar. 12, 1936 Mar. 15, 1940	7.30 - -	1,500 1,500 1,500	51.0 51.0 51.0	Aug. 19, 9:30 a.m.	5.61	1,160	39.5
196	Greenwood Lake at Awosting, N. J.	27.1	1898-1903, 1907-55	Oct. 9-14, 1903	r14.25	-	-	Aug. 19	b12.05	-	-
197	Wanaque River at Awosting, N. J.	27.1	1919-55	Mar. 31, 1951	5.44	1,190	43.9	Aug. 19	b5.61	1,180	43.5
198	Wanaque River at Monks, N. J.	40.4	1935-55	Mar. 31, 1951	b3.85	2,660	65.8	Aug. 19	b,r4.1	r3,400	84.2
199	Ringwood Creek near Wanaque, N.J.	19.1	1934-55	Mar. 31, 1951	b3.74	1,150	60.2	Aug. 19, 8:30 a.m.	3.61	924	48.4
200	Cupsaw Brook near Wanaque, N. J.	4.38	1934-55	Mar. 11, 1936	2.94	536	122	Aug. 19, 6:30 a.m.	2.40	442	101
201	Blue Mine Brook near Wanaque, N.J.	1.71	1934-55	Mar. 30, 1951	2.15	458	268	Aug. 19, 5 a.m.	1.38	156	91.2
202	Ramapo River near Mahwah, N. J.	118	1903-6, 1922-55	Oct. 9, 1903	i9.8	r12,400	105	Aug. 19, 1:30 p.m.	11.38	r7,100	60.2
203	Ramapo River at Pompton Lakes, N.J.	160	1921-55	Mar. 12, 1936	3.56	12,300	76.9	Aug. 19, 6-7 p.m.	3.58	r8,570	53.6
204	Saddle River at Ridgewood, N.J.	r21.4	1954-55	---	-	-	-	Aug. 13, 2 p.m. Aug. 19, 10 a.m.	7.80 8.88	r1,100 r1,500	51.4 70.1

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Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

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				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	PASSAIC RIVER BASIN--Continued										
205	Hohokus Brook at Hohokus, N. J.	r16.5	1954-55	---	-	-	-	Aug. 13, 10 a.m. Aug. 19, 6:30 a.m.	3.49 4.71	r700 r 1,400	42.4 84.8
206	Saddle River at Lodi, N. J.	54.6	1923-55	July 23, 1945	b10.00	3,500	64.1	Aug. 19, 10 p.m.	6.47	2,200	40.3
	RARITAN RIVER BASIN										
207	South Branch Raritan River near High Bridge, N. J.	65.3	1919-55	Mar. 15, 1940	11.78	5,160	69.0	Aug. 19, 9 a.m.	10.48	2,780	42.6
208	South Branch Raritan River at Clinton, N. J.	112	---	---	-	-	-	Aug. 19	-	8,080D	72.1
209	Cakepaulin Creek at Lansdowne, N. J.	13.7	---	---	-	-	-	Aug. 18	-	7,230	528
210*	South Branch Raritan River at Stanton, N. J.	147	1903-6, 1919-55	Mar. 15, 1940, July 19, 1945	12.2	10,900	74.1	Aug. 19, 2 a.m.	15.22	18,000AB	122
211	Prescott Brook near Stanton, N. J.	8.37	---	---	-	-	-	Aug. 18	-	2,010	240
212	Walnut Brook near Flemington, N. J.	2.24	1936-55	July 18, 1945	3.30	645	288	Aug. 18, 12 p.m.	3.02	443	198
213	Neshanic River at Reaville, N. J.	25.7	1930-55	July 18, 1945	b12.33	5,940	231	Aug. 19, 1 a.m.	b11.90	8,830	344
214	North Branch Raritan River near Far Hills, N. J.	26.2	1922-55	Mar. 15, 1940	5.85	3,410	130	Aug. 19, 3:30 p.m.	4.95	r 1,700	64.9
215	Lamington (Black) River near Pottersville, N. J.	32.8	1921-55	Mar. 15, 1940	v5.34	v2,630	80.2	Aug. 13, 4:30 p.m. Aug. 18, 10 p.m.	5.24 4.71	2,480 1,770	75.6 54.0
216	North Branch Raritan River near Raritan, N. J.	190	1923-55	Sept. 21, 1938	12.16	16,500	86.8	Aug. 13, 12:30 p.m. Aug. 19, 7 a.m.	b 12.70 b 13.59	- 20,700	- 109
217	Raritan River at Manville, N. J.	490	1903-7, 1921-55	Sept. 22, 1938	b20.42	-	-	Aug. 19, 4 p.m.	b 22.06	33,300	68.0
218	Stony Brook at Princeton, N. J.	r 44.0	1953-55	Dec. 14, 1953	b8.66	-	-	Aug. 13, 10:30 a.m.	11.90	r 4,600	105

219	Millstone River at Lake Carnegie, N.J.	159	1926-55	Sept. 21, 1938	b4.20	-	-	Aug. 13, 4 p.m. Aug. 19, 10 a.m.	b5.02 4.53	- -	- -
220	Millstone River at Blackwells Mills, N.J.	258	1921-55	Sept. 21, 1938	b15.29	-	-	Aug. 14, 1 a.m. Aug. 19, 6 p.m.	12.42 12.14	- -	- -
221	Raritan River at Bound Brook, N.J.	779	1903-9, 1945-55	Sept. 22, 1938	b16.3	-	-	Aug. 19, 4 p.m.	16.20	30,800	39.5
222	Green Brook at Plainfield, N. J.	9.75	1938-55	July 23, 1938	5.82	2,890	296	Aug. 13, 8 a.m. Aug. 19, 3 a.m.	4.32 3.30	1,270 644	130 66.1
223	Lawrence Brook at Farrington Dam, N.J.	34.4	1927-55	Sept. 21, 1938	26.18	2,660	77.3	Aug. 13, 10:30 a.m.	25.78	1,450	42.2
224	South River at Old Bridge, N. J.	94.6	1939-55	Sept. 15, 1944	11.71	4,250	44.9	Aug. 13, 7 p.m.	11.27	2,680	28.3
	DELAWARE RIVER BASIN										
225	Callicoon Creek at Callicoon, N. Y.	111	1940-55	Aug. 17, 1947	9.68	16,000	144	Aug. 19, 2 a.m.	7.11	8,150	73.4
226	Tenmile River at Tusten, N. Y.	45.0	1946-55	Nov. 26, 1950	6.05	1,870	41.6	Aug. 19, 3 a.m.	9.08	6,850	150
227*	Delaware River above Lackawaxen River, near Barryville, N. Y.	2,023	1940-55	May 23, 1942	23.19	105,000	51.9	Aug. 19, about 3:30 a.m.	26.40	w130,000	w78.7
228	West Branch Lackawaxen River at Prompton, Pa.	59.7	1944-55	Apr. 5, 1947 Nov. 25, 1950 May 23, 1942	8.45 8.42 b16.7	5,230 5,230 -	87.6 87.6 -	Aug. 18, 11 p.m.	9.24	5,860	98.2
229	Dyberry Creek at Dyberry, Pa.	63.2	1943-55	July 10, 1952 May 23, 1942	14.6 b15.86	v15,500	245	Aug. 18, 11:30 p.m.	13.78	11,400A	180
230	Lackawaxen River near Honesdale, Pa.	164	1948-55	July 10, 1952 May 1942	14.2 24.5	12,400 r34,000	75.6 207	Aug. 18, 11:30 p.m.	15.52	18,600	113
231*	Middle Creek near Hawley, Pa.	78.4	1944-55	July 10, 1952 May 23, 1942	14.17 r18	6,970 -	88.9 -	Aug. 19, 1 a.m.	17.87	12,000A	153
232*	Lackawaxen River at Hawley, Pa.	518	1908-19, 1938-55	May 23, 1942	20.1	50,000	a172	Aug. 19, 2. a.m.	20.6	51,900	a179
233	Wallenpaupack Creek at South Sterling, Pa.	14.3	---	May 1942	-	y10,600	-	Aug. 19, about 1 a.m.	-	22,200A	1,550
234	Angels Creek at Angels, Pa.	1.33	---	---	-	-	-	Aug. 18	-	1,070E	805
235	East Branch Wallenpaupack, Creek at Greentown, Pa.	33.9	---	---	-	-	-	Aug. 19, about 12:30 a.m.	-	33,300A	982

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Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

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				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	DELAWARE RIVER BASIN--Continued										
236	West Branch Wallenpaupack Creek near Sterling, Pa.	52.4	---	May 1942	-	z 7,720	-	Aug. 19	-	14,000A	267
237	Butternut Creek near Sterling, Pa.	5.03	---	---	-	-	-	Aug. 18-19	-	3,520A	700
238	Wallenpaupack Creek at Wilsonville, Pa.	228	1913-22 1925-55	---	-	-	-	Aug. 19, 11 p.m. to Aug. 21, 11 p.m.	aa3.45	ab 2,900	-
239	Shohola Creek at Lords Valley, Pa.	25.2	---	---	-	-	-	Aug. 19	-	13,800A	548
240	Mongaup River near Mongaup, N.Y.	202	1939-55	Apr. 9, 1940	-	ac 4,240	21.0	Aug. 19, 4:30 a.m.	11.22	r,ac10,800	53.5
241	Shingle Kill near Sparrow Bush, N.Y.	12.1	---	---	-	-	-	Aug. 19	-	6,590A	545
242*	Delaware River at Port Jervis, N. Y.	3,076	1904-55	May 23, 1942 Oct. 10, 1903	17.76 23.1	p140,000 205,000	45.5 66.6	Aug. 19, about 5:30 a.m.	23.91	p233,000A	75.7
243*	Neversink River at Oakland Valley, N. Y.	222	1928-55	Nov. 26, 1950	12.62	23,300	105	Aug. 19, 2:30 a.m.	12.74	ad23,800	ad183
244	Gumaer Brook near Wurtsboro, N.Y	6.92	---	---	-	-	-	Aug. 19	-	2,870A	415
245	Pine Kill near West Brookville, N.Y.	10.7	---	---	-	-	-	Aug. 19	-	2,640	247
246	Basher Kill at West Brookville, N.Y.	59.5	---	---	-	-	-	Aug. 19	-	4,040	67.9
247	Neversink River at Godeffroy, N. Y.	302	1937-55	Nov. 26, 1950	11.79	20,000	66.2	Aug. 19, 4 a.m.	12.49	ad33,000A	ad157
248*	Delaware River at Montague, N. J.	3,480	1940-55	May 23, 1942 Oct. 10, 1903	25.70 35.5	136,500 -	39.2 -	Aug. 19, 9 a.m.	35.15	-	-
249	Dingmans Creek at Dingmans Ferry, Pa.	15.2	---	---	-	-	-	Aug. 19	-	3,660B	241
250	Bush Kill near Shoemakers, Pa.	85.6	---	---	-	-	-	Aug. 19	-	19,500A	228
251	Saw Creek near Shoemakers, Pa.	29.9	---	---	-	-	-	Aug. 19	-	3,870A	129

252*	Bush Kill at Shoemakers, Pa.	117	1908-55	July 24, 1920	7.2	5,250	44.9	Aug. 19, 4 a.m.	13.95	23,400A	200
253	Big Flat Brook near Hainesville, N.J.	19.9	---	---	-	-	-	Aug. 19	-	4,140	208
254*	Flat Brook near Flatbrookville, N. J.	65.1	1923-55	Apr. 6, 1952	7.24	3,630	55.8	Aug. 19, 11 a.m.	b12.58	9,550A	147
255	Middle Branch Brodhead Creek near Canadensis, Pa.	6.14	---	---	-	-	-	Aug. 18	-	3,840BD	625
256	Paradise Creek near Paradise Valley, Pa.	12.6	---	---	-	-	-	Aug. 18	-	8,870D	704
257	Brodhead Creek at Anglomink, Pa.	124	---	---	-	-	-	Aug. 18	-	72,200A	582
258	McMichaels Creek near Stroudsburg, Pa.	65.3	1911-38	Mar. 12, 1936	b10.5	v3,480	53.3	Aug. 18	b14.1	5,740BE	87.9
259	Pocono Creek near Stroudsburg, Pa.	37.7	1911-19	Jan. 7, 1915 Feb. 26, 1918	6.52 7.1	2,410	63.9	Aug. 18	-	22,400A	594
260*	Brodhead Creek at Minisink Hills, Pa.	259	1950-55	Dec. 1, 1952	14.43	19,900	76.8	Aug. 19, 2 a.m.	b29.9	68,800A	266
261	Paulens Kill at Lafayette, N. J.	33.6	---	---	-	-	-	Aug. 19	-	1,440	42.9
262	Culvers Brook at Culvers Pond near Branchville, N. J.	7.12	---	---	-	-	-	Aug. 19	-	444	62.4
263	Culvers Brook at Branchville, N. J.	10.7	---	---	-	-	-	Aug. 19	-	1,560	146
264	Dry Brook at Branchville, N. J.	4.80	---	---	-	-	-	Aug. 19	-	1,790	373
265	Paulins Kill at Paulins Kill Lake Dam near Newton, N. J.	81	---	---	-	-	-	Aug. 19	-	6,020	74.3
266	Trout Brook at Middleville, N. J.	5.50	---	---	-	-	-	Aug. 19	-	899	163
267*	Paulins Kill at Blairstown, N. J.	126	1921-55	Sept. 22, 1938	7.56	4,480	35.6	Aug. 19, 12 m.	11.12	8,740A	69.4
268	Pequest River at Huntsville, N. J.	31.4	1939-55	July 20, 1945	4.68	596	19.0	Aug. 19, 12 p.m.	5.06	565	18.0
269	Pequest River at Pequest, N. J.	108	1921-55	Mar. 14, 1936	4.97	1,810	16.8	Aug. 19, 11:30 a.m.	3.86	1,110	10.3
270	Beaver Brook near Belvidere, N.J.	36.2	1922-55	Mar. 12, 1936	5.76	1,510	41.7	Aug. 19, 8:30 p.m.	4.40	750	20.7
271*	Delaware River at Belvidere, N. J.	4,535	1922-55	Mar. 19, 1936 Oct. 10, 1903	25.0 b28.6	179,000 220,000	39.5 48.5	Aug. 19, 8 p.m.	30.21	247,000A	54.5
272*	Lehigh River at Stoddartsville, Pa.	91.7	1943-55	Dec. 4, 1950 May 22, 1942	8.59 12.03	v7,250 v15,700	79.1 171	Aug. 19, 4 a.m.	16.37	31,900A	348

See footnotes at end of table, p. 29.

Table 2. --Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	DELAWARE RIVER BASIN--Continued										
273	Tobyhanna Creek near Tobyhanna, Pa.	7.6	---	---		-	-	Aug. 19, 3:30 a.m.	-	2,310D	304
274	Tobyhanna Creek near Blakeslee, Pa.	118	---	May 23, 1942	-	ae7,070	59.9	Aug. 19	-	g35,300A	299
275*	Lehigh River at Tannery, Pa.	322	1914-55	May 22, 1942	16.51	29,600	91.9	Aug. 19, 5 a.m.	22.2	58,300A	181
276	Dilldown Creek near Long Pond, Pa.	2.39	1948-55	July 10, 1952	3.195	281	118	Aug. 18, 7 p.m.	3.37	342	143
277	Wild Creek at Hatchery, Pa.	16.8	1941-55	May 23, 1942	6.00	v2,360	140	Aug. 18, 9:30 p.m.	5.59	1,630B	109
278	Pohapoco Creek near Parryville, Pa.	109	1940-55	May 23, 1942	7.42	5,300	48.6	Aug. 18, 11:30 p.m.	6.77	5,250A	48.2
279	Aquashicola Creek at Palmerton, Pa.	76.7	1939-55	July 10, 1945	13.63	11,700	153	Aug. 19, 3:30 a.m.	9.82	4,380	57.1
280*	Lehigh River at Walnutport, Pa.	889	1946-55	Dec. 4, 1950 May 23, 1942	12.66 b20.6	46,000	51.7	Aug. 19, 6:30 a.m.	b17.68	77,800	87.5
281	Little Lehigh Creek near Allentown, Pa.	80.8	1945-55	Aug. 18, 1946 July 9, 1935	5.14 9.5	1,300	16.1	Aug. 18, 9 p.m.	6.17	1,880	23.3
282	Jordan Creek at Allentown, Pa.	75.8	1944-55	May 23, 1942	r7.1	-	-	Aug. 19, 4:30 a.m.	b8.00	9,520A	126
283	Monocacy Creek at Bethlehem, Pa.	44.5	1948-55	July 28, 1951 July 10, 1945	4.42 b9.74	419 5,200	9.42 117	Aug. 19, 5:30 a.m.	4.68	495	11.1
284*	Lehigh River at Bethlehem, Pa.	1,279	1902-05 1909-55	May 23, 1942	b23.47	92,000	71.9	Aug. 19, 10 a.m.	23.38	91,300	71.4
285	Musconetcong River at outlet of Lake Hopatcong, N. J.	25.6	1928-55	Mar. 19, 1936	3.17	534	20.9	Aug. 20, 5 a.m.	3.85	r700	27.3
286	Musconetcong River near Hackettstown, N. J.	70.0	1921-55	Mar. 12, 1936	i5.88	1,430	20.4	Aug. 19, 4 p.m.	3.98	r2,200	31.4
287*	Musconetcong River near Bloomsbury, N. J.	143	1921-55	Mar. 15, 1940	7.55	v5,760	40.3	Aug. 19, 9 a.m.	6.95	4,430A	31.0

288*	Delaware River at Riegelsville, N. J.	6,328	1906-55	Mar. 19, 1936 Oct. 10, 1903	32.45 b35.9	210,000 r 275,000	33.2 43.5	Aug. 20, 1 a.m.	38.85	-	-
289*	Tahickon Creek near Pipersville, Pa.	97.4	1935-55	Aug. 9, 1942	10.48	13,700	141	Aug. 18, 12 p.m.	11.26	16,000	164
290*	Delaware River at Trenton, N. J.	6,780	1913-55	Mar. 19, 1936 Mar. 8, 1904 Oct. 11, 1903	16.66 k22.8 20.7	227,000 - 295,000	33.5 - 43.5	Aug. 20, 6-7 a.m.	20.83	r 329,000	48.5
291*	Neshaminy Creek near Langhorne, Pa.	210	1934-55	July 23, 1938 Aug. 23, 1933	15.94 b17.3	24,800 30,000	118 143	Aug. 19, 9 a.m.	22.84	49,300A	235
292	Schuylkill River at Pottsville, Pa.	53.4	1943-55	Nov. 25, 1950 May 1942	7.9 b8.8	4,800 6,170	89.9 116	Aug. 18, 8 p.m.	6.33	2,760	51.7
293	Schuylkill River at Auburn, Pa.	160	1947-51	Nov. 25, 1950 May 1942	13.19 b15.5	9,630 -	60.2 -	Aug. 19	b10.80	6,520	40.8
294*	Little Schuylkill River at Tamaqua, Pa.	42.9	1916-55	May 22, 1942	7.95	4,310	100	Aug. 18, 5:30 p.m.	b 11.10	7,790B	182
295	Little Schuylkill River at Drehersville, Pa.	122	1947-51	Nov. 25, 1950 Dec. 4, 1950	10.96 11.02	10,300 10,300	84.4 84.4	Aug. 19	b 14.76	18,200	149
296	Schuylkill River at Berne, Pa.	355	1947-55	Dec. 4, 1950 May 1942	14.46 b15.0	24,200 26,900	68.2 75.8	Aug. 19, 1 a.m.	15.73	29,400	82.8
297	Tulpehocken Creek near Reading, Pa.	211	1950-55	Sept. 1, 1952	8.65	v 7,680	36.4	Aug. 18, 11:30 p.m.	7.94	6,760	32.0
298	Schuylkill River at Pottstown, Pa.	1,147	1927-55	May 13, 1942 Feb. 28, 1902	20.15 b21.0	50,800 53,900	44.3 47.0	Aug. 19, 1:30 p.m.	17.98	42,300	36.9
299	Perkiomen Creek at Graterford, Pa.	279	1914-55	July 9, 1935	18.26	39,900	143	Aug. 19, 12:15 a.m.	14.08	24,400	87.5
300	Schuylkill River at Philadelphia, Pa.	1,893	1898-1912, 1931-55	Mar. 1, 1902 Oct. 4, 1869	14.8 b17.0	98,000 135,000	51.8 71.3	Aug. 19, 6:30 a.m.	14.32	89,800	47.4
301	Ridley Creek at Maylan, Pa.	31.9	1931-53	Nov. 25, 1950	10.84	5,720	179	Aug. 18	b9.42	4,390	138
302	Chester Creek near Chester, Pa.	61.1	1931-55	Nov. 25, 1950	b16.21	v 14,400	236	Aug. 18, 9 p.m.	b 13.57	9,380B	154
303	Brandywine Creek at Chadds Ford, Pa.	287	1911-53	Mar. 5, 1920	b15.0	17,200	59.9	Aug. 19, 2 a.m.	b 14.64	16,400	57.1
	SUSQUEHANNA RIVER BASIN										
304	Tunkhannock Creek at Dixon, Pa.	383	1914-55	Apr. 5, 1947	13.96	32,200	84.1	Aug. 19, 6 a.m.	7.92	8,080	21.1

See footnotes at end of table, p. 29.

Table 2.--Summary of stages and discharges in the Northeast during the floods of August 1955--Continued

No. on pl. 1	Stream and place of determination	Drainage area (sq mi)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (cfs)	Cfs per sq mi	Date and hour	Gage height (feet)	Discharge (cfs)	Cfs per sq mi
	SUSQUEHANNA RIVER BASIN--Con.										
305	Lackawanna River at Archbald, Pa.	108	1940-55	May 22, 1942	10.58	9,510	88.1	Aug. 19, 1 a.m.	7.50	5,050	46.8
306	Roaring Brook at Dunmore, Pa.	49.4	---	---	-	-	-	Aug. 19, 1 a.m.	-	18,500D	374
307	Little Roaring Brook at Dunmore, Pa.	5.12	---	---	-	-	-	Aug. 18	-	601D	117
308	Spring Brook at Rockdale, Pa.	15.9	---	May 1942	-	2,120	133	Aug. 18-19	-	3,130D	197
309	Spring Brook near Rockdale, Pa.	37.0	---	May 1942	-	7,500	203	Aug. 19	-	9,280D	251
310	Spring Brook at intake Dam near Moosic, Pa.	43.1	---	May 1942	-	8,360	194	Aug. 19	-	10,500D	244
311	Spring Brook near Moosic, Pa.	50.7	---	---	-	-	-	Aug. 19	-	10,300A	203
312*	Lackawanna River at Old Forge, Pa.	332	1938-55	May 23, 1942	15.30	20,900	63.0	Aug. 19, 2 a.m.	20.05	31,000A	93.4
313	Susquehanna River at Wilkes-Barre, Pa.	9,960	1890-1955	Mar. 20, 1936	33.07	232,000	23.3	Aug. 19, 7:30 a.m.	12.84	52,500	5.27
314	Toby Creek at Luzerne, Pa.	32.4	1941-55	Dec. 30, 1942	-	-	-	Aug. 18, 7 p.m.	4.33	2,440	75.3
315	Solomon Creek at Wilkes-Barre, Pa.	15.7	1940-55	Aug. 17, 1947 Sept. 16, 1933	6.40 b11.4	- -	- -	Aug. 18, 7:30 p.m.	9.83	2,450C	157
316*	Wapwallopen Creek near Wapwallopen, Pa.	45.8	1919-55	July 22, 1952	8.96	2,980	65.1	Aug. 18, 11 p.m.	9.23	3,140	68.6
317	Nescopeck Creek near Nescopeck, Pa.	161	---	---	-	-	-	Aug. 18-19	-	13,400B	83.2
318	Fishing Creek near Bloomsburg, Pa.	274	1938-55	Mar. 31, 1940 Mar. 18, 1936	b12.08 11.86	18,100 17,600	66.1 64.2	Aug. 19, 4 a.m.	8.54	7,980	29.1

a Based on contributing area.
b From floodmarks.
c Affected by failure of Horseshoe Dam on Mill River.
d No flow from Mansfield Hollow Reservoir (drainage area, 159 sq mi); unit rate adjusted for effective drainage area.
e Drainage area, 68.0 sq mi at a site used in 1938.
f Affected by failure of Glenecho Dam upstream.
g Affected by failure of dam or dams upstream.
h Small controlled flow from Quabbin Reservoir (drainage area, 186 sq mi).
i Site and datum then in use.
j Controlled release from Knightville flood-control reservoir.
k Ice jam.
m From 189 sq mi; 162 sq mi above Knightville flood-control dam contributed negligible discharge.
n Affected by storage in Borden Brook and Cobble Mountain Reservoirs.
o Affected by storage in Congamond Lakes.
p Affected by storage and/or diversion in reservoirs upstream.
q No flow from Otis Reservoir; unit rate adjusted for effective drainage area, 74.8 sq mi.
r Approximately.
s About 2.7 ft higher than in 1952.
t Some flow bypassed gage; discharge computed on basis of peak flow at station and slope-area determination of bypass water.
u Essentially no flow from Rondout Reservoir (drainage area 94.4 sq mi); unit rate adjusted for effective drainage area.
v Revised.
w Essentially no flow from Pepacton Reservoir; unit rate adjusted for effective drainage area, 1,652 sq mi.
x Excluding drainage area of Wallenpaupack Creek, flow from which normally is diverted around station.
y At a site about 10 miles downstream (drainage area, 75.4 sq mi).
z At a site about 2 miles downstream (drainage area, 68.9 sq mi).
aa Head over top of roller gates; furnished by Pennsylvania Power and Light Co.
ab Affected by storage in Lake Wallenpaupack.
ac Affected by storage in Toronto, Cliff Lake, and Swinging Bridge Reservoirs.
ad Essentially no flow from Neversink Reservoir (drainage area, 91.8 sq mi); unit rate adjusted for effective drainage area.
ae At a site 0.3 mile downstream (drainage area, 118 sq mi).

In figures 4 and 5, the unit discharge (cubic feet per second per square mile) has been plotted against drainage area (square miles) for all stations listed in the summary of stages and discharges (table 2). These graphs, show the interrelation of the peak discharges at the many observation points. An excellent idea of the upper limiting parameter of the plotted points may be obtained from the graphs, and they serve as a basis for comparison of the data for the present flood with those for other floods. The reference numbers used in table 2 and on plate 1 are shown alongside the highest plotted points for identity.

Gaging-Station Records

Continuous records are collected at the regular gaging stations that show both stage and discharge at any moment and their variations during any length of time. It is thus possible to plot graphs of discharge in flood periods, like those shown in figures 6, 7, and 8. These graphs are for data at selected gaging stations in the August flood area, chosen for their geographic distribution. The peak discharge of the highest previous flood at each station has been shown as a point of comparison.

The graphs show the different flow characteristics of the streams and the relative effect on them of the Connie and Diane storms. The Connie storm had very little effect on some streams, but it had large effect on others. For most stations, the hydrograph in the Connie storm period (around August 12 and 13) was drawn from daily mean discharges. This has the effect of attenuating the rise at that time as compared with the more detailed graph for the later and greater peak. The area under the curve, however, essentially represents the volume of flow.

One of the more interesting graphs is that for Charles River in figure 6. Charles River rose to an intermediate peak and leveled for a while. This was followed by a slower rise to a higher peak, followed by a quite slow recession. The action demonstrates the streamflow characteristic of the basin which is formed by sandy soils that have high rainfall absorption, flat terrain and its slow runoff characteristics, and a sizable area of ponds. It is quite in contrast with the hydrograph for a number of the other stations where the water rose quickly and then subsided almost as quickly.

In order to plot detailed graphs of stage and discharge, and to present other information for the floods, tabulations of data are presented in the following pages for 51 gaging stations in the flood area. This is a selection from a total of about 200 gaging stations in that area. The number shown in parentheses with the name of each gaging station is the same as that used for that station in the summary table 2 and on the map showing the location of all sites (plate 1).

For each gaging station the tabulations include a station description and two tables. The descriptive section contains a description of the location, how the record was obtained, maxima during the present and during previous floods, and other information. The first table lists the daily mean discharge during the flood period, usually August 1-31. The second table shows stage and discharge in sufficient detail to plot accurate hydrographs. In most cases, the daily mean discharge can be computed from the detailed data; in cases where this cannot be done, because of minor variations of no hydrologic import, the fact is noted.

Other, and more detailed, data are available in the basic records held by the Geological Survey, and these may be studied at the appropriate field office.

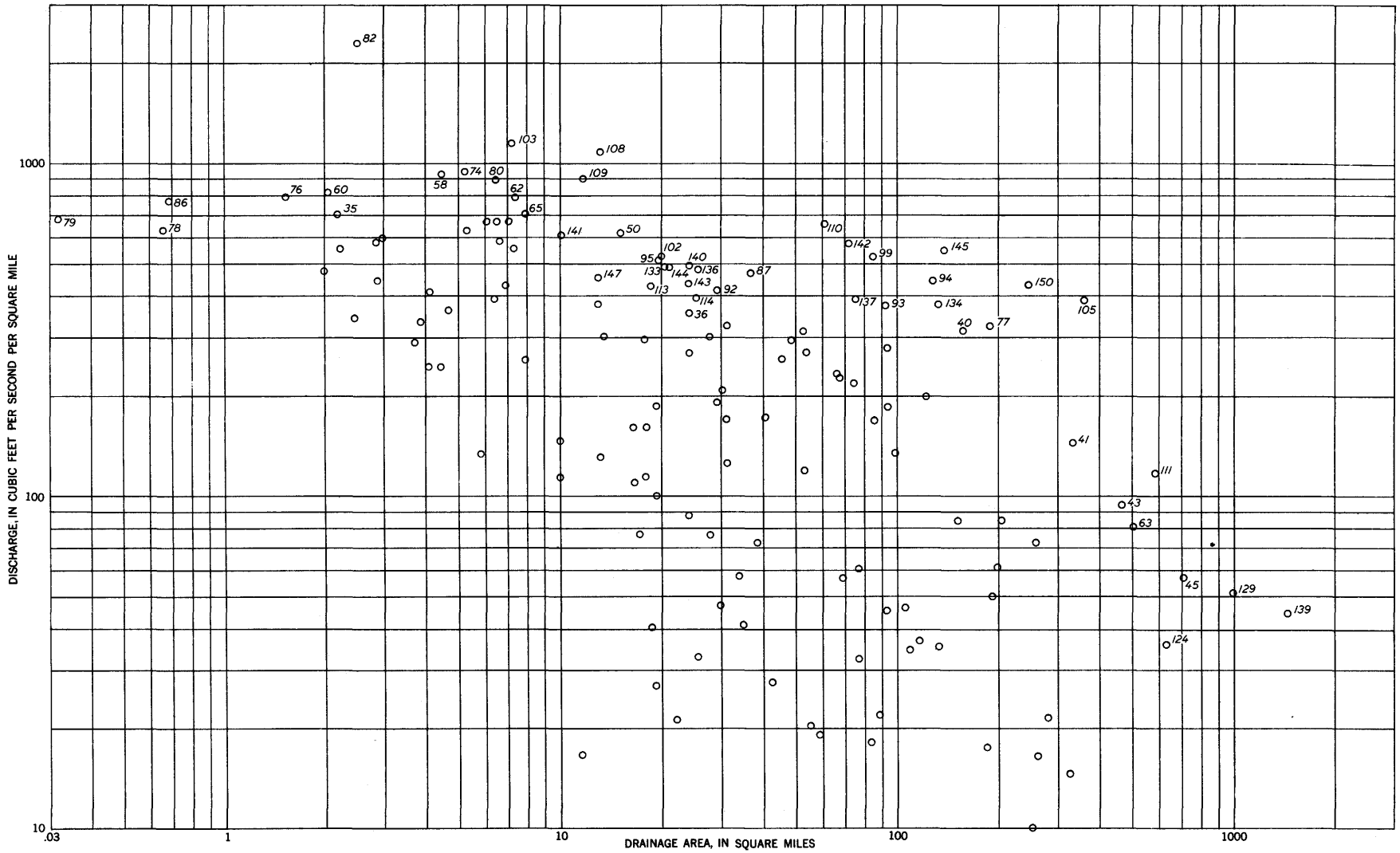

Figure 4. --Graph of relation of unit discharge and size of drainage area, east of Hudson River, floods of August 18-19, 1955.

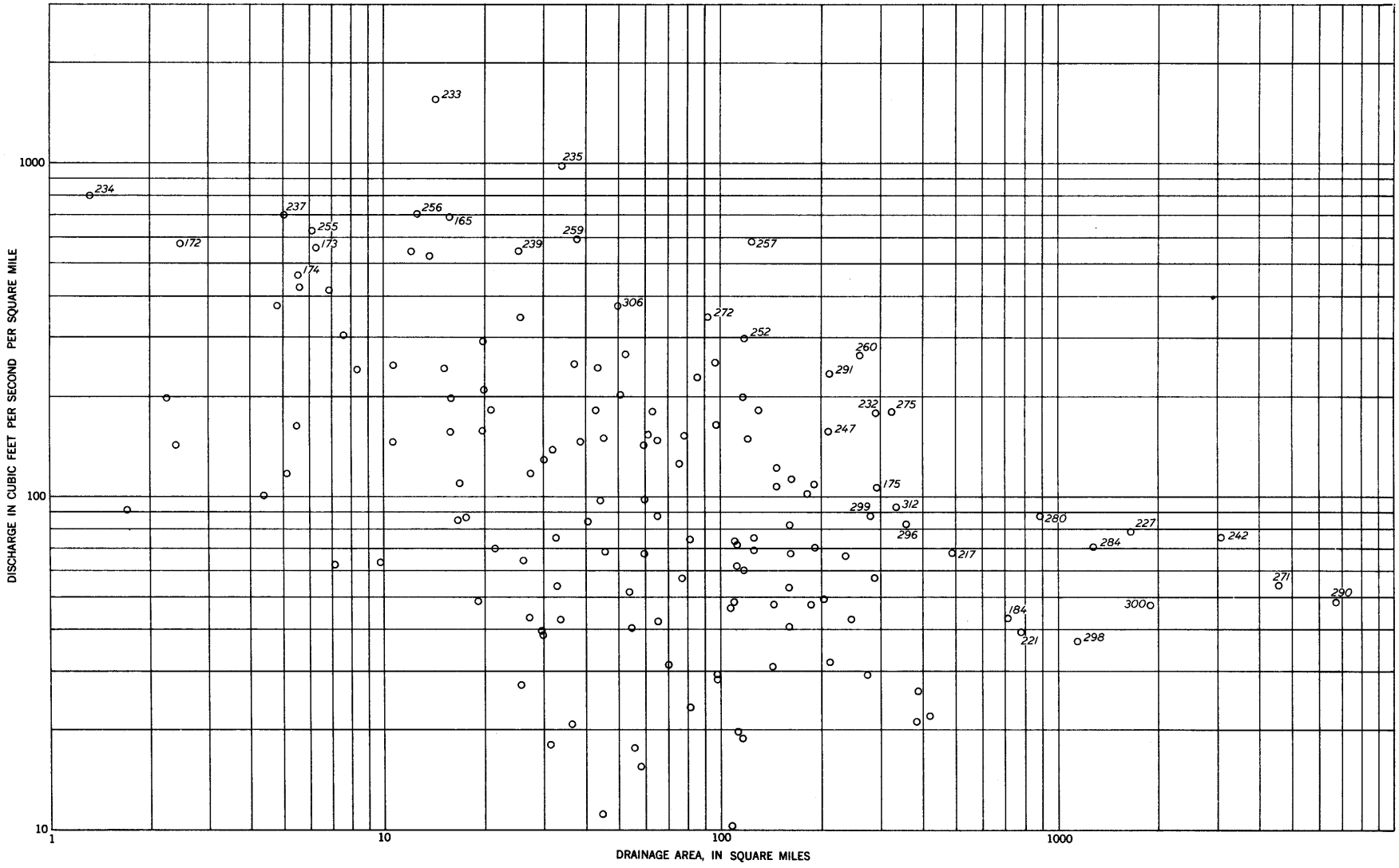

Figure 5. --Graph of relation of unit discharge and size of drainage area, west of Hudson River, floods of August 18-19, 1955.

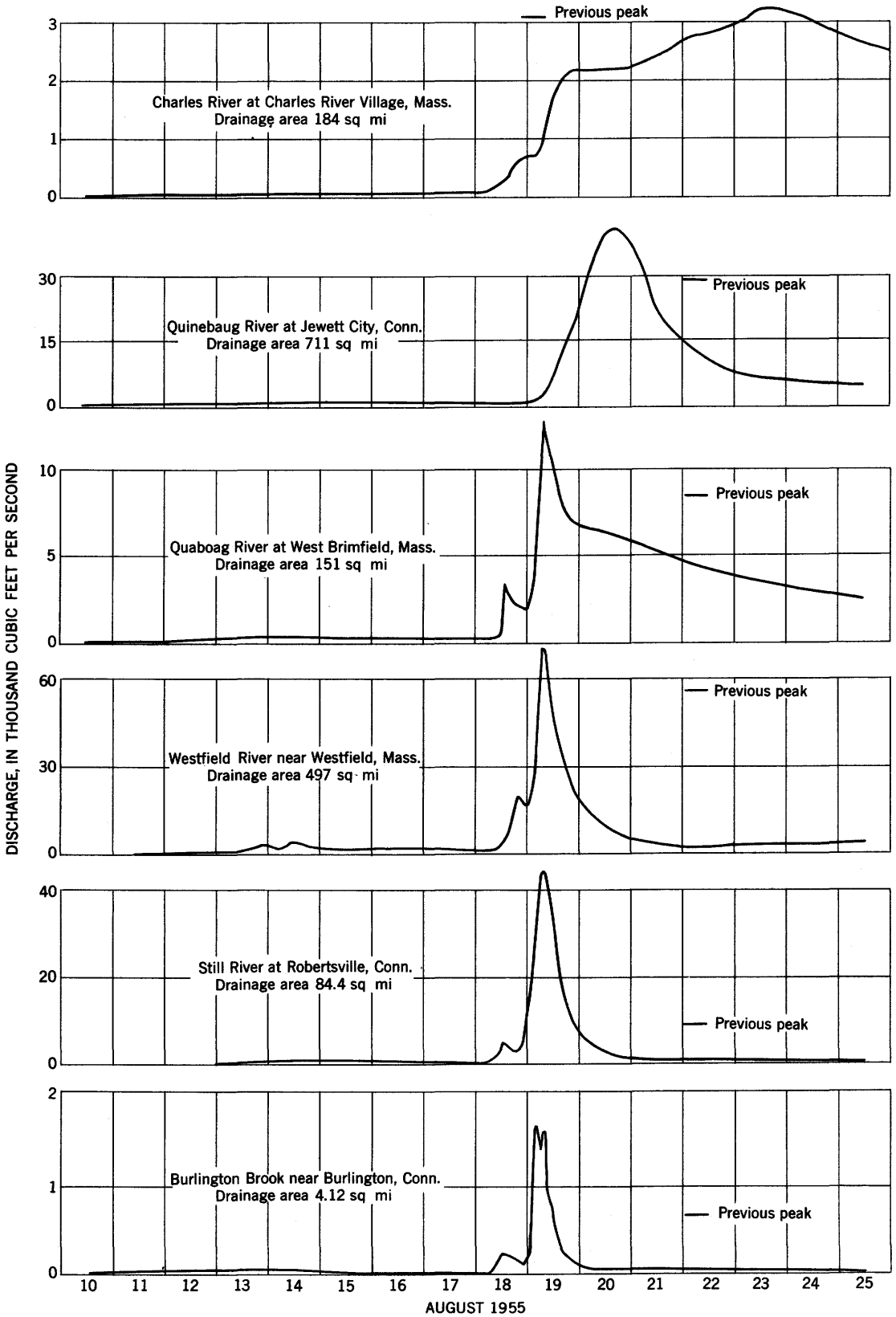

Figure 6. --Graphs of discharge at selected gaging stations, August 10-25.

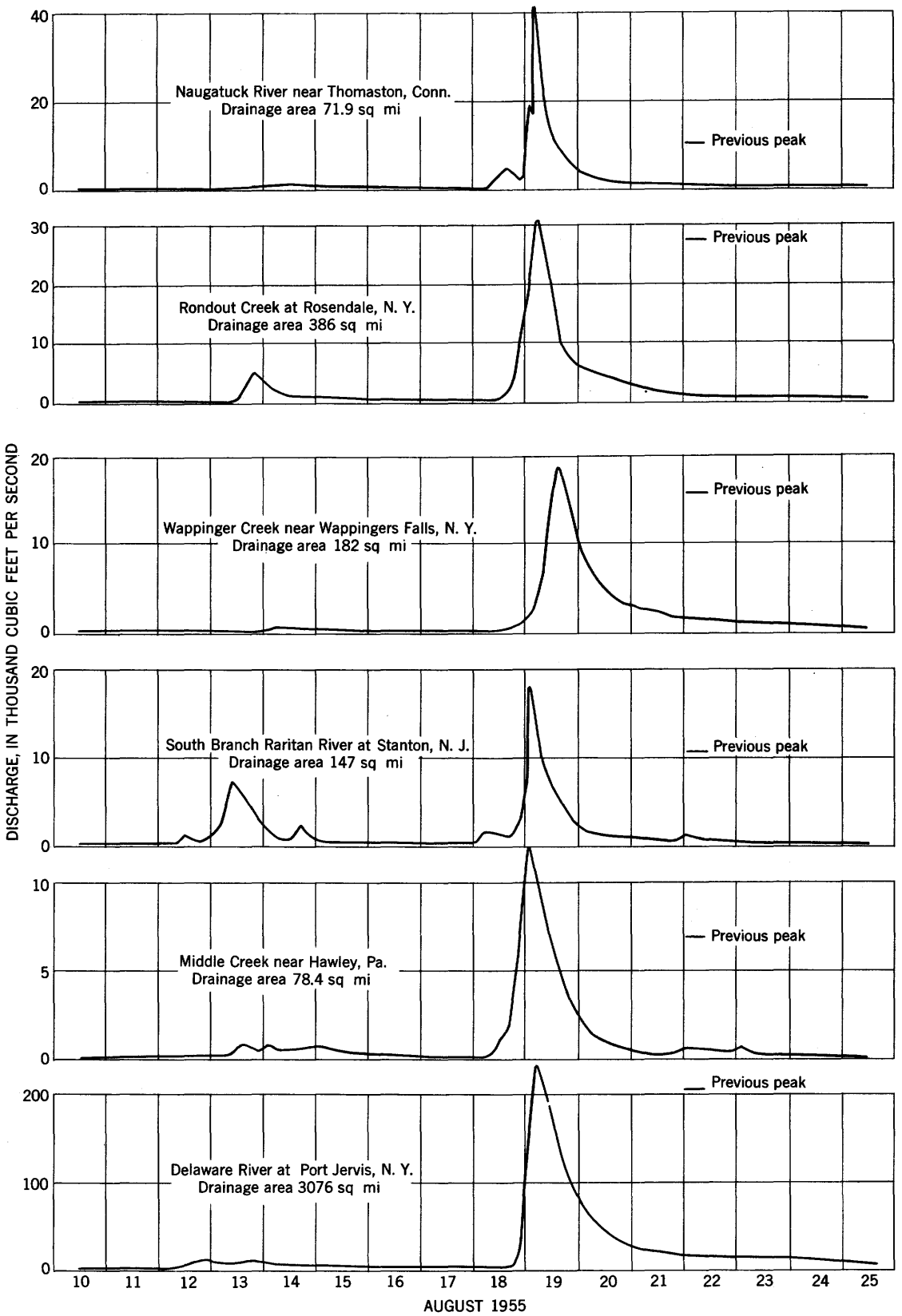

Figure 7. --Graphs of discharge at selected gaging stations, August 10-25.

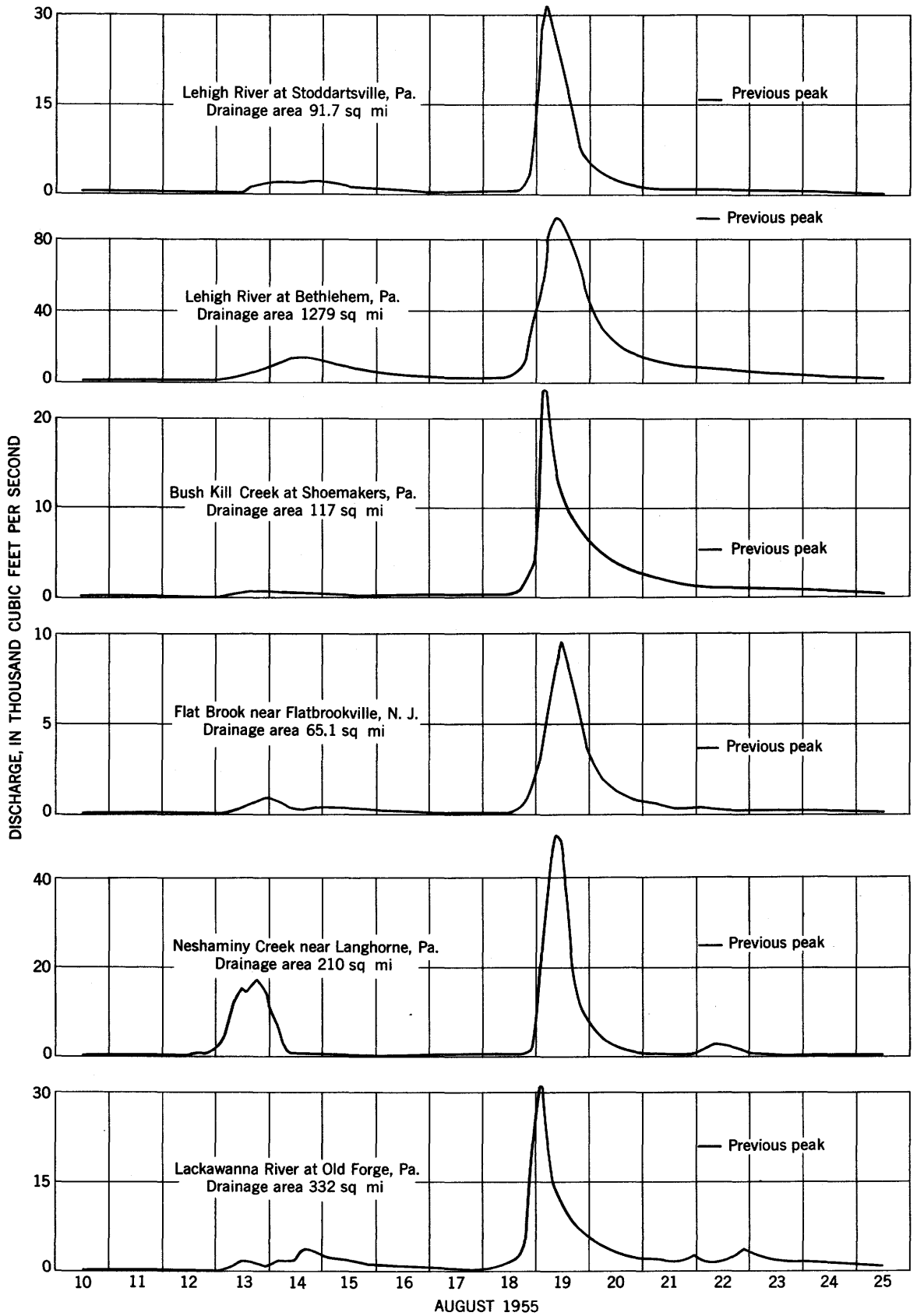

Figure 8. --Graphs of discharge at selected gaging stations, August 10-25.

(2) Concord River below River Meadow Brook, at Lowell, Mass.

Location.--Lat 42°38'12", long 71°18'09", on right bank 300 ft downstream from Rogers Street Bridge at Lowell, Middlesex County, 0.3 mile downstream from River Meadow Brook, and 0.8 mile upstream from mouth. Datum of gage is 67.41 ft above mean sea level, datum of 1929.
Drainage area.--Total above gage, 405 sq mi; net above gage, 312 sq mi (diversion as needed from 92.6 sq mi for use of Boston metropolitan district).
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements. Backwater from grass at times.
Maxima.--August 1955: Discharge, 4,540 cfs 8 to 10 p.m. Aug 23 (gage height, 8.97 ft).
1936 to July 1955: Discharge, 3,790 cfs July 29, 1938 (gage height, 8.11 ft).
Remarks.--Discharge includes water wasted from 92.6 sq mi in basins of Sudbury River and Lake Cochituate. Water diverted above station for use of city of Lowell. Medium and low flows regulated by mills above station.

Mean discharge, in cubic feet per second

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
Aug. 1	165	Aug. 9	91	Aug. 17	185	Aug. 25	4,230	Sept. 2	2,220	Sept. 10	1,110
2	140	10	80	18	232	26	3,970	3	2,020	11	1,040
3	135	11	86	19	605	27	3,720	4	1,850	12	988
4	102	12	114	20	1,200	28	3,480	5	1,720	13	920
5	110	13	166	21	2,240	29	3,190	6	1,590	14	861
6	92	14	208	22	3,800	30	2,940	7	1,460	15	805
7	88	15	225	23	4,490	31	2,680	8	1,320		
8	115	16	198	24	4,430	Sept. 1	2,440	9	1,220		

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 18			Aug. 20--Con.			Aug. 22--Con.			Aug. 23--Con.		
12 p.m.	5.18	275	12 m.	6.58	1,190	12	8.82	4,280	12	8.93	4,490
			6 p.m.	6.73	1,310						
Aug. 19			12	6.95	1,510	Aug. 23			Aug. 24		
3 a.m.	5.23	297				2 a.m.	8.84	4,320	12 m.	8.89	4,440
6	5.39	375	Aug. 21			4	8.88	4,410	12 p.m.	8.83	4,360
9	5.45	408	6 a.m.	7.27	1,840	6	8.92	4,480			
12 m.	5.84	644	12 m.	7.28	2,190	8	8.95	4,520	Aug. 25		
3 p.m.	6.05	784	6 p.m.	7.85	2,600	10	8.96	4,530	12 m.	8.73	4,230
6	6.12	840	12	8.19	3,170	12 m.	8.96	4,530	12 p.m.	8.63	4,100
9	6.19	890				2 p.m.	8.96	4,530			
12	6.25	935	Aug. 22			4	8.95	4,520	Aug. 26		
			6 a.m.	8.40	3,540	6	8.95	4,520	12 m.	8.53	3,970
Aug. 20			12 m.	8.60	3,860	8	8.97	4,540	12 p.m.	8.43	3,840
6 a.m.	6.43	1,070	6 p.m.	8.71	4,070	10	8.97	4,540			

(3) Charles River at Charles River Village, Mass.

Location.--Lat 42°15'23", long 71°15'42", on right bank 0.25 mile downstream from highway bridge at Charles River Village, Norfolk County, 0.8 mile downstream from Noanet Brook, and 1.3 miles northeast of Dover. Datum of gage is 89.76 ft above mean sea level, datum of 1929.
Drainage area.--184 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements.
Maxima.--August 1955: Discharge, 3,220 cfs 2 to 3 p.m. Aug. 23 (gage height, 9.24 ft).
1937 to July 1955: Discharge, 3,110 cfs July 27, 1938 (gage height, 9.00 ft).
Flood in March 1936 reached a discharge of 3,170 cfs, by computation of flow over dam at site a quarter of a mile above station.
Remarks.--Diversion above station for municipal supply of Wellesley and Needham. Occasional diversion from Sudbury River basin.

Mean discharge, in cubic feet per second

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
Aug. 1	47	Aug. 8	30	Aug. 15	74	Aug. 22	2,800	Aug. 29	1,650	Sept. 5	750
2	42	9	31	16	77	23	3,130	30	1,440	6	680
3	42	10	34	17	94	24	3,020	31	1,280	7	621
4	42	11	38	18	322	25	2,660	Sept. 1	1,150	8	563
5	42	12	54	19	1,450	26	2,370	2	1,020	9	514
6	31	13	69	20	2,200	27	2,140	3	916		
7	30	14	63	21	2,430	28	1,900	4	829		

(3) Charles River at Charles River Village, Mass.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19--Con.			Aug. 22			Aug. 25--Con.		
12 p.m.	0.96	111	12 m.	6.22	1,580	6 a.m.	8.59	2,740	6 p.m.	8.27	2,580
			1 p.m.	6.43	1,660	12 m.	8.71	2,810	12	8.12	2,510
Aug. 18			2	6.61	1,740	6 p.m.	8.82	2,870			
3 a.m.	.94	104	3	6.80	1,830	12	8.89	2,910	Aug. 26		
6	.93	101	4	6.96	1,920				6 a.m.	7.98	2,440
9	1.21	195	5	7.11	2,010	Aug. 23			12 m.	7.81	2,360
12 m.	1.35	234	6	7.20	2,060	4 a.m.	9.00	3,000	6 p.m.	7.66	2,300
2 p.m.	1.68	317	7	7.29	2,110	8	9.15	3,130	12	7.49	2,220
4	2.12	423	8	7.36	2,150	12 m.	9.22	3,200			
6	2.57	531	9	7.42	2,180	2 p.m.	9.24	3,220	Aug. 27		
8	2.87	603	10	7.46	2,200	3	9.24	3,220	6 a.m.	7.33	2,150
10	3.13	668	11	7.48	2,210	4	9.23	3,210	12 m.	7.34	2,150
12	3.24	695	12	7.50	2,220	6	9.22	3,200	6 p.m.	7.26	2,120
						8	9.20	3,180	12	7.10	2,040
Aug. 19			Aug. 20			10	9.22	3,200			
1 a.m.	3.26	700	6 a.m.	7.47	2,210	12	9.20	3,180	Aug. 28		
2	3.26	700	12 m.	7.42	2,190				12 m.	6.76	1,900
3	3.25	697	6 p.m.	7.43	2,190	Aug. 24			12 p.m.	6.43	1,770
4	3.24	694	12 p.m.	7.52	2,230	6 a.m.	9.15	3,130			
5	3.27	703				12 m.	9.02	3,020	Aug. 29		
6	3.35	722				6 p.m.	8.88	2,910	12 m.	6.13	1,650
7	3.68	806	Aug. 21			12	8.74	2,820	12 p.m.	5.84	1,540
8	4.26	949	6 a.m.	7.71	2,320						
9	4.76	1,090	12 m.	7.93	2,420	Aug. 25			Aug. 30		
10	5.31	1,260	6 p.m.	8.14	2,520	6 a.m.	8.59	2,740	12 m.	5.56	1,430
11	5.83	1,430	12	8.41	2,660	12 m.	8.43	2,660	12 p.m.	5.30	1,340

(16) Blackstone River at Woonsocket, R. I.

Location.--Lat 42°00'22", long 71°30'13", on right bank at Woonsocket, Providence County, 50 ft downstream from Peters River. Datum of gage is 107.42 ft above mean sea level, datum of 1929.
Drainage area.--416 sq mi.
Gage-height record.--Water-stage recorder graph except for periods 8:30 p.m. Aug. 19 to 1 p.m. Aug. 22 and 6:30 p.m. Aug. 23 to 8 a.m. Aug. 26. One measurement of stage from a temporary reference point obtained Aug. 20. Graph for Aug. 24, 25 drawn on basis of range line and trend of recorded graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 15,000 cfs and extended to peak stage on basis of slope-area determination at gage height 21.8 ft. Discharge for period 9 p.m. Aug. 19 to noon Aug. 22 estimated on basis of 1 measurement of stage, floodmarks, and records for Blackstone River at Northbridge, Mass. Backwater from grass at times.
Maxima.--August 1955: Discharge, 32,900 cfs 10 p.m. Aug. 19 (gage height, 21.8 ft, from floodmarks), affected by failure of Horseshoe Dam on Mill River.
1929 to July 1955: Discharge, 15,100 cfs July 24, 1938 (gage height, 14.43 ft).
Remarks.--Discharge includes flow diverted from Nashua River basin to Blackstone River basin for supply of Worcester, Mass., and flow diverted around station in Hamlet Trench. Flood flow affected by reservoirs and by dam failures above station. Low and medium flows regulated by powerplants above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	142	7	128	12	211	17	318	22	6,430	27	2,190
2	162	8	150	13	357	18	686	23	4,410	28	1,910
3	135	9	185	14	595	19	11,200	24	4,260	29	1,710
4	125	10	150	15	403	20	25,900	25	3,500	30	1,460
5	139	11	155	16	348	21	12,200	26	2,750	31	1,380
6	127										

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19--Con.			Aug. 20--Con.			Aug. 23--Con.		
12 p.m.	2.46	279	3	4.63	1,650	4	---	25,200	6	6.75	4,300
			4	4.86	1,900	6	---	22,700	8	---	4,400
Aug. 18			5	5.70	2,910	8	---	20,600	10	---	4,470
1 a.m.	2.50	291	6	6.89	4,460	10	---	19,100	12	---	4,530
2	2.51	294	7	7.51	5,260	12	---	17,500			
3	2.51	294	8	8.09	6,010				Aug. 24		
4	2.50	291	9	8.53	6,580	Aug. 21			6 a.m.	6.88	4,460
5	2.48	285	10	9.20	7,460	6 a.m.	---	14,200	12 m.	6.73	4,280
6	2.84	407	11	9.89	8,390	12 m.	---	11,800	6 p.m.	6.57	4,080
7	3.12	530	12 m.	10.28	8,940	6 p.m.	---	9,940	12	6.40	3,880
8	2.76	377	1 p.m.	10.64	9,440	12	---	8,470			
9	2.88	423	2	11.47	10,600				Aug. 25		
10	2.88	423	3	12.17	11,700	Aug. 22			6 a.m.	6.24	3,690
11	2.98	465	4	12.77	12,600	6 a.m.	---	7,320	12 m.	6.09	3,510
12 m.	3.41	683	5	13.47	13,600	12 m.	---	6,310	6 p.m.	5.92	3,310
1	3.22	580	6	14.21	14,700	2 p.m.	8.05	5,960	12	5.72	3,090
2	3.80	939	7	14.69	15,500	4	7.84	5,680			
3	3.52	751	8	15.37	16,600	6	7.68	5,480	Aug. 26		
4	3.55	770	9	---	27,100	8	7.52	5,270	6 a.m.	5.56	2,920
5	3.60	803	10	21.8	32,900	10	7.35	5,050	12 m.	5.39	2,730
6	3.61	810	11	---	31,500	12	7.18	4,830	6 p.m.	5.28	2,610
7	4.22	1,230	12	---	29,800				12	5.11	2,420
8	4.36	1,340				Aug. 23					
9	4.19	1,210	Aug. 20			2 a.m.	7.01	4,620	Aug. 27		
10	4.20	1,220	2 a.m.	---	28,400	4	6.85	4,420	6 a.m.	5.02	2,320
11	4.23	1,240	4	---	27,800	6	6.99	4,590	12 m.	4.82	2,120
12	4.33	1,320	6	---	27,800	8	6.81	4,380	6 p.m.	4.77	2,070
			8	---	28,400	10	6.74	4,290	12	4.75	2,050
Aug. 19			10	---	29,200	12 m.	6.71	4,260			
1 a.m.	4.41	1,400	12 m.	---	29,600	2 p.m.	6.71	4,260			
2	4.50	1,510	2 p.m.	---	28,300	4	6.72	4,270			

(20) Willimantic River near South Coventry, Conn.

Location.--Lat 41°45'02", long 72°15'58", on left bank 700 ft upstream from highway bridge, 1 mile downstream from Mill Brook, 2.4 miles southwest of South Coventry, Tollard County, 2.8 miles upstream from Hop River, and at mile 6.3. Datum of gage is 239.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.--121 sq mi.
Gage-height record.--Water-stage recorder graph except for period 1:30 to 10 p.m. Aug. 19. Graph for this period drawn on basis of floodmark and time of peak.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 3,600 cfs and by computation of flow over dam at gage height 12.19 ft and contracted-opening determination at gage height 18.66 ft.
Maxima.--August 1955: Discharge, 24,200 cfs 4 p.m. Aug. 19 (gage height, 18.66 ft, from floodmarks).
1931 to July 1955: Discharge, 15,500 cfs Sept. 21, 1938 (gage height, 18.08 ft, from floodmarks), by computation of flow over dam at Eagleville above station, prior to washing out, adjusted for flow from intervening area.
Remarks.--Flood flow affected briefly when storage was released by washout of dam at Eagleville.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	24	7	36	12	147	17	186	22	1,030	27	408
2	25	8	73	13	735	18	337	23	924	28	392
3	27	9	60	14	1,230	19	12,100	24	830	29	336
4	29	10	53	15	628	20	6,650	25	580	30	288
5	30	11	42	16	310	21	1,850	26	468	31	284
6	31										

Runoff, in inches..... 9.26

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 10			Aug. 14			Aug. 17--Con.			Aug. 20		
12 p.m.--	2.47	43	3 a.m.----	7.40	1,600	10---------	3.38	187	4 a.m.-----	13.70	11,400
			6---------	7.20	1,500	12---------	3.33	176	8----------	12.01	7,480
Aug. 11			9---------	6.82	1,340				12 m.-------	10.74	4,890
12 p.m.--	2.42	39	12 m.------	6.43	1,180	Aug. 18			4 p.m.-----	9.92	3,700
			6 p.m.----	6.01	1,010	2 a.m.----	3.22	154	8----------	9.36	3,060
			12---------	5.65	870	4---------	3.16	143	12----------	8.89	2,620
Aug. 12						6---------	3.16	143			
2 a.m.--	2.42	39	Aug. 15			8---------	3.27	164	Aug. 21		
4-------	2.54	50	8 a.m.----	5.13	686	10---------	3.41	193	6 a.m.-----	8.30	2,150
6-------	2.73	74	4 p.m.----	4.75	555	12 m.------	3.82	290	12 m.-------	7.83	1,820
8-------	2.87	94	12---------	4.29	417	4 p.m.----	4.42	456	6 p.m.-----	7.32	1,490
12 m.----	3.11	134				8---------	4.81	574	12----------	6.95	1,270
4 p.m.--	3.29	168	Aug. 16			12---------	5.08	668			
8-------	3.64	246	6 a.m.----	4.01	338				Aug. 22		
10-------	3.86	300	12 m.------	3.83	292				6 a.m.-----	6.73	1,140
12-------	3.98	330	2 p.m.----	3.79	282	Aug. 19			2 p.m.-----	6.42	980
			4---------	3.82	290	2 a.m.----	5.69	886	5----------	6.26	900
			6---------	3.79	282	4---------	7.60	1,700	7----------	6.30	920
			8---------	3.74	270	6---------	9.72	3,460	12----------	6.17	855
Aug. 13			10---------	3.67	253	8---------	10.78	4,960			
2 a.m.--	4.09	358	12---------	3.57	229	10---------	11.78	6,980	Aug. 23		
4-------	4.36	438				12 m.------	13.74	11,600	4 a.m.-----	6.03	785
6-------	4.52	486				2 p.m.----	17.55	21,300	6----------	6.10	820
9-------	4.66	528				4---------	18.66	24,200	8----------	6.33	935
12 m.----	4.77	561	Aug. 17			6---------	18.25	23,100	11----------	6.47	1,000
3 p.m.--	4.83	580	8 a.m.----	3.34	178	8---------	17.35	20,800	2 p.m.-----	6.48	1,010
6-------	5.91	974	4---------	3.28	166	10---------	16.4	18,300	9----------	6.33	935
9-------	7.03	1,420	6---------	3.36	183	12---------	15.55	16,100	12----------	6.33	935
12-------	7.30	1,550	8---------	3.38	187						

(30) Quinebaug River at Westville, Mass.

Location.--Lat 42°04'23", long 72°04'28", on right bank 350 ft upstream from highway bridge, 0.45 mile downstream from Breakneck Brook, 0.6 mile west of Westville, Worcester County, and 1-3/4 miles west of Southbridge. Datum of gage is 537.66 ft above mean sea level, unadjusted (levels by Corps of Engineers).
Drainage area.--93.8 sq mi.
Gage-height record.--Water-stage recorder graph except for period 1 to 12 p.m. Aug. 19, when graph was drawn on basis of floodmarks. Stage graph adjusted for intake drawdown during period 8:30 a.m. Aug. 21 to 8 a.m. Aug. 22 and for intake lag during period Aug. 26-31.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,300 cfs and extended to peak stage on basis of slope-area determination of peak flow.
Maxima.--August 1955: Discharge, 17,500 cfs 6:30 p.m. Aug. 19 (gage height, 16.11 ft, from floodmarks).
1939 to July 1955: Discharge, 1,500 cfs Mar. 22, 1948 (gage height, 6.93 ft).
Flood in September 1938 reached a discharge of 8,400 cfs, by slope-area determination.
Remarks.--Flood flow affected by dam failures and by reservoirs above station. Medium and low flows regulated by mills and reservoirs.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	34	7	47	12	99	17	228	22	1,870	27	499
2	43	8	65	13	252	18	605	23	1,230	28	436
3	45	9	63	14	374	19	11,400	24	999	29	390
4	45	10	54	15	433	20	8,830	25	774	30	365
5	41	11	48	16	330	21	3,800	26	611	31	344
6	33										

Runoff, in inches..... 13.63

(30) Quinebaug River at Westville, Mass.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19--Con.			Aug. 20--Con.			Aug. 22		
12 p.m.	3.75	214	6 a.m.	11.48	6,360	7 a.m.	13.60	10,200	4 a.m.	7.89	2,270
			7	12.69	8,410	8	13.42	9,840	8	7.56	2,010
Aug. 18			8	13.21	9,420	9	13.26	9,520	12 m.	7.28	1,820
3 a.m.	3.68	201	9	13.73	10,500	10	13.14	9,280	4 p.m.	7.03	1,640
6	3.62	191	10	14.11	11,400	11	12.95	8,900	8	6.80	1,500
8	3.63	192	11	14.41	12,100	12 m.	12.80	8,620	12	6.62	1,390
10	3.64	194	12 m.	14.67	12,800	2 p.m.	12.45	7,980			
11	3.68	201	1 p.m.	14.94	13,600	4	12.11	7,390	Aug. 23		
12 m.	3.80	224	2	15.17	14,300	6	11.78	6,840	4 a.m.	6.49	1,310
1 p.m.	3.87	238	3	15.42	15,100	8	11.44	6,300	8	6.42	1,270
2	3.98	262	4	15.64	15,800	10	11.12	5,820	12 m.	6.34	1,230
3	4.11	293	5	15.87	16,600	12	10.84	5,420	4 p.m.	6.25	1,180
4	4.38	365	6	16.08	17,400				8	6.17	1,140
5	4.79	490	6:30	16.11	17,500	Aug. 21			12	6.10	1,110
6	5.53	752	7	16.08	17,400	2 a.m.	10.57	5,040			
7	5.87	892	8	15.95	16,900	4	10.35	4,760	Aug. 24		
8	6.65	1,280	9	15.70	16,000	6	10.11	4,460	6 a.m.	5.99	1,060
9	7.22	1,620	10	15.50	15,400	8	9.87	4,180	12 m.	5.88	1,000
10	7.71	1,980	11	15.27	14,600	10	9.67	3,960	6 p.m.	5.75	942
11	8.23	2,410	12	15.01	13,800	12 m.	9.44	3,700	12	5.60	875
12	8.73	2,870				2 p.m.	9.23	3,490			
			Aug. 20			4	9.03	3,290	Aug. 25		
Aug. 19			1 a.m.	14.77	13,100	6	8.82	3,080	6 a.m.	5.47	816
1 a.m.	9.22	3,380	2	14.65	12,800	8	8.61	2,890	12 m.	5.36	769
2	9.61	3,820	3	14.31	11,900	10	8.44	2,740	6 p.m.	5.25	729
3	10.02	4,320	4	14.05	11,200	12	8.28	2,590	12	5.16	689
4	10.46	4,890	5	13.87	10,800						
5	11.04	5,700	6	13.72	10,500						

(39) French River at Webster, Mass.

Location.--Lat 42°03'03", long 71°53'08", on right bank 50 ft upstream from Pleasant Street Bridge at Webster, Worcester County, and 1.1 miles upstream from Potash Brook. Datum of gage is 406.74 ft above mean sea level, datum of 1929.

Drainage area.--85.3 sq mi.

Gage-height record.--Water-stage recorder graph except for period 1:15 p.m. Aug. 19 to 4:30 p.m. Aug. 22 Gage heights for period 1:15 p.m. to 6 p.m. Aug. 19 are from graph based on floodmarks and readings from reference points and for period 4 p.m. Aug. 21 to noon Aug. 22 from graph based on engineer's tape-gage reading.

Discharge record.--Stage-discharge relation defined by current-meter measurements below 2,400 cfs and extended to peak stage on basis of computation of peak flow over dam. Discharge for period 8 p.m. Aug. 19 to noon Aug. 21 estimated on basis of records for Quinebaug River at Westville and Little River at Buffumville. Backwater from debris at times.

Maxima.--August 1955: Discharge, 14,400 cfs 6 p.m. Aug. 19 (gage height, 26.05 ft, from floodmarks).
1948 to July 1955: Discharge, 2,320 cfs Sept. 12, 1954 (gage height, 11.64 ft).
Flood of Mar. 19, 1936, reached a discharge of 4,700 cfs, by computation of flow over dam.

Remarks.--Flood flow affected by dam failures and by reservoirs above station. Low and medium flows regulated by Lake Chaubunagungamaug (estimated usable capacity, 207,000,000 cu ft) and other reservoirs above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	39	7	14	12	43	17	125	22	1,290	27	618
2	42	8	50	13	48	18	222	23	937	28	540
3	29	9	44	14	96	19	6,170	24	782	29	464
4	24	10	49	15	97	20	5,640	25	730	30	436
5	44	11	36	16	131	21	2,180	26	720	31	422
6	9.6										

Runoff, in inches..... 9.62

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 20			Aug. 23--Con.		
12 p.m.	4.90	46	11	6.10	369	4 a.m.		7,900	8	9.31	948
			12	6.20	397	8		6,300	12 m.	9.22	912
Aug. 18						12 m.		5,200	4 p.m.	9.18	900
1 a.m.	4.94	99	Aug. 19			4 p.m.		4,300	8	9.22	912
2	4.98	104	1 a.m.	6.30	425	8		3,600	12	9.14	885
3	5.01	109	2	6.56	498	12		3,100			
4	5.03	112	3	7.15	663				Aug. 24		
5	5.05	115	4	7.66	813	Aug. 21			4 a.m.	9.07	858
6	5.34	167	5	8.87	1,210	4 a.m.		2,700	8	8.98	828
7	5.63	239	6	9.41	1,400	8		2,350	12 m.	8.85	783
8	5.55	218	7	10.09	1,670	12 m.		2,100	4 p.m.	8.75	747
9	5.48	199	8	10.75	1,930	4 p.m.	11.44	1,860	8	8.62	702
10	5.45	192	9	11.57	2,280	8	11.11	1,710	12	8.50	666
11	5.63	239	10	12.57	2,780	12	10.83	1,580			
12 m.	5.52	209	11	14.28	3,670				Aug. 25		
1 p.m.	5.72	263	12 m.	16.39	4,970	Aug. 22			2 a.m.	8.45	649
2	5.63	239	1 p.m.	19.22	7,200	4 a.m.	10.59	1,470	4	8.40	635
3	5.62	236	2	20.00	7,900	8	10.34	1,370	6	8.38	629
4	5.50	204	3	20.85	8,660	12 m.	10.12	1,280	8	8.40	635
5	5.73	266	4	21.77	9,570	4 p.m.	9.93	1,200	10	8.52	671
6	5.69	255	5	24.00	11,900	8	9.72	1,120	12 m.	8.69	726
7	5.80	285	6	26.05	14,400	12	9.54	1,050	2 p.m.	8.86	786
8	5.86	302	8		13,000				4	8.96	819
9	5.94	324	10		11,400	Aug. 23			6	9.00	834
10	6.01	344	12		10,000	4 a.m.	9.40	984	8	8.99	831
									10	8.94	813
									12	8.89	795

(45) Quinebaug River at Jewett City, Conn.

Location.--Lat 41°35'52", long 71°59'05", on left bank in rear of school house on Slater Avenue at Jewett City, New London County, 570 ft downstream from outlet of canal from Fisk Mills, Inc. at mouth of Pachaug River, 1,000 ft downstream from railroad bridge, and at mile 6.1. Datum of gage is 63.07 ft above mean sea level, datum of 1929.
Drainage area.--711 sq mi.
Gage-height record.--Water-stage recorder graph except for period 2 p.m. Aug. 19 to 3 p.m. Aug. 22. Graph for this period drawn on basis of floodmark and time of peak.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 11,000 cfs, and by computation of flow over three nearby dams at gage heights 21.7, 22,5, and 24.0 ft, and at dam 6 miles downstream at gage height 29.0 ft. Shifting-control method used at times.
Maxima.--August 1955: Discharge, 40,700 cfs 5 to 6 p.m. Aug. 20 (gage height, 29.0 ft, from floodmarks).
1918 to July 1955: Discharge, 29,200 cfs Mar. 19, 1936 (gage height, 24.0 ft, from floodmarks).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	337	7	106	12	360	17	998	22	11,200	27	3,110
2	291	8	348	13	1,210	18	1,060	23	6,770	28	2,750
3	272	9	289	14	1,610	19	7,020	24	5,800	29	2,390
4	267	10	299	15	1,600	20	35,300	25	4,680	30	2,070
5	126	11	375	16	1,260	21	25,100	26	3,750	31	1,940
6	42										

Runoff, in inches..... 6.42

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 18			Aug. 19--Con.			Aug. 20--Con.			Aug. 21--Con.		
12 p.m.--	6.88	1,390	9---------	18.5	16,200	6----------	29.0	40,700	3----------	21.0	20,900
			10---------	19.4	17,700	7----------	28.98	40,600	4----------	20.6	20,100
			11---------	20.1	19,000	8----------	28.95	40,600	5----------	20.2	19,200
Aug. 19			12---------	20.9	20,700	9----------	28.8	40,100	6----------	19.9	18,600
1 a.m.--	6.82	1,350				10---------	28.65	39,700	7----------	19.6	18,100
2-------	6.90	1,400				11---------	28.4	39,000	8----------	19.3	17,500
3-------	7.13	1,560	Aug. 20			12---------	28.1	38,100	9----------	19.0	17,000
4-------	7.32	1,690	1 a.m.----	21.6	22,200				10---------	18.7	16,500
5-------	7.50	1,820	2---------	22.4	23,900				11---------	18.4	16,000
6-------	7.70	1,960	3---------	23.1	25,400	Aug. 21			12---------	18.1	15,500
7-------	8.03	2,220	4---------	23.9	27,300	1 a.m.-----	27.9	37,500			
8-------	8.32	2,460	5---------	24.8	29,500	2----------	27.5	36,400	Aug. 22		
9-------	8.75	2,840	6---------	25.6	31,500	3----------	27.1	35,300	2 a.m.-----	17.65	14,700
10-------	9.23	3,290	7---------	26.3	33,200	4----------	26.8	34,500	4----------	17.15	13,900
11-------	9.70	3,760	8---------	26.8	34,500	5----------	26.3	33,200	6----------	16.7	13,100
12 m.----	10.34	4,430	9---------	27.3	35,800	6----------	25.8	32,000	8----------	16.25	12,300
1 p.m.--	10.98	5,140	10---------	27.6	36,700	7----------	25.1	30,200	10---------	15.8	11,600
2-------	11.70	5,970	11---------	28.0	37,800	8----------	24.5	28,800	12 m.-------	15.35	10,900
3-------	12.50	6,930	12 m.------	28.3	38,700	9----------	23.9	27,300	2 p.m.-----	14.95	10,300
4-------	13.5	8,210	1 p.m.----	28.5	39,200	10---------	23.3	25,900	4----------	14.62	9,780
5-------	14.7	9,900	2---------	28.75	40,000	11---------	22.7	24,500	6----------	14.28	9,290
6-------	15.8	11,600	3---------	28.9	40,400	12 m.-------	22.1	23,200	8----------	13.98	8,870
7-------	16.8	13,300	4---------	28.97	40,600	1 p.m.-----	21.7	22,400	10---------	13.70	8,480
8-------	17.6	14,600	5---------	29.0	40,700	2----------	21.3	21,500	12---------	13.38	8,050

(47) Connecticut River at Montague City, Mass.

Location.--Lat 42°34'48", long 72°34'30", on left bank 75 ft downstream from New York, New Haven & Hartford Railroad bridge at Montague City, Franklin County, and 1,000 ft downstream from Deerfield River. Datum of gage is 99.87 ft above mean sea level, datum of 1929.
Drainage area.--7,865 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements.
Maxima.--August 1955: Discharge, 42,800 cfs 1 to 1:30 p.m. Aug. 14 (gage height, 19.75 ft).
1904 to July 1955: Discharge, 236,000 cfs Mar. 19, 1936 (gage height, 49.2 ft, from floodmarks), from rating curve extended above 160,000 cfs.
Remarks.--Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, and other reservoirs (combined usable capacity, about 27½ billion cu ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	2,780	7	581	12	9,720	17	17,600	22	10,800	27	5,920
2	3,420	8	1,010	13	16,800	18	20,100	23	9,610	28	3,640
3	2,000	9	2,460	14	39,400	19	33,400	24	10,800	29	7,300
4	1,990	10	2,980	15	33,300	20	26,000	25	11,500	30	7,340
5	1,940	11	6,000	16	18,800	21	13,500	26	10,400	31	7,540
6	601										

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 16--Con.			Aug. 19		
12 p.m.	11.52	13,400	2	19.74	42,700	10	13.63	19,800	1 a.m.	14.74	23,500
			3	19.50	41,700	11	13.72	20,100	2	14.72	23,400
Aug. 13			4	19.39	41,300	12 m.	13.65	19,900	3	14.73	23,500
1 a.m.	11.63	13,700	5	19.47	41,600	2 p.m.	13.21	19,500	4	14.82	23,800
2	11.04	12,000	6	19.47	41,600	4	13.07	18,000	5	14.96	24,300
3	10.53	10,600	7	19.50	41,700	5	13.07	18,000	6	15.23	25,200
4	9.89	9,010	8	19.52	41,800	6	13.25	18,600	7	15.55	26,400
5	9.40	7,930	9	19.51	41,700	7	13.28	18,700	8	16.95	31,600
6	9.52	8,180	10	19.39	41,300	8	13.22	18,500	9	17.74	34,700
7	10.32	10,000	11	19.28	40,800	10	13.05	18,000	10	18.07	36,000
8	10.95	11,800	12	19.35	41,100	12	13.08	18,100	11	18.48	37,600
9	11.47	13,200							12 m.	18.66	38,300
10	11.47	13,200	Aug. 15			Aug. 17			1 p.m.	18.87	39,200
11	11.13	12,300	1 a.m.	19.39	41,300	2 a.m.	13.08	18,100	2	19.21	40,500
12 m.	11.85	14,400	2	19.41	41,300	4	13.08	18,100	3	19.36	41,100
1 p.m.	12.34	15,800	3	19.41	41,300	6	13.07	18,000	4	19.28	40,800
2	12.69	16,900	4	19.38	41,200	8	13.05	18,000	5	19.15	40,300
3	12.28	15,600	5	19.18	40,400	10	13.03	17,900	6	18.94	39,500
4	12.35	15,800	6	19.16	40,300	12 m.	12.97	17,700	7	18.69	38,500
5	13.03	17,900	7	19.25	40,700	1 p.m.	12.93	17,600	8	18.47	37,600
6	13.54	19,500	8	19.27	40,800	2	12.65	16,800	9	18.25	36,700
7	15.16	25,000	9	19.17	40,400	3	12.46	16,200	10	18.07	36,000
8	15.77	27,200	10	18.89	39,300	4	12.53	16,400	11	17.84	35,100
9	15.87	27,500	11	18.64	38,300	6	12.85	17,400	12	17.38	33,200
10	16.50	29,900	12 m.	18.40	37,300	8	12.94	17,600			
11	17.18	32,500	1 p.m.	17.39	33,300	9	12.84	17,300	Aug. 20		
12	17.45	33,500	2	16.97	31,700	10	12.94	17,600	2 a.m.	16.77	30,900
			3	17.05	32,000	12	12.99	17,800	4	16.33	29,300
Aug. 14			4	16.73	30,800				6	15.94	27,800
1 a.m.	17.62	34,200	5	16.18	28,700	Aug. 18			7	15.58	26,500
2	17.76	34,700	6	15.17	25,000	2 a.m.	13.00	17,800	8	15.43	25,900
3	17.67	34,400	7	14.54	22,800	4	12.99	17,800	9	15.59	26,500
4	17.59	34,100	8	14.19	21,600	6	12.96	17,700	10	15.60	26,600
5	18.03	35,800	9	13.84	20,500	8	12.97	17,700	12 m.	15.44	26,000
6	18.45	37,500	10	13.76	20,200	10	13.01	17,800	2 p.m.	15.24	25,300
7	18.65	38,300	11	13.67	19,900	12 m.	13.14	18,200	4	15.06	24,600
8	18.78	38,800	12	13.60	19,700	2 p.m.	13.76	20,200	6	14.82	23,800
9	18.94	39,500				4	14.27	21,900	7	14.84	23,900
10	19.10	40,100	Aug. 16			6	14.74	23,500	8	14.74	23,500
11	19.27	40,800	2 a.m.	13.45	19,200	8	14.95	24,200	10	14.25	21,800
12 m.	19.54	41,900	4	13.36	19,000	10	14.92	24,100	12	13.87	20,600
1 p.m.	19.74	42,800	6	13.27	18,700	12	14.81	23,800			
1:30	19.75	42,800	8	13.28	18,700						

(55) Ware River at Gibbs Crossing, Mass.

Location.--Lat 42°14'07", long 72°16'45", on right bank half a mile upstream from Gibbs Crossing, Hampshire County, 1.8 miles upstream from Beaver Brook, and 2½ miles southwest of Ware. Datum of gage is 379.79 ft above mean sea level, datum of 1929.
Drainage area.--199 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 4,600 cfs and extended to peak stage on basis of contracted-opening determination at 12.83 ft and slope-area determination at 18.2 ft. Backwater from grass at times.
Maxima.--August 1955: Discharge, 12,200 cfs 10 a.m. Aug. 19 (gage height, 12.83 ft).
1912 to July 1955: Discharge, 22,700 cfs Sept. 21, 1938 (gage height, 18.2 ft, from floodmarks), from slope-area determination.
Remarks.--Flood flow affected by diversion from 97 sq mi for supply of Boston metropolitan district. Regulation at low and medium flows by mills above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	78	7	28	12	87	17	199	22	1,000	27	685
2	57	8	75	13	166	18	1,550	23	1,260	28	625
3	22	9	27	14	565	19	8,880	24	1,160	29	553
4	21	10	61	15	553	20	5,060	25	812	30	436
5	21	11	31	16	370	21	1,930	26	842	31	407
6	21										

Runoff, in inches..... 5.99

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Dis-charge	Time	Gage height	Dis-charge	Time	Gage height	Dis-charge	Time	Gage height	Dis-charge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 22--Con.		
12 p.m.---	2.52	179	12----------	6.33	3,270	12----------	10.29	8,140	8----------	3.88	1,030
									10----------	3.86	1,020
Aug. 18			Aug. 19			Aug. 20			12 m.-------	3.84	1,000
1 a.m.---	2.51	175	1 a.m.-----	6.35	3,290	2 a.m.-----	9.82	7,480	6 p.m.-----	3.77	948
2--------	2.51	175	2----------	6.47	3,410	4----------	9.39	6,880	8----------	3.73	918
3--------	2.50	172	3----------	6.71	3,650	6----------	8.92	6,270	10----------	3.73	918
4--------	2.50	172	4----------	7.17	4,160	8----------	8.51	5,730	12----------	3.77	948
5--------	2.49	168	5----------	8.33	5,520	10----------	8.11	5,250			
6--------	2.49	168	6----------	9.72	7,340	12 m.-------	7.76	4,830	Aug. 23		
7--------	2.50	172	7----------	10.97	9,160	2 p.m.	7.38	4,390	6 a.m.-----	4.10	1,220
8--------	2.54	187	8----------	12.00	10,800	4----------	7.13	4,110	8----------	4.23	1,340
9--------	2.57	199	9----------	12.65	11,900	6----------	6.77	3,720	10----------	4.21	1,320
10--------	2.58	203	10----------	12.83	12,200	8----------	6.46	3,400	12 m.-------	4.18	1,290
11--------	2.66	239	11----------	12.76	12,100	10----------	6.20	3,140	6 p.m.-----	4.21	1,320
12 m.-----	2.96	385	12 m.-------	12.57	11,800	12----------	5.94	2,880	12----------	4.25	1,360
1 p.m.---	3.66	828	1 p.m.-----	12.42	11,500						
2--------	4.92	1,950	2----------	12.27	11,300	Aug. 21			Aug. 24		
3--------	5.76	2,710	3----------	12.14	11,000	4 a.m.-----	5.45	2,440	2 a.m.-----	4.24	1,350
4--------	6.25	3,190	4----------	12.03	10,900	8----------	5.12	2,140	4----------	4.13	1,250
5--------	6.44	3,380	5----------	11.91	10,700	12 m.-------	4.82	1,970	6----------	4.11	1,230
6--------	6.57	3,510	6----------	11.73	10,400	4 p.m.-----	4.58	1,650	8----------	4.18	1,290
7--------	6.64	3,580	7----------	11.53	10,000	8----------	4.34	1,440	12 m.-------	4.06	1,190
8--------	6.64	3,580	8----------	11.29	9,660	12----------	4.12	1,240	6 p.m.-----	3.89	1,040
9--------	6.57	3,510	9----------	11.04	9,270				12----------	3.75	932
10--------	6.56	3,440	10----------	10.77	8,860	Aug. 22					
11--------	6.39	3,330	11----------	10.53	8,500	6 a.m.-----	3.79	962			

(61) Quaboag River at West Brimfield, Mass.

Location.--Lat 42°10'31", long 72°15'46", on left bank 15 ft upstream from site of former highway bridge at West Brimfield, Hampden County, 0.4 mile upstream from Blodgett Mill Brook, and 3½ miles northeast of Palmer. Datum of gage is 377.36 ft above mean sea level, datum of 1929.
Drainage area.--151 sq mi.
Gage-height record.--Water-stage recorder graph except for 8:15 to 9:15 a.m. Aug. 19; floodmark used to complete graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 2,700 cfs and extended to peak stage on basis of slope-area determinations at gage heights 11.8 and 14.79 ft.
Maxima.--August 1955: Discharge, 12,800 cfs 8:30 a.m. Aug. 19 (gage height, 14.79 ft, from floodmark in gage house).
1909 to July 1955: Discharge, 8,470 cfs Sept. 21, 1938 (gage height, 11.8 ft, from floodmarks), from slope-area determination.
Remarks.--Flood flow affected by natural storage. Slight diurnal regulation at low flow by mill above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	41	7	42	12	84	17	274	22	4,270	27	1,730
2	38	8	65	13	338	18	1,220	23	3,640	28	1,440
3	38	9	48	14	435	19	7,590	24	3,020	29	1,220
4	35	10	45	15	352	20	6,370	25	2,500	30	1,040
5	35	11	46	16	302	21	5,360	26	2,090	31	910
6	32										

Runoff, in inches..... 11.00

(61) Quaboag River at West Brimfield, Mass.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19			Aug. 19--Con.			Aug. 20--Con.		
12 p.m.	3.38	265	1 a.m.	5.99	2,130	11	10.46	6,800	8	9.91	6,140
			2	6.36	2,460	12	10.42	6,750	9	9.85	6,070
			3	6.90	2,950				10	9.82	6,030
Aug. 18			4	7.70	3,730	Aug. 20			11	9.78	5,990
6 a.m.	3.38	265	5	9.05	5,160	1 a.m.	10.40	6,730	12	9.74	5,940
7	3.39	270	6	10.77	7,170	2	10.38	6,710			
8	3.41	279	7	13.96	11,600	3	10.39	6,720	Aug. 21		
9	3.44	293	8	14.27	12,000	4	10.29	6,600	6 a.m.	9.49	5,640
10	3.46	302	8:30	14.79	12,800	5	10.28	6,590	12 m.	9.24	5,360
11	3.53	336	9	14.51	12,400	6	10.27	6,570	6 p.m.	8.97	5,070
12 m.	3.66	403	10	13.93	11,500	7	10.15	6,430	12	8.71	4,780
1 p.m.	4.03	603	11	13.48	10,800	8	10.15	6,430			
2	6.12	2,250	12 m.	13.14	10,300	9	10.15	6,430	Aug. 22		
3	7.35	3,380	1 p.m.	12.70	9,710	10	10.14	6,420	6 a.m.	8.45	4,500
4	6.63	2,710	2	12.29	9,140	11	10.13	6,410	12 m.	8.22	4,250
5	6.39	2,490	3	11.91	8,610	12 m.	10.11	6,380	6 p.m.	7.99	4,020
6	6.39	2,490	4	11.62	8,240	1 p.m.	10.10	6,370	12	7.79	3,820
7	6.32	2,430	5	11.39	7,940	2	10.09	6,360			
8	6.16	2,280	6	11.05	7,510	3	10.06	6,320	Aug. 23		
9	5.97	2,110	7	10.66	7,040	4	10.04	6,300	2 a.m.	7.88	3,910
10	5.85	2,000	8	10.51	6,860	5	10.01	6,260	4	7.87	3,900
11	5.79	1,950	9	10.49	6,840	6	9.97	6,210	12 m.	7.61	3,640
12	5.79	1,950	10	10.49	6,840	7	9.94	6,180	12 p.m.	7.28	3,310

(68) Chicopee River at Indian Orchard, Mass.

Location.--Lat 42°09'38", long 72°30'52", on left bank 1,000 ft downstream from West Street Bridge at Indian Orchard, Hampden County, and 1.1 miles upstream from Fuller Brook. Altitude of gage is 125 ft (from topographic map).
Drainage area.--688 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 22,000 cfs and extended to peak stage on basis of computation of peak flow over dam. Backwater from grass at times.
Maxima.--August 1955: Discharge, 40,500 cfs 4 p.m. Aug. 19 (gage height, 22.14 ft).
1928 to July 1955: Discharge, 45,200 cfs Sept. 21, 1938, by computation of flow over dam.
Remarks.--Flood flow affected by Quabbin Reservoir (usable capacity, 55,700,000,000 cu ft) on Swift River, by diversion from Ware River, and by dam failures on small tributaries. Diversions from basin for Boston, Springfield, and Chicopee. Low and medium flows regulated by powerplants above station, by Quabbin Reservoir, and by smaller reservoirs.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	368	7	47	12	380	17	980	22	7,360	27	3,050
2	259	8	253	13	702	18	3,000	23	6,450	28	2,570
3	253	9	331	14	2,580	19	30,600	24	5,740	29	2,340
4	256	10	256	15	1,890	20	20,800	25	4,330	30	2,080
5	256	11	246	16	1,400	21	10,800	26	3,610	31	1,920
6	184										

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19--Con.			Aug. 20--Con.			Aug. 22--Con.		
12 p.m.	5.85	912	2 a.m.	12.92	11,500	12 m.	16.02	20,000	4 p.m.	10.56	7,020
			3	13.70	13,600	2 p.m.	15.62	18,800	6	10.36	6,680
Aug. 18			4	14.34	15,200	4	15.18	17,600	8	10.26	6,510
1 a.m.	5.76	823	5	15.20	17,600	6	14.79	16,500	10	10.20	6,410
2	5.35	470	6	16.59	21,700	8	14.38	15,400	12	10.07	6,200
3	5.35	470	7	19.01	29,500	10	14.05	14,500			
4	5.49	552	8	19.83	32,300	12	13.75	13,700	Aug. 23		
5	5.49	552	9	20.00	32,900				2 a.m.	10.02	6,120
6	5.55	602	10	20.41	34,300	Aug. 21			4	10.05	6,170
7	6.50	1,530	11	21.03	36,500	2 a.m.	13.50	13,100	6	10.09	6,230
8	6.51	1,540	12 m.	21.46	38,100	4	13.26	12,500	8	10.34	6,650
9	6.22	1,230	1 p.m.	21.79	39,200	6	13.02	11,900	10	10.34	6,650
10	6.23	1,240	2	22.06	40,200	8	12.82	11,500	12 m.	10.29	6,560
11	6.33	1,350	3	22.10	40,400	10	12.62	11,000	2 p.m.	10.40	6,750
12 m.	7.02	2,010	4	22.14	40,500	12 m.	12.45	10,600	4	10.35	6,660
1 p.m.	6.72	1,730	5	22.13	40,500	2 p.m.	12.30	10,300	6	10.35	6,660
2	6.70	1,710	6	21.95	39,800	4	12.14	9,990	8	10.24	6,480
3	7.42	2,410	7	21.60	38,600	6	11.95	9,610	10	10.11	6,270
4	7.86	2,900	8	21.25	37,300	8	11.79	9,290	12	10.06	6,190
5	8.56	3,690	9	20.86	35,900	10	11.64	9,000			
6	9.03	4,260	10	20.46	34,500	12	11.50	8,730	Aug. 24		
7	10.14	5,760	11	19.99	32,900				4 a.m.	10.09	6,230
8	10.87	6,890	12	19.66	31,700	Aug. 22			8	10.09	6,230
9	11.27	7,620				2 a.m.	11.35	8,440	12 m.	9.80	5,770
10	11.65	8,430	Aug. 20			4	11.21	8,180	4 p.m.	9.66	5,550
11	11.84	8,860	2 a.m.	18.88	29,100	6	11.07	7,930	8	9.43	5,200
12	12.15	9,600	4	18.12	26,600	8	11.02	7,840	12	9.10	4,720
			6	17.56	24,700	10	10.86	7,550			
Aug. 19			8	16.99	22,900	12 m.	10.68	7,230			
1 a.m.	12.52	10,500	10	16.42	21,200	2 p.m.	10.57	7,040			

(71) Middle Branch Westfield River at Goss Heights, Mass.

Location.--Lat 42°15'31", long 72°52'23", on right bank at upstream side of highway bridge at Goss Heights, Hampshire County, 0.35 mile upstream from mouth and 1.7 miles north of Huntington. Datum of gage is 400.30 ft above mean sea level, datum of 1929.
Drainage area.--52.6 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 5,700 cfs and extended to peak stage on basis of slope-area determination at gage height 11.33 ft.
Maxima.--August 1955: Discharge, 16,500 cfs 4 a.m. Aug. 19 (gage height, 11.33 ft).
1910 to July 1955: Discharge, 19,900 cfs Sept. 21, 1938 (gage height, 10.61 ft), from rating curve extended above 3,200 cfs on basis of mean of two contracted-opening determinations of peak flow; maximum gage height, 13.87 ft Mar. 12, 1936 (ice jam).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	2.4	7	1.5	12	10	17	44	22	185	27	59
2	2.0	8	1.4	13	329	18	1,400	23	154	28	51
3	1.8	9	1.6	14	841	19	5,190	24	114	29	43
4	1.7	10	2.0	15	211	20	578	25	85	30	39
5	1.6	11	2.4	16	79	21	263	26	70	31	39
6	1.5										

Runoff, in inches..... 6.93

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 17--Con.			Aug. 19--Con.		
12 p.m.--	1.30	35	8----------	4.36	1,490	12----------	1.32	37	7----------	7.50	7,640
			9----------	4.17	1,340				8----------	7.01	6,660
Aug. 13			10----------	3.95	1,160	Aug. 18			9----------	6.75	6,140
6 a.m.--	1.47	55	11----------	3.73	1,010	6 a.m.-----	1.30	35	10----------	6.81	6,260
8-------	1.59	72	12 m.-------	3.57	900	8----------	1.52	62	11----------	6.76	6,160
10-------	1.79	109	1 p.m.-----	3.44	814	9----------	1.70	91	12 m.-------	6.38	5,430
12 m.----	2.05	173	2----------	3.28	718	10----------	1.79	109	1 p.m.-----	5.90	4,570
1 p.m.--	2.29	247	3----------	3.17	652	11----------	2.68	403	2----------	5.45	3,800
2-------	2.81	465	4----------	3.09	605	12 m.-------	3.07	595	3----------	4.95	3,020
3-------	2.97	545	5----------	3.02	570	1 p.m.-----	5.00	2,060	4----------	4.60	2,510
4-------	2.98	550	6----------	2.99	555	2----------	7.00	4,740	5----------	4.32	2,150
5-------	3.05	585	7----------	2.99	555	3----------	7.18	5,060	6----------	4.06	1,840
6-------	3.26	706	8----------	2.95	535	4----------	6.52	3,960	7----------	3.81	1,560
7-------	3.52	864	10----------	2.80	460	5----------	6.03	3,250	8----------	3.66	1,410
8-------	3.47	832	12----------	2.65	389	6----------	5.63	2,740	9----------	3.50	1,260
9-------	3.30	730				7----------	5.23	2,290	10----------	3.38	1,150
10-------	3.12	622	Aug. 15			8----------	4.90	1,960	11----------	3.25	1,040
11-------	2.99	555	4 a.m.-----	2.42	294	9----------	4.62	1,750	12----------	3.17	979
12-------	2.87	495	8----------	2.25	234	10----------	4.53	1,630			
			12 m.-------	2.12	193	11----------	4.50	1,600	Aug. 20		
Aug. 14			6 p.m.-----	1.95	146	12----------	4.86	1,920	2 a.m.-----	3.00	860
1 a.m.	2.83	475	12----------	1.79	109				4----------	2.87	777
2-------	2.98	550				Aug. 19			6----------	2.77	718
3-------	3.40	790	Aug. 16			1 a.m.-----	5.85	3,020	8----------	2.65	652
4-------	3.90	1,130	12 m.-------	1.61	76	2----------	7.47	5,600	12 m.-------	2.47	561
5-------	4.18	1,340	12----------	1.47	55	3----------	10.20	12,600	4 p.m.-----	2.24	457
6-------	4.48	1,580				4----------	11.33	16,500	8----------	2.03	373
6:30----	4.51	1,610	Aug. 17			5----------	9.82	12,900	12----------	1.92	331
7-------	4.50	1,600	12 m.-------	1.36	42	6----------	8.50	9,840			

(73) West Branch Westfield River at Huntington, Mass.

Location.--Lat 42°14'14", long 72°53'46", on left bank at Huntington, Hampshire County, 0.4 mile downstream from Roaring Brook and 1½ miles upstream from mouth. Datum of gage is 388.60 ft above mean sea level, datum of 1929.
Drainage area.--93.7 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 9,500 cfs and extended to peak stage on basis of slope-area determination of peak flow. Shifting-control method used at times.
Maxima.--August 1955: Discharge, 26,100 cfs 4:30 a.m. Aug. 19 (gage height, 15.27 ft).
1935 to July 1955: Discharge, 21,800 cfs Sept. 21, 1938 (gage height, 15.5 ft, from floodmarks), from rating curve extended above 1,900 cfs on basis of computations of flow over dam at gage heights 11.93, 12.95, and 15.5 ft and slope-area determination at gage height 15.5 ft.
Remarks.--Some diurnal fluctuation at low flow caused by mill above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	5.3	7	3.8	12	20	17	94	22	617	27	132
2	4.8	8	3.5	13	554	18	2,260	23	481	28	114
3	4.5	9	3.3	14	1,210	19	10,500	24	310	29	93
4	4.2	10	4.0	15	341	20	1,390	25	211	30	81
5	4.0	11	4.5	16	143	21	749	26	161	31	81
6	3.8										

Runoff, in inches..... 7.77

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 11			Aug. 14--Con.			Aug. 18--Con.			Aug. 20--Con.		
12 p.m.	0.34	4.8	10	3.74	1,450	1 p.m.	5.70	3,130	7	3.75	1,560
			11	3.60	1,350	2	7.45	5,210	8	3.68	1,490
Aug. 12			12 m.	3.44	1,240	3	7.81	5,740	9	3.61	1,440
4 a.m.	.39	6.2	1 p.m.	3.32	1,150	4	7.65	5,480	10	3.56	1,400
8	.51	11	2	3.26	1,110	5	7.06	4,690	11	3.50	1,350
12 m.	.63	17	3	3.18	1,060	6	6.80	4,390	12 m.	3.43	1,290
3	.66	19	4	3.09	993	7	6.48	3,990	1 p.m.	3.36	1,240
6	.81	29	5	3.01	937	8	6.16	3,640	2	3.29	1,180
9	.93	39	6	2.92	874	9	5.84	3,320	3	3.23	1,130
12	1.14	61	7	2.86	832	10	6.01	3,480	4	3.18	1,100
			8	2.78	776	11	6.75	4,340	5	3.13	1,060
Aug. 13			9	2.71	727	12	7.45	5,320	6	3.08	1,030
1 a.m.	1.23	72	10	2.64	678				7	3.04	998
2	1.27	78	11	2.57	630	Aug. 19			8	3.01	977
3	1.36	93	12	2.52	598	1 a.m.	9.36	8,720	9	2.97	949
4	1.44	108				2	11.87	14,700	10	2.95	935
5	1.50	121	Aug. 15			3	13.74	20,500	11	2.93	921
6	1.57	138	6 a.m.	2.24	419	4	14.93	24,800	12	2.90	900
7	1.67	165	12 m.	2.05	315	4:30	15.27	26,100			
8	1.84	222	6 p.m.	1.88	237	5	15.11	25,600	Aug. 21		
9	1.95	268	12	1.74	187	6	13.84	21,500	2 a.m.	2.85	865
10	2.17	378				7	12.40	17,300	4	2.82	844
11	2.34	481	Aug. 16			8	11.30	14,400	6	2.78	816
12 m.	2.48	572	6 a.m.	1.66	162	9	10.43	12,300	8	2.75	795
1 p.m.	2.61	657	12 m.	1.58	140	10	10.24	11,900	10	2.71	767
2	2.76	762	6 p.m.	1.51	123	11	9.91	11,200	12 m.	2.67	739
3	2.93	881	12	1.44	108	12 m.	9.34	9,950	2 p.m.	2.62	704
4	3.15	1,040				1 p.m.	8.68	8,600	4	2.56	664
5	3.20	1,070	Aug. 17			2	8.15	7,610	6	2.53	644
6	3.21	1,080	6 a.m.	1.39	98	3	7.54	6,510	8	2.55	658
7	3.13	1,020	12 m.	1.35	92	4	7.03	5,690	10	2.58	677
8	3.03	951	6 p.m.	1.34	90	5	6.60	5,000	12	2.66	732
9	2.95	895	12	1.31	85	6	6.22	4,420			
10	2.91	867				7	5.84	3,880	Aug. 22		
11	2.95	895	Aug. 18			8	5.57	3,520	2 a.m.	2.67	739
12	2.94	888	1 a.m.	1.30	83	9	5.33	3,230	6	2.62	704
			2	1.29	81	10	5.07	2,910	12 m.	2.52	638
Aug. 14			3	1.29	81	11	4.86	2,680	6 p.m.	2.35	528
1 a.m.	3.06	972	4	1.28	80	12	4.68	2,480	10	2.26	471
2	3.25	1,100	5	1.27	78				12	2.25	465
3	3.32	1,150	6	1.27	78	Aug. 20					
4	3.73	1,440	7	1.37	95	1 a.m.	4.51	2,290	Aug. 23		
5	4.58	2,120	8	1.53	128	2	4.37	2,150	4 a.m.	2.33	514
6	4.82	2,340	9	1.73	183	3	4.22	2,000	8	2.36	534
7	4.55	2,100	10	2.14	364	4	4.08	1,860	12 m.	2.33	514
8	4.19	1,780	11	3.22	1,080	5	3.96	1,740	6 p.m.	2.22	447
9	3.96	1,600	12 m.	4.25	1,830	6	3.82	1,620	12	2.12	387

(84) Westfield River near Westfield, Mass.

Location.--Lat 42°06'24", long 72°41'58", on left bank 0.7 mile downstream from Great Brook and 3 miles east of Westfield, Hampden County. Datum of gage is 98.25 ft above mean sea level, datum of 1929.
Drainage area.--497 sq mi.
Gage-height record.--Water-stage recorder graph except for period 5:45 a.m. Aug. 19 to noon Aug. 24. Graph for periods 5:45 a.m. Aug. 19 to Aug. 21 and Aug. 23 to noon Aug. 24 based on outside-gage readings and floodmarks.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 18,000 cfs and extended to peak stage on basis of computations of flow over dam at gage heights 27.20, 29.40, and 34.2 ft. Discharge for Aug. 22 estimated on basis of trend of gage-height graph. Backwater from grass at times.
Maxima.--August 1955: Discharge, 70,300 cfs 7 to 8 a.m. Aug. 19 (gage height, 34.2 ft, from floodmarks).
1914 to July 1955: Discharge, 55,500 cfs Sept. 21, 22, 1938 (gage height, 29.40 ft, from floodmarks), from computation of flow over dam.
Remarks.--Flood flow affected by Borden Brook and Cobble Mountain Reservoirs (combined usable capacity, 3,394,000,000 cu ft), Knightville Reservoir (usable capacity, 2,130,000,000 cu ft), and by dam failures above station. Low and medium flows regulated by Borden Brook and Cobble Mountain Reservoirs. Diversion above station from Westfield Little River for municipal supply of Springfield.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	79	7	95	12	202	17	1,960	22	2,710	27	2,380
2	110	8	79	13	1,300	18	7,210	23	3,040	28	2,470
3	95	9	83	14	3,140	19	37,400	24	3,200	29	3,490
4	107	10	81	15	1,790	20	11,000	25	3,480	30	3,350
5	114	11	101	16	2,230	21	3,620	26	2,740	31	2,580
6	114										

Runoff, in inches.....7.51

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 17--Con.			Aug. 19--Con.		
12 p.m.	3.81	332	10	6.92	2,530	8	6.49	2,130	6	27.5	47,700
			11	6.81	2,420	10	6.40	2,050	7	34.2	70,300
Aug. 13			12	6.73	2,350	12 m.	6.30	1,960	8	34.2	70,300
2 a.m.	3.89	364				1 p.m.	6.25	1,920	9	32.0	62,800
4	4.12	461	Aug. 15			2	6.28	1,940	10	30.5	57,700
6	4.44	610	2 a.m.	6.54	2,180	3	6.43	2,080	11	29.0	52,600
8	4.52	656	4	6.37	2,020	4	6.25	1,920	12 m.	27.5	47,700
10	4.65	730	6	6.20	1,870	6	6.10	1,780	2 p.m.	25.4	41,200
12 m.	4.90	880	8	6.08	1,760	8	5.88	1,590	4	23.4	35,400
2	5.24	1,110	9	6.09	1,770	10	5.66	1,420	6	21.5	30,300
4	5.62	1,390	10	6.02	1,710	12	5.42	1,230	8	20.1	26,800
6	6.43	2,080	12 m.	5.86	1,580				10	18.7	23,300
7	6.93	2,540	1 p.m.	5.81	1,540	Aug. 18			12	17.2	19,700
8	7.15	2,760	2	5.85	1,570	2 a.m.	5.17	1,060			
9	7.12	2,730	3	5.91	1,620	4	4.98	932	Aug. 20		
10	7.24	2,850	4	5.92	1,630	6	4.76	796	2 a.m.	16.15	17,300
11	7.39	3,020	6	5.87	1,590	7	4.72	772	4	15.25	15,000
12	7.47	3,110	8	5.82	1,550	8	4.78	808	6	14.50	14,000
			10	6.06	1,740	9	4.87	862	8	13.75	12,600
Aug. 14			12	6.46	2,100	10	5.10	1,010	10	13.1	11,400
1 a.m.	7.47	3,110				11	5.95	1,650	12 m.	12.45	10,300
2	7.32	2,940	Aug. 16			12 m.	6.37	2,020	2 p.m.	11.9	9,410
3	6.99	2,600	2 a.m.	6.47	2,110	1 p.m.	7.10	2,710	4	11.3	8,450
4	6.72	2,340	4	6.44	2,090	2	8.75	4,660	6	10.75	7,570
5	6.61	2,240	6	6.41	2,060	3	10.90	7,810	8	10.25	6,820
6	6.77	2,380	8	6.37	2,020	4	13.25	11,700	10	9.8	6,140
7	7.04	2,650	10	6.35	2,000	5	14.77	14,500	12	9.4	5,550
8	7.46	3,100	12 m.	6.32	1,980	6	16.35	17,800			
9	8.10	3,840	1 p.m.	6.35	2,000	7	16.99	19,200			
10	8.57	4,430	2	6.59	2,220	8	17.06	19,300	Aug. 21		
11	8.71	4,610	3	6.87	2,480	9	16.78	18,700	2 a.m.	9.00	4,990
12 m.	8.60	4,470	4	6.94	2,550	10	16.36	17,800	4	8.65	4,590
1 p.m.	8.33	4,120	6	6.95	2,560	11	16.04	17,100	6	8.37	4,170
2	8.03	3,760	8	6.90	2,510	12	15.75	16,500	8	8.12	3,860
3	7.77	3,440	10	6.84	2,450				10	7.90	3,600
4	7.55	3,200	12	6.79	2,400	Aug. 19			12 m.	7.72	3,380
5	7.43	3,060				1 a.m.	15.71	16,400	4 p.m.	7.42	3,050
6	7.41	3,040	Aug. 17			2	16.89	19,000	8	7.22	2,830
7	7.31	2,930	2 a.m.	6.72	2,340	3	18.48	22,800	12	7.09	2,700
8	7.19	2,800	4	6.65	2,280	4	20.46	27,600			
9	7.05	2,660	6	6.57	2,200	5	23.49	35,700			

(85) Connecticut River at Thompsonville, Conn.

Location.--Lat 41°59'14", long 72°36'21", on right bank just upstream from Enfield Dam and 1 mile downstream from Thompsonville, Hartford County. Datum of gage is 38.48 ft above mean sea level, datum of 1929.
Drainage area.--9,661 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements.
Maxima.--August 1955: Discharge, 174,000 cfs 7 p.m. Aug. 19 (gage height, 10.93 ft).
1928 to July 1955: Discharge, 282,000 cfs Mar. 20, 1936 (gage height, 16.6 ft, from floodmarks).
Remarks.--Flood flow affected by Quabbin Reservoir (usable capacity, 55,700,000,000 cu ft), Borden Brook and Cobble Mountain Reservoirs (compined usable capacity, 3,394,000,000 cu ft), Knightville Reservoir (usable capacity, 2,130,000,000 cu ft), by other reservoirs, and by diversion from Ware River. Discharge includes water diverted around station by canal of Connecticut Light & Power Co. Low and medium flows regulated by powerplants, by diversion from Chicopee River basin, and by reservoirs (combined usable capacity, about 88½ billion cu ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	2,460	7	1,130	12	9,700	17	23,800	22	29,400	27	18,000
2	3,420	8	1,800	13	15,400	18	29,200	23	25,700	28	11,100
3	3,400	9	2,290	14	36,700	19	127,000	24	24,500	29	13,900
4	3,720	10	2,550	15	45,600	20	104,000	25	24,800	30	14,900
5	2,620	11	3,660	16	31,300	21	49,900	26	21,700	31	14,200
6	1,640										

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 13			Aug. 16--Con.			Aug. 19--Con.			Aug. 20--Con.		
12 p.m.	---	19,800	2 p.m.	2.98	28,900	5	5.53	74,800	4	6.06	84,100
			4	2.91	27,900	6	5.89	81,600	5	5.89	80,900
Aug. 14			6	2.89	27,500	7	6.35	90,400	6	5.75	78,200
2 a.m.	2.59	22,600	8	2.85	27,000	8	6.81	99,200	7	5.59	75,200
4	2.84	26,300	10	2.83	26,600	9	7.51	112,000	8	5.46	72,700
6	3.07	30,000	12	2.78	25,900	10	8.06	122,000	9	5.35	70,600
8	3.25	32,900				11	8.77	135,000	10	5.24	68,400
10	3.42	35,700	Aug. 17			12 m.	9.35	144,000	11	5.14	66,400
12 m.	3.60	38,800	6 a.m.	2.70	24,700	1 p.m.	9.84	153,000	12	5.05	64,600
2 p.m.	3.75	41,400	12 m.	2.62	23,400	2	10.17	159,000			
4	3.86	43,000	6 p.m.	2.59	23,000	3	10.44	164,000	Aug. 21		
6	3.94	44,500	12	2.53	22,100	4	10.65	168,000	2 a.m.	4.86	60,900
8	4.00	45,500				5	10.82	172,000	4	4.71	58,100
10	4.05	46,400	Aug. 18			6	10.90	173,000	6	4.56	55,300
12	4.07	46,800	6 a.m.	2.45	21,100	7	10.93	174,000	8	4.41	52,600
			8	2.48	21,400	8	10.92	173,000	10	4.31	50,800
Aug. 15			10	2.54	22,300	9	10.84	172,000	12 m.	4.21	49,000
2 a.m.	4.08	46,800	11	2.64	23,700	10	10.71	169,000	2 p.m.	4.11	47,200
4	4.09	47,000	12 m.	2.76	25,500	11	10.56	167,000	4	4.02	45,600
6	4.01	46,200	1 p.m.	2.86	27,100	12	10.36	163,000	6	3.95	44,400
8	4.02	46,300	2	2.96	28,700				8	3.84	42,500
10	4.03	46,400	3	3.06	30,200	Aug. 20			10	3.72	40,400
12 m.	4.04	46,600	4	3.16	31,800	1 a.m.	10.12	158,000	12	3.60	38,400
2 p.m.	4.01	46,200	5	3.24	33,000	2	9.84	153,000			
4	3.99	45,700	6	3.38	35,400	3	9.50	147,000	Aug. 22		
6	3.95	45,100	7	3.52	37,800	4	9.12	140,000	2 a.m.	3.46	36,000
8	3.89	44,000	8	3.67	40,300	5	8.81	135,000	4	3.34	34,000
10	3.80	42,500	9	3.80	42,600	6	8.45	128,000	6	3.22	32,000
12	3.70	40,800	10	3.92	44,500	7	8.13	122,000	8	3.14	30,700
			11	4.07	47,300	8	7.80	116,000	10	3.09	29,900
Aug. 16			12	4.22	49,900	9	7.53	112,000	12 m.	3.03	29,000
2 a.m.	3.59	39,000				10	7.30	107,000	2 p.m.	2.94	27,500
4	3.47	36,900	Aug. 19			11	7.04	103,000	4	2.83	25,800
6	3.34	34,700	1 a.m.	4.43	53,600	12 m.	6.80	98,200	6	2.78	25,100
8	3.23	32,900	2	4.59	56,600	1 p.m.	6.61	94,600	8	2.82	25,700
10	3.13	31,300	3	4.89	62,200	2	6.41	90,800	10	2.80	25,400
12 m.	3.05	30,000	4	5.20	68,400	3	6.22	87,200	12	2.81	25,600

(89) Scantic River at Broad Brook, Conn.

Location.--Lat 41°54'42", long 72°33'48", on left bank 300 ft upstream from bridge on State Highway 140, half a mile downstream from Broad Brook, 1 mile southwest of town of Broad Brook, Hartford County, and 8¼ miles upstream from mouth. Datum of gage is 26.23 ft above mean sea level, datum of 1929.
Drainage area.--98.4 sq mi.
Gage-height record.--Water-stage recorder graph except for periods 8 a.m. Aug. 19 to 1 p.m. Aug. 20 and 3 p.m. Aug. 24 to 9 a.m. Aug. 27. Graph for period 8 a.m. Aug. 19 to 1 p.m. Aug. 20 drawn on basis of floodmark and time of peak.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,200 cfs and by computations of flow over dams 7 and 9 miles above station at gage heights 13.9 and 14.4 ft, adjusted for flow from intervening area on basis of computation of flow over dam on Broad Brook, and by slope-area determination of peak flow. Discharge for Aug. 25, 26 estimated on basis of normal recession.
Maxima.--August 1955: Discharge, 13,300 cfs 6 p.m. Aug. 19 (gage height, 19.9 ft, from floodmark).
1928 to July 1955: Discharge, 7,360 cfs Sept. 21, 1938 (gage height, 16.08 ft, from floodmark).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	31	7	29	12	93	17	114	22	839	27	324
2	31	8	65	13	258	18	398	23	589	28	303
3	29	9	62	14	403	19	7,770	24	567	29	282
4	28	10	48	15	416	20	5,070	25	450	30	259
5	25	11	48	16	233	21	1,460	26	360	31	246
6	28										
Runoff, in inches											7.89

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 20--Con.		
12 p.m.--	1.22	102	8----------	6.39	776	4----------	19.5	12,500	12----------	10.43	2,000
			9----------	6.42	782	5----------	19.75	13,000			
Aug. 18			10----------	6.55	807	6----------	19.9	13,300	Aug. 21		
5 a.m.--	1.21	100	11----------	6.86	874	7----------	19.85	13,200	6----------	9.72	1,650
7-------	1.31	113	12----------	7.26	976	8----------	19.8	13,100	12 m.-------	9.21	1,440
8-------	1.31	113				10----------	19.4	12,300	6 p.m.-----	8.68	1,230
9-------	1.43	129	Aug. 19			12----------	18.8	11,100	12----------	8.13	1,070
10-------	2.05	202	1 a.m.-----	7.95	1,180						
12 m.----	2.52	278	3----------	9.85	1,840	Aug. 20			Aug. 22		
1 p.m.--	2.86	328	5----------	11.00	2,420	3 a.m.-----	17.6	9,060	12 m.-------	7.25	821
2-------	3.57	407	7----------	12.85	3,600	6----------	16.2	6,980	12 p.m.-----	6.37	644
3-------	4.33	483	9----------	14.6	5,120	9----------	14.9	5,420			
4-------	5.62	645	11----------	16.25	7,050	12 m.-------	13.55	4,160			
5-------	6.07	718	1 p.m.-----	17.9	9,540	2 p.m.-----	12.85	3,600	Aug. 23		
6-------	6.24	748	2----------	18.65	10,900	6----------	11.67	2,740	12 m.-------	5.98	585
7-------	6.35	768	3----------	19.1	11,700	9----------	10.94	2,280	12 p.m.-----	5.66	541

(93) West Branch Farmington River near New Boston, Mass.

Location.--Lat 42°04'45", long 73°04'24", on left bank 5 ft downstream from highway bridge, 0.3 mile downstream from Clam River, and 1 mile south of New Boston, Berkshire County. Datum of gage is 758.21 ft above mean sea level, datum of 1929.
Drainage area.--92.0 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 9,600 cfs and extended to peak stage on basis of slope-area determination of peak flow.
Maxima.--August 1955: Discharge, 34,300 cfs 4:45 a.m. Aug. 19 (gage height, 14.06 ft).
1913 to July 1955: Discharge, 18,500 cfs Sept. 21, 1938 (gage height, 12.94 ft), from rating curve extended above 1,400 cfs on basis of contracted-opening and slope-area determinations at gage heights 10.65 and 12.94 ft.
Remarks.--Flood flow affected by, and low and medium flows regulated by, Otis Reservoir.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	15	7	16	12	34	17	178	22	1,160	27	272
2	14	8	16	13	458	18	2,400	23	805	28	265
3	14	9	15	14	1,340	19	16,100	24	504	29	223
4	14	10	15	15	676	20	3,380	25	381	30	194
5	14	11	16	116	337	21	1,710	26	302	31	171
6	16										

(93) West Branch Farmington River near New Boston, Mass.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	2.92	51	6	5.97	1,250	7	3.74	193	9	8.97	6,560
			7	5.88	1,170	8	3.95	246	10	8.86	6,190
Aug. 13			8	5.81	1,120	9	4.20	317	11	8.74	5,810
2 a.m.	3.00	60	9	5.74	1,070	10	5.12	700	12	8.65	5,530
4	3.16	82	10	5.68	1,030	11	6.46	1,680			
6	3.30	104	11	5.62	984	12 m.	7.29	2,600	Aug. 20		
8	3.57	156	12	5.57	952	1 p.m.	8.08	3,980	6 a.m.	8.16	4,160
10	4.06	276				2	8.23	4,340	12 m.	7.85	3,140
12 m.	4.60	460	Aug. 15			3	8.18	4,210	6 p.m.	7.18	2,460
1 p.m.	4.60	460	4 a.m.	5.39	844	4	8.03	3,870	12	6.80	2,020
2	4.64	476	8	5.21	746	5	7.91	3,620			
3	4.87	576	12 m.	5.05	665	6	7.92	3,640	Aug. 21		
4	5.15	715	4 p.m.	4.91	595	7	7.83	3,470	6 a.m.	6.50	1,720
5	5.35	822	8	4.76	527	8	7.66	3,160	12 m.	6.20	1,450
6	5.39	844	9	4.63	472	9	7.71	3,250	5 p.m.	5.94	1,220
7	5.45	880	12	4.53	432	10	8.52	5,140	6	6.36	1,590
8	5.48	898				11	9.07	6,900	7	7.13	2,400
9	5.59	964	Aug. 16			12	10.04	10,600	12	6.48	1,700
10	5.53	928	6 a.m.	4.39	380						
11	5.47	892	12 m.	4.28	343	Aug. 19			Aug. 22		
12	5.43	868	6 p.m.	4.15	302	1 a.m.	11.22	15,800	4 a.m.	6.23	1,480
			8	4.11	290	2	12.10	20,600	8	6.01	1,280
Aug. 14			9	4.06	276	3	12.84	25,300	12 m.	5.89	1,180
1 a.m.	5.40	850	10	3.84	217	4	13.66	31,200	4 p.m.	5.41	895
2	5.38	839	12	3.80	207	4:45	14.06	34,300	8	5.24	810
3	5.39	844				5	13.74	31,800	12	5.39	885
4	5.40	850	Aug. 17			6	13.35	28,800			
5	5.58	958	4 a.m.	3.75	196	7	12.89	25,600			
6	6.12	1,380	8	3.70	184	8	12.63	23,900	Aug. 23		
7	6.92	2,150	12 m.	3.66	175	9	12.43	22,600	2 a.m.	5.65	1,030
7:30	7.03	2,280	4 p.m.	3.65	173	10	12.17	21,000	4	5.55	970
8	7.02	2,260	8	3.60	162	11	11.55	17,500	6	5.45	915
9	6.81	2,030	12	3.56	154	12 m.	11.12	15,300	12 m.	5.21	795
10	6.58	1,800				1 p.m.	10.73	13,500	6 p.m.	5.01	695
11	6.59	1,810	Aug. 18			2	10.42	12,200	12	4.85	615
12 m.	6.46	1,680	1 a.m.	3.55	152	3	10.14	11,000			
1 p.m.	6.33	1,570	2	3.54	149	4	9.38	9,960	Aug. 24		
2	6.23	1,480	3	3.54	149	5	9.64	9,010	6 a.m.	4.70	544
3	6.18	1,430	4	3.53	147	6	9.44	8,250	12 m.	4.59	499
4	6.11	1,370	5	3.52	145	7	9.25	7,540	6 p.m.	4.48	454
5	6.03	1,300	6	3.55	152	8	9.10	7,000	12	4.36	421

(99) Still River at Robertsville, Conn.

Location.--Lat 41°58'04", long 73°02'03", on left bank 1,500 ft downstream from Sandy Brook, 1 mile southeast of Robertsville, Litchfield County, 1 mile northwest of Riverton, and 1 mile upstream from mouth. Datum of gage is 510.24 ft above mean sea level, datum of 1929.

Drainage area.--84.4 sq mi.

Gage-height record.--Water-stage recorder graph except for 5 to 11 a.m. on Aug. 19 during time of the peak. Graph for this period was drawn on basis of floodmark and time of peak.

Discharge record.--Stage-discharge relation defined by current-meter measurements below 5,600 cfs and by slope-area determinations at gage heights 10.12 and 16.48 ft.

Maxima.--August 1955: Discharge, 44,000 cfs 8 a.m. Aug. 19 (gage height, 16.48 ft, from floodmark).
1948 to July 1955: Discharge, 9,550 cfs Dec. 31, 1948 (gage height, 10.12 ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	6.8	7	7.8	12	43	17	145	22	746	27	220
2	5.9	8	5.7	13	331	18	2,490	23	629	28	202
3	6.1	9	5.6	14	1,150	19	24,800	24	460	29	184
4	18	10	5.9	15	592	20	3,710	25	324	30	140
5	14	11	9.8	16	254	21	1,150	26	264	31	148
6	13										

Runoff, in inches..... 16.78

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 21		
12 p.m.	1.42	74	8	6.33	3,170	11	15.43	35,800	6 a.m.	5.31	1,380
			9	6.37	3,220	12 m.	15.03	33,000	12 m.	5.00	1,130
			10	6.63	3,530	2 p.m.	13.72	24,800	6 p.m.	4.59	854
Aug. 18			11	7.86	5,220	4	12.49	18,200	8	4.49	800
3 a.m.	1.43	75	12	10.45	10,400	5	11.90	15,600	10	4.49	800
5	1.65	108				6	11.56	14,200	12	4.54	827
6	1.68	113				8	10.54	10,700			
7	2.00	173	Aug. 19			10	9.84	8,800	Aug. 22		
8	3.20	620	1 a.m.	11.45	13,800	12	9.33	7,500	6 a.m.	4.57	844
9	4.20	1,250	2	13.15	21,600				12 m.	4.44	774
10	4.80	1,700	3	14.05	26,700	Aug. 20			6 p.m.	4.19	659
11	6.62	3,510	4	14.90	32,100	3 a.m.	8.68	6,020	12	4.02	589
12 m.	6.57	3,450	5	15.58	36,900	4	8.32	5,350			
1 p.m.	7.74	5,030	6	16.17	41,600	7	7.68	4,290	Aug. 23		
2	7.48	4,640	7	16.43	43,600	11	7.09	3,380	4 a.m.	4.24	681
3	7.11	4,130	8	16.48	44,000	5 p.m.	6.33	2,310	6	4.26	689
4	6.96	3,940	9	16.40	43,400	8	6.00	1,960	12 m.	4.17	650
5	6.72	3,630	10	16.00	40,200	12	5.72	1,710	12 p.m.	3.91	546

(106) Burlington Brook near Burlington, Conn.

Location.--Lat 41°47'10", long 72°57'55", on left bank in rock gorge, 1¼ miles north of Burlington, Hartford County, 3 miles upstream from mouth, and 3 miles southwest of Collinsville. Datum of gage is 714.00 ft above mean sea level, datum of 1929.
Drainage area.--4.12 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 320 cfs and by computations of flow through orifice and over weir and abutments at peak flow.
Maxima.--August 1955: Discharge, 1,720 cfs 4 a.m. Aug. 19 (gage height, 9.22 ft).
1931 to July 1955: Discharge, 676 cfs Sept. 21, 1938 (gage height, 7.24 ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	0.81	7	2.80	12	8.98	17	3.57	22	17.8	27	8.95
2	.75	8	2.75	13	54	18	109	23	14.2	28	8.0
3	.69	9	.92	14	53	19	677	24	11.9	29	7.13
4	.79	10	.97	15	12.4	20	56	25	10.3	30	6.85
5	.72	11	1.99	16	5.77	21	27.0	26	10.4	31	7.13
6	1.06										
Runoff, in inches											10.13

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 20--Con.		
12 p.m.	0.99	3.07	11	3.01	124	10	7.81	845	7	2.25	64
			12	3.28	148	11	7.70	807	10	2.17	58
Aug. 18						1 p.m.	6.60	537	6 p.m.	1.92	41.5
4 a.m.	.99	3.07	Aug. 19			3	5.40	370	9	1.81	35.1
6	1.25	8.63	1 a.m.	4.99	323	5	4.07	225	12	1.77	32.8
9	1.62	24.8	2	7.95	896	7	3.42	161			
11	3.60	178	3	9.10	1,600	10	2.89	113			
12 m.	4.17	235	4	9.22	1,720	12	2.67	96	Aug. 21		
3 p.m.	3.86	204	6	8.60	1,220				12 m.	1.68	27.9
4	3.82	200	7	9.13	1,630	Aug. 20			6 p.m.	1.60	23.7
10	3.02	125	9	8.03	927	4 a.m.	2.39	73	12	1.52	19.7

(111) Farmington River at Rainbow, Conn.

Location.--Lat 41°54'41", long 72°41'16", on left bank at Rainbow, Hartford County, 300 ft from Stevens Paper Mill, 0.4 mile downstream from Farmington River Power Co. Dam, 1.3 miles upstream from Poquonock, 6.4 miles downstream from Salmon Brook and 8 miles upstream from mouth. Datum of gage is 35.36 ft above mean sea level, datum of 1929.
Drainage area.--584 sq mi.
Gage-height.--Water-stage recorder graph 9 a.m. to 12 p.m. Aug. 31 only.
Discharge record.--Discharges computed from powerplant data furnished by Farmington River Power Co., and determination of peak flow over dam for flood of August 19.
Maxima.--August 1955: Discharge, 69,200 cfs 10-11 p.m. Aug. 19 (gage height, 23.5 ft, from floodmarks).
1928 to July 1955: Discharge, 29,900 cfs Sept. 22, 1938; gage height, 13.83 ft Jan. 1, 1949.
Remarks.--Flood flow regulated by powerplants, by Otis, Barkhamsted, East Branch, Nepaug and Whigville Reservoirs having a combined capacity of about 6,450,000,000 cubic feet, and by diversions for domestic water supply from Barkhamsted, Nepaug, and Whigville Reservoirs and Whites Bridge pumping plant.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	215	7	290	12	805	17	1,800	22	13,800	27	1,600
2	205	8	420	13	1,700	18	1,850	23	8,460	28	1,450
3	215	9	230	14	2,500	19	45,100	24	5,520	29	1,250
4	550	10	230	15	4,500	20	56,700	25	4,870	30	1,450
5	300	11	310	16	2,600	21	27,600	26	2,500	31	1,250
6	230										
Runoff, in inches											12.11

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19--Con.			Aug. 20--Con.			Aug. 22		
12 p.m.		20	3		7,700	4		66,800	6 a.m.		15,700
			4		8,700	7		65,900	12 m.		13,500
Aug. 18			5		18,000	12 m.		60,600	6 p.m.		11,900
6 a.m.		20	6		40,500	3 p.m.		53,700	12		10,400
7		1,000	9		41,500	6		47,200			
8		2,000	10		56,500	9		41,000	Aug. 23		
11		2,000	5 p.m.		56,500	11		37,600	12 m.		8,410
12 m.		1,000	6		57,500	12		40,200	3 p.m.		7,780
1 p.m.		2,000	7		58,500				4		8,280
2		2,000	8		60,500				5		8,540
3		2,400	9		65,500	Aug. 21			6		7,320
9		2,400	10		69,200	3 a.m.		36,100	12		6,540
10		4,570	11		69,200	6		33,300			
11		5,280	12		68,000	9		29,700	Aug. 24		
12		6,830				12 m.		27,300	8 a.m.		5,920
			Aug. 20			3 p.m.		23,400	6 p.m.		5,500
Aug. 19			1 a.m.		68,000	6		21,700	7		3,930
1 a.m.		6,800	2		68,500	9		20,000	11		4,120
2		6,650	3		68,000	12		18,100	12		5,540

(129) Housatonic River at Gaylordsville, Conn.

Location.--Lat 41°39'11", long 73°29'25", on left bank 0.4 mile downstream from hydroelectric plant of Connecticut Light & Power Co., 0.5 mile upstream from bridge on U. S. Highway 7 at Gaylordsville, Litchfield County, 1½ miles downstream from Tenmile River, and at mile 50.6. Datum of gage is 236.78 feet above mean sea level, datum of 1929.
Drainage area.--994 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 28,000 cfs and extended to peak stage on basis of logarithmic plotting.
Maxima.--August 1955: Discharge, 51,800 cfs 5 p.m. Aug. 19 (gage height, 18.58 ft).
1900-1914, 1940 to July 1955: Discharge, 32,300 cfs Jan. 1, 1949 (gage height, 14.85 ft).
Flood of May 1854 reached a stage of 21 ft 3 in, at former gage site 0.6 mile downstream at different datum, reported by observer in 1902. Flood of Sept. 22, 1938, reached a stage of 14.5 ft., from floodmarks, at present site (discharge, 37,000 cfs, by computation of peak flow over dam 2½ miles upstream adjusted for flow from intervening area).
Remarks.--Low and medium flows regulated by powerplants above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	227	7	146	12	328	17	1,560	22	9,490	27	2,600
2	208	8	157	13	955	18	1,820	23	7,460	28	2,320
3	206	9	177	14	3,130	19	38,800	24	5,520	29	2,020
4	231	10	145	15	3,240	20	27,700	25	4,040	30	1,850
5	299	11	247	16	2,250	21	15,100	26	3,120	31	1,710
6	385										
Runoff, in inches											5.14

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19			Aug. 20--Con.			Aug. 23		
12 p.m.	3.41	1,380	2 a.m.	8.95	10,700	12 m.	13.56	26,200	4 a.m.	7.80	8,010
			4	11.75	19,000	6 p.m.	12.58	22,100	8	7.72	7,840
Aug. 18			6	14.76	31,800	12	11.81	19,200	4 p.m.	7.43	7,230
1 a.m.	3.20	1,210	8	16.52	40,600				12	7.06	6,490
3	3.22	1,230	10	17.38	45,200	Aug. 21					
4	2.56	746	12 m.	17.91	48,000	8 a.m.	10.95	16,300			
5	2.52	722	2 p.m.	18.23	49,800	4 p.m.	10.08	13,700	Aug. 24		
6	2.90	980	4	18.54	51,500	12	9.31	11,600	12 m.	6.52	5,490
7	3.21	1,220	5	18.58	51,800				12 p.m.	6.08	4,730
9	3.27	1,270	6	18.53	51,500						
10	3.48	1,440	9	17.78	47,300	Aug. 22					
2 p.m.	3.50	1,460	12	16.65	41,300	8 a.m.	8.66	9,960	Aug. 25		
6	4.26	2,230				4 p.m.	8.15	8,780	12 m.	5.65	4,040
8	4.33	2,300	Aug. 20			8	7.92	8,270	12 p.m.	5.23	3,430
12	6.24	5,000	6 a.m.	14.86	32,300	12	7.80	8,010			

(137) Pomperaug River at Southbury, Conn.

Location.--Lat 41°28'50", long 73°13'30", on right bank 200 ft upstream from highway bridge, 800 ft downstream from Bullet Hill Brook, 0.6 mile west of Southbury, New Haven County, and 5.8 miles upstream from mouth. Datum of gage is 165.60 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.--75.3 sq mi.
Gag-height record.--Water-stage recorder graph except for period 1 a.m. to 7 p.m. Aug. 19. Graph for this period drawn on basis of floodmark and time of peak.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,200 cfs and by computation of flow over dam at gage height 16.0 ft and slope-area determination of peak.
Maxima.--August 1955: Discharge, 29,400 cfs 6:30 a.m. Aug. 19 (gage height, 21.8 ft, from floodmarks).
1932 to July 1955: Discharge, 7,420 cfs Sept. 21, 1938 (gage height, 16.0 ft, from floodmarks).
Remarks.--Infrequent regulation at low flow only by mill above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	15	7	13	12	60	17	126	22	468	27	88
2	14	8	21	13	380	18	1,550	23	350	28	73
3	13	9	16	14	1,360	19	9,510	24	270	29	56
4	12	10	14	15	348	20	1,370	25	226	30	48
5	12	11	15	16	181	21	679	26	193	31	48
6	12										
Runoff, in inches											8.67

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 20		
12 p.m.	3.48	108	8	7.37	1,660	9	19.95	19,800	2 a.m.	7.83	2,000
			9	7.13	1,540	10	19.0	16,600	4	7.65	1,820
Aug. 18			10	7.38	1,670	11	18.05	13,800	6	7.39	1,670
3 a.m.	3.47	106	11	8.25	2,150	12 m.	17.15	11,600	8	7.16	1,550
4	3.80	165	12	9.12	2,630	1 p.m.	16.0	9,300	10	6.83	1,380
5	4.52	344				2	15.0	7,700	12 m.	6.66	1,300
6	5.40	680	Aug. 19			3	14.0	6,440	4 p.m.	6.25	1,100
7	5.87	905	1 a.m.	10.00	3,160	4	12.95	5,360	8	5.93	935
8	6.52	1,230	2	11.25	3,960	5	11.85	4,400	12	5.76	850
10	7.45	1,710	3	13.2	5,500	6	11.0	3,800			
11	7.90	1,960	4	17.3	9,500	7	10.35	3,370	Aug. 21		
12 m.	9.23	2,700	5	19.5	13,000	8	9.80	3,040	6 a.m.	5.60	770
1 p.m.	9.94	3,120	6	21.65	24,600	9	9.35	2,770	12 m.	5.42	689
2	9.75	3,010	6:30	21.8	29,400	10	9.03	2,580	6 p.m.	5.17	583
4	8.84	2,470	7	21.65	28,100	11	8.73	2,410	10	5.02	523
6	8.02	2,020	8	20.9	23,600	12	8.43	2,250	12	5.01	519

(142) Naugatuck River near Thomaston, Conn.

Location.--Lat 41°42'15", long 73°03'53", on right bank near downstream side of Twomile Bridge, 250 ft downstream from New York, New Haven & Hartford Railroad bridge, 0.4 mile upstream from Leadmine Brook and 2 miles north of Thomaston, Litchfield County, and at mile 31. Datum of gage is 389.44 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.--71.9 sq mi.
Gage-height record.--Water-stage recorder graph except for period 4 a.m. Aug. 19 to 3 p.m. Aug. 20 and Aug. 21 to 30. Graph for period 4 a.m. Aug. 19 to 3 p.m. Aug 20 was drawn on basis of floodmark and time of peak and for Aug. 21 to 30 on basis of shape of recession graph for former floods.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 6,000 cfs and by slope-area determination of peak flow.
Maxima.--August 1955: Discharge, 41,600 cfs 5:30 a.m. Aug. 19 (gage height, 24.0 ft, from floodmarks).
1930 to July 1955: Discharge 10,200 cfs Dec. 31, 1948 (gage height, 12.03 ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	19	7	26	12	71	17	110	22	500	27	180
2	20	8	31	13	433	18	2,160	23	350	28	170
3	19	9	24	14	1,690	19	14,700	24	280	29	150
4	21	10	23	15	442	20	2,320	25	220	30	145
5	25	11	35	16	187	21	1,000	26	190	31	142
6	42										

Runoff, in inches..... 13.33

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 19--Con.		
12 p.m.	1.74	100	5	7.54	4,450	3:30	16.24	19,600	6	10.2	7,950
			6	6.85	3,700	4	15.52	17,800	8	9.2	6,530
Aug. 18			7	6.13	3,000	4:30	21.5	33,100	10	8.3	5,360
6 a.m.	1.70	93	8	5.65	2,560	5	23.8	41,000	12	7.5	4,400
7	1.95	144	9	5.32	2,270	5:30	24.0	41,600			
8	2.85	465	10	5.07	2,040	6	23.9	41,300	Aug. 20		
9	4.20	1,310	11	5.65	2,560	7	21.8	34,700	2 a.m.	6.8	3,650
10	6.17	3,030	12	7.21	4,080	8	18.9	26,200	4	6.3	3,150
11	6.45	3,300				9	17.0	21,400	6	5.9	2,790
12 m.	6.63	3,480	Aug. 19			10	15.6	18,000	9	5.5	2,430
1 p.m.	6.82	3,670	1 a.m.	8.80	5,990	11	14.5	15,800	12 m.	5.2	2,160
2	7.17	4,040	2	9.30	6,670	12 m.	13.6	13,800	3 p.m.	4.95	1,940
3	7.60	4,520	2:30	10.00	7,650	2 p.m.	12.1	11,100	6	4.63	1,650
4	7.72	4,660	3	14.00	14,600	4	11.1	9,370	12	4.12	1,250

(169) Rondout Creek near Lackawack, N. Y.

Location.--Lat 41°46'30", long 74°24'10", on left bank at downstream side of highway bridge known as Wilburs Bridge, 2½ miles southeast of Lackawack, Ulster County, and 3 miles downstream from Merriman Dam (Roundout Reservoir). Datum of gage is 601.07 ft above mean sea level (datum of New York City Board of Water Supply).
Drainage area.--100 sq mi.
Gage-height record.--Water-stage recorder graph except for period 12:40 p.m. Aug. 1 to 12:50 p.m. Aug. 5, for which discharge was estimated on basis of weather records.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,400 cfs and extended to peak stage by logarithmic plotting.
Maxima.--August 1955: Discharge 2,360 cfs 1:15 a.m. Aug. 19 (gage height, 5.76 ft).
1906 to July 1955: Discharge 26,700 cfs Aug. 26, 1928 (slope-area determination by Board of Water Supply, city of New York).
Remarks.--Practically entire flow above Merriman Dam (drainage area, 94.4 sq mi) diverted for water supply of city of New York, subsequent to May 9, 1951.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	18	7	19	12	20	17	22	22	43	27	28
2	18	8	19	13	75	18	356	23	37	28	27
3	18	9	19	14	33	19	561	24	33	29	25
4	19	10	19	15	22	20	94	25	30	30	23
5	19	11	19	16	22	21	57	26	29	31	24
6	19										

Runoff, in inches..... 0.66

(169) Rondout Creek near Lackawack, N. Y.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 19--Con.		
12 p.m.--	0.75	25	2---------	1.90	157	4---------	4.02	934	8---------	1.92	161
			3---------	1.79	138	5---------	3.59	705	9---------	1.88	154
Aug. 18			4---------	1.70	125	6---------	3.33	585	10---------	1.84	147
1 a.m.--	.75	25	5---------	1.63	115	7---------	3.16	514	11---------	1.80	140
2-------	.75	25	6---------	1.92	161	8---------	3.01	456	12---------	1.76	134
3-------	.78	26	7---------	2.62	326	9---------	2.87	406			
4-------	.84	31	8---------	3.48	653	10---------	2.74	363			
5-------	.94	38	9---------	4.76	1,430	11---------	2.62	326	Aug. 20		
6-------	1.10	52	10---------	5.06	1,680	12 m.------	2.50	292	4 a.m.----	1.65	118
7-------	1.37	81	11---------	4.91	1,550	1 p.m.----	2.40	266	8---------	1.55	104
8-------	1.56	106	12---------	5.26	1,860	2---------	2.31	244	12 m.------	1.45	92
9-------	1.63	115				3---------	2.22	223	4 p.m.----	1.35	79
10-------	1.96	168	Aug. 19			4---------	2.15	207	8---------	1.29	72
11-------	2.09	194	1 a.m.----	5.70	2,300	5---------	2.09	194	12---------	1.25	68
12 m.----	2.25	230	2---------	5.49	2,080	6---------	2.02	180			
1 p.m.--	2.06	188	3---------	4.75	1,420	7---------	1.97	170			

(175) Rondout Creek at Rosendale, N. Y.

Location.--Lat 41°50'35", long 74°05'10", on left bank 150 ft upstream from upper highway bridge in Rosendale, Ulster County, and 3 miles upstream from Wallkill River. Datum of gage is 42.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Drainage area.--386 sq mi.

Gage-height record.--Water-stage recorder graph, except for period 4 a.m., Aug. 19 to 4 p.m., Aug. 20, for which graph was reconstructed on basis of high-water mark in gage house.

Discharge record.--Stage-discharge defined by current-meter measurements below 15,000 cfs and extended to peak stage on basis of contracted-opening determination.

Maxima.--August 1955: Discharge 30,900 cfs about 6 a.m. Aug. 19 (gage height, 23.93 ft, from high-water mark in gage house).

1901-03, 1906-19, 1926 to July 1955: Discharge, 27,300 cfs Aug. 27, 1928 (gage height, 21.9 ft) from rating curve extended by logarithmic plotting.

Remarks.--Practically entire flow above Merriman Dam (drainage area, 94.4 sq mi) diverted for water supply of city of New York, subsequent to May 9, 1951.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	33	7	36	12	47	17	286	22	1,320	27	401
2	58	8	34	13	1,690	18	2,300	23	884	28	332
3	37	9	42	14	1,800	19	17,900	24	716	29	283
4	30	10	42	15	881	20	4,560	25	547	30	255
5	31	11	34	16	371	21	2,170	26	485	31	261
6	33										

Runoff, in inches..... 3.65

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.---	1.47	16	12 p.m.-----	2.85	492	12----------	13.80	14,600	11----------	8.67	6,570
									12----------	8.50	6,330
Aug. 13*											
7 a.m.---	1.55	22	Aug. 16*			Aug. 19			Aug. 20		
8--------	1.98	88	12 m.-------	2.68	387	1 a.m.-----	16.40	18,700	4 a.m.-----	7.90	5,490
9--------	2.86	498	12 p.m.-----	2.52	298	2----------	18.50	22,100	8----------	7.48	4,920
10--------	2.89	518				3----------	20.50	25,300	12 m.-------	7.18	4,530
12 m.-----	2.62	353	Aug. 17*			4----------	22.00	27,700	4 p.m.-----	6.85	4,100
2 p.m.---	2.51	292	12 m.-------	2.51	292	5----------	23.23	29,800	8----------	6.45	3,620
4--------	5.75	2,840	12 p.m.-----	2.42	248	6----------	23.93	30,900	12----------	5.96	3,070
6--------	7.16	4,510				7----------	23.53	30,300			
8--------	7.47	4,910	Aug. 18*			8----------	22.72	28,900			
10--------	7.18	4,530	4 a.m.-----	2.45	262	9----------	21.97	27,700	Aug. 21		
12--------	6.72	3,940	8----------	2.80	460	10----------	21.00	26,100	4 a.m.-----	5.62	2,710
			12 m.-------	2.93	544	11----------	19.40	23,500	8----------	5.34	2,430
Aug. 14*			1 p.m.-----	3.01	597	12 m.-------	17.40	20,300	12 m.-------	5.13	2,230
4 a.m.---	5.53	2,620	2----------	3.30	795	1 p.m.-----	15.50	17,300	4 p.m.-----	4.66	1,800
8--------	4.69	1,840	3----------	3.73	1,100	2----------	13.75	14,500	8----------	4.38	1,560
12 m.-----	4.21	1,460	4----------	4.32	1,550	3----------	11.90	11,500	12----------	4.38	1,560
4 p.m.---	3.89	1,220	5----------	5.37	2,460	4----------	10.75	9,700			
8--------	3.81	1,160	6----------	6.25	3,380	5----------	10.35	9,080	Aug. 22*		
12--------	3.76	1,120	7----------	6.77	4,000	6----------	10.00	8,550	12 m.-------	4.14	1,360
			8----------	7.37	4,780	7----------	9.68	8,070	12 p.m.-----	3.64	983
			9----------	8.23	5,950	8----------	9.40	7,650			
Aug. 15*			10----------	9.57	7,900	9----------	9.12	7,230	Aug. 23*		
12 m.-----	3.56	977	11----------	11.50	10,900	10----------	8.90	6,900	12 m.-------	3.47	866
									12 p.m.-----	3.41	825

(184) Wallkill River at Gardiner, N. Y.

Location.--Lat 41°41'10", long 74°09'55", on left bank 400 ft upstream from highway bridge, 500 ft downstream from Shawangunk Kill, and three-quarters of a mile northwest of Gardiner, Ulster County. Datum of gage is 185.70 ft above mean sea level, adjustment of 1912.
Drainage area.--711 sq mi.
Gage-height record.--Water-stage recorder graph, except for period 5 a.m. Aug. 5 to 8:40 a.m. Aug. 8, for which discharge was estimated on basis of weather records.
Discharge record.--Stage-discharge relation defined by current-meter measurements.
Maxima.--August 1955: Discharge 30,600 cfs 10:30 a.m. Aug. 19 (gage height, 19.77 ft).
1924 to July 1955: Discharge 21,200 cfs June 1, 1952 (gage height, 14.88 ft); gage height, 18.83 ft Mar. 7, 1945 (ice jam).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	30	7	29	12	119	17	2,020	22	9,910	27	2,000
2	30	8	28	13	1,220	18	3,460	23	8,620	28	1,570
3	29	9	21	14	2,800	19	25,200	24	6,680	29	1,320
4	28	10	22	15	2,160	20	14,300	25	4,610	30	925
5	26	11	56	16	2,150	21	10,400	26	2,870	31	798
6	25										

Runoff, in inches..... 5.41

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	2.68	186	12	5.45	2,380	4	5.75	2,700	12	16.00	19,800
Aug. 13			Aug. 15			5	5.81	2,770			
1 a.m.	2.71	197	4 a.m.	5.32	2,240	6	6.03	3,030	Aug. 20		
2	2.72	200	8	5.22	2,140	7	6.32	3,370	6 a.m.	14.59	16,600
3	2.75	212	12 m.	5.19	2,110	8	6.81	3,960	12 m.	13.03	13,600
4	2.79	226	4 p.m.	5.18	2,100	9	8.05	5,610	6 p.m.	12.00	11,800
5	2.84	246	8	5.20	2,120	10	10.20	8,820	12	11.45	10,800
6	2.91	276	12	5.24	2,160	11	11.90	11,600			
7	2.96	299				12	13.20	13,900			
8	2.97	303	Aug. 16						Aug. 21		
9	3.01	322	12 m.	5.24	2,160	Aug. 19			12 m.	11.15	10,300
10	3.13	384	12 p.m.	5.18	2,100	1 a.m.	14.30	16,000	12 p.m.	11.12	10,300
11	3.29	476				2	15.25	18,100			
12 m.	3.40	545	Aug. 17			3	16.76	21,700	Aug. 22		
1 p.m.	3.57	662	12 m.	5.12	2,040	4	18.00	25,000	6 a.m.	11.04	10.160
2	3.95	958	12 p.m.	5.00	1,920	5	18.60	26,800	12 m.	10.92	9,970
3	4.25	1,220				6	19.00	28,000	6 p.m.	10.73	9,670
4	4.48	1,420	Aug. 18			7	19.26	28,900	12	10.53	9,350
5	4.80	1,720	1 a.m.	5.00	1,920	8	19.51	29,700			
6	5.32	2,240	2	4.98	1,900	9	19.68	30,300	Aug. 23		
7	5.74	2,590	3	4.97	1,890	10	19.77	30,600	6 a.m.	10.33	9,030
8	6.02	3,010	4	4.98	1,900	11	19.77	30,600	12 m.	10.11	8,680
9	6.17	3,190	5	4.99	1,910	12 m.	19.65	30,200	6 p.m.	9.82	8,210
10	6.28	3,330	6	5.01	1,930	1 p.m.	19.45	29,500	12	9.50	7,730
11	6.32	3,370	7	5.05	1,970	2	19.17	28,600			
12	6.30	3,350	8	5.14	2,060	3	18.85	27,500	Aug. 24		
Aug. 14			9	5.25	2,170	4	18.53	26,500	8 a.m.	9.05	7,060
4 a.m.	6.10	3,110	10	5.47	2,400	5	18.15	25,400	4 p.m.	8.57	6,340
8	5.95	2,930	11	5.60	2,540	6	17.81	24,500	12	8.03	5,580
12 m.	5.80	2,760	12 m.	5.71	2,660	7	17.45	23,500			
4 p.m.	5.67	2,620	1 p.m.	5.81	2,770	8	17.11	22,600	Aug. 25		
8	5.56	2,500	2	5.77	2,730	9	16.85	21,900	8 a.m.	7.55	4,920
			3	5.73	2,680	10	16.55	21,200	4 p.m.	7.06	4,290
						11	16.28	20,500	12	6.57	3,670

(185) Wappinger Creek near Wappingers Falls, N. Y.

Location.--Lat 41°39'05", long 73°52'20", on left bank 700 ft downstream from Red Oak Mill dam and 4½ miles northeast of village of Wappingers Falls, Dutchess County. Altitude of gage is 120 ft (from topographic map).
Drainage area.--182 sq mi.
Gage-height record.--Water-stage recorder graph, except for period 12 m. to 6 p.m. Aug. 19, for which graph was reconstructed on basis of high-water mark.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 3,800 cfs and extended on basis of flow-over-dam determination at 18.02 ft, and contracted-opening and flow-over-road determination at 19.60 ft made upstream at Manchester Bridge at Arlington, N. Y., with discharge of 18,000 cfs.
Maxima.--August 1955: Discharge, 18,600 cfs about 3 p.m. Aug. 19 (gage height, 19.60 ft, from high-water mark in gage house).
1928 to July 1955: Discharge, 15,900 cfs Sept. 22, 1938 (gage height 18.02 ft, from floodmarks).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	14	7	12	12	12	17	95	22	1,400	27	473
2	14	8	12	13	112	18	312	23	1,230	28	426
3	13	9	11	14	410	19	10,500	24	916	29	365
4	13	10	11	15	221	20	5,490	25	664	30	327
5	12	11	11	16	137	21	2,290	26	551	31	298
6	12										
Runoff, in inches											5.39

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 19--Con.			Aug. 20*--Con.			Aug. 22--Con.		
12 p.m.--	3.14	83	10----------	14.30	10,700	10----------	10.34	5,510	8----------	6.20	1,510
			11----------	16.00	13,200	12 m.-------	9.94	5,030	12 m.-------	6.06	1,420
Aug. 18*			12 m.-------	17.40	15,300	2 p.m.-----	9.59	4,630	4 p.m.-----	5.88	1,300
4 a.m.--	3.14	83	1 p.m.-----	18.10	16,300	4----------	9.00	3,980	8----------	5.74	1,210
8-------	3.24	99	2----------	19.00	17,700	6----------	8.76	3,720	12----------	5.63	1,150
12 m.----	3.43	136	3----------	19.60	18,600	8----------	8.57	3,530			
4 p.m.--	3.76	226	4----------	19.25	18,000	10----------	8.42	3,380	Aug. 23		
8-------	4.76	660	5----------	18.70	17,200	12----------	8.23	3,190	4 a.m.-----	5.61	1,140
12-------	5.95	1,350	6----------	18.10	16,300				8----------	5.73	1,210
			7----------	17.50	15,400				12 m.-------	5.89	1,310
			8----------	16.75	14,300	Aug. 21			4 p.m.-----	5.86	1,290
Aug. 19			9----------	16.00	13,200	4 a.m.-----	7.81	2,790	8----------	5.71	1,200
1 a.m.--	6.26	1,550	10----------	15.30	12,100	8----------	7.46	2,480	12----------	5.53	1,090
2-------	6.69	1,860	11----------	14.60	11,100	12 m.-------	7.17	2,240			
3-------	7.36	2,390	12----------	14.00	10,300	4 p.m.-----	6.87	2,000	Aug. 24		
4-------	7.91	2,880				8----------	6.63	1,820	4 a.m.-----	5.38	998
5-------	8.48	3,440	Aug. 20*			12----------	6.40	1,650	8----------	5.28	939
6-------	9.50	4,530	2 a.m.-----	13.05	8,930				12 m.-------	5.20	893
7-------	10.55	5,760	4----------	12.06	7,640				4 p.m.-----	5.14	859
8-------	11.50	6,910	6----------	11.43	6,820	Aug. 22			8----------	5.14	859
9-------	12.71	8,480	8----------	10.78	6,040	4 a.m.----	6.27	1,560	12----------	5.04	805

(210) South Branch Raritan River at Stanton, N. J.

Location.--Lat 40°34'21", long 74°52'10", on right bank at downstream side of highway bridge near Stanton railroad station, Reading Township, Hunterdon County, half a mile upstream from Prescott Brook. Datum of gage is 125.01 ft above mean sea level, datum of 1929.
Drainage area.--147 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 6,500 cfs and extended to peak stage on basis of adjustment to station of contracted-opening determination of 22,900 cfs made 1.7 miles downstream and slope-area determination of 19,600 cfs made 0.4 mile downstream. Backwater from aquatic growth or debris, at times.
Maxima.--August 1955: Discharge, 18,000 cfs 2 a.m. Aug. 19 (gage height, 15.22 ft).
1903-6, 1919-July 1955: Discharge, 10,900 cfs Mar. 15, 1940, July 19, 1945 (gage height, 12.2 ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	72	7	83	12	740	17	300	22	880	27	310
2	70	8	193	13	4,390	18	1,920	23	575	28	276
3	65	9	87	14	1,390	19	8,060	24	453	29	255
4	63	10	76	15	625	20	1,430	25	391	30	245
5	65	11	119	16	346	21	924	26	338	31	241
6	67										

Runoff, in inches..... 6.34

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 10			Aug. 14--Con.			Aug. 19			Aug. 21		
12 p.m.--	2.39	72	12---------	4.35	930	1 a.m.----	14.53	16,300	2 a.m.-----	4.47	1,000
						2---------	15.22	18,000	4----------	4.42	972
Aug. 11			Aug. 15			3---------	14.84	17,100	6----------	4.38	948
4 a.m.--	2.42	78	4 a.m.----	4.13	798	4---------	13.75	14,400	8----------	4.35	930
8-------	2.40	74	8---------	3.97	705	5---------	12.75	12,200	10---------	4.31	906
12 m.----	2.39	72	12 m.------	3.82	595	6---------	12.00	10,600	12 m.-------	4.26	876
4 p.m.--	2.41	76	4 p.m.----	3.67	520	7---------	11.49	9,580	2 p.m.-----	4.20	840
6-------	2.66	134	8---------	3.54	456	8---------	11.26	9,130	4----------	4.14	804
8-------	2.73	152	12---------	3.47	424	9---------	11.14	8,910	6----------	4.09	774
10-------	3.21	318				10---------	10.75	8,160	8----------	4.11	786
12-------	3.34	370	Aug. 16			11---------	10.37	7,480	10---------	4.64	1,100
			4 a.m.----	3.42	402	12 m.------	9.90	6,670	12---------	4.91	1,270
Aug. 12			8---------	3.37	379	1 p.m.----	9.50	6,030			
2 a.m.--	3.29	350	12 m.------	3.32	338	2---------	9.26	5,670	Aug. 22		
4-------	3.13	286	4 p.m.----	3.26	314	3---------	9.04	5,340	2 a.m.-----	4.79	1,190
6-------	3.10	276	8---------	3.20	290	4---------	8.82	5,030	4----------	4.57	1,060
8-------	3.38	388	12---------	3.17	280	5---------	8.60	4,720	6----------	4.43	978
10-------	4.25	870				6---------	8.31	4,340	8----------	4.39	954
12 m.----	4.91	1,270	Aug. 17			7---------	8.00	3,960	10---------	4.33	918
2 p.m.--	4.61	1,090	4 a.m.----	3.14	269	8---------	7.68	3,580	12 m.-------	4.24	864
4-------	4.29	894	8---------	3.12	262	9---------	7.32	3,180	2 p.m.-----	4.16	816
6-------	4.14	804	12 m.------	3.07	245	10---------	6.99	2,850	4----------	4.07	762
8-------	4.20	840	4 p.m.----	3.17	280	11---------	6.66	2,540	6----------	3.99	715
10-------	4.51	1,030	8---------	3.43	406	12---------	6.36	2,290	8----------	3.93	685
12-------	4.79	1,190	12---------	3.42	402				10---------	3.88	658
									12---------	3.86	646
Aug. 13						Aug. 20					
2 a.m.--	4.82	1,210	Aug. 18			1 a.m.----	6.11	2,090	Aug. 23		
4-------	6.28	2,220	1 a.m.----	3.50	460	2---------	5.90	1,930	4 a.m.-----	3.82	622
6-------	8.15	4,140	2---------	4.02	732	3---------	5.74	1,820	8----------	3.78	600
8-------	9.65	6,270	3---------	4.73	1,160	4---------	5.62	1,730	12 m.-------	3.75	585
10-------	10.29	7,330	4---------	5.35	1,560	5---------	5.52	1,660	4 p.m.-----	3.68	550
12 m.----	9.94	6,740	5---------	5.41	1,600	6---------	5.44	1,610	8----------	3.62	520
2 p.m.--	9.72	6,380	6---------	5.42	1,600	7---------	5.37	1,570	12---------	3.57	495
4-------	9.19	5,560	7---------	5.37	1,570	8---------	5.31	1,530			
6-------	8.48	4,560	8---------	5.25	1,490	9---------	5.25	1,490	Aug. 24		
8-------	7.69	3,590	9---------	5.08	1,380	10---------	5.20	1,460	4 a.m.	3.54	480
10-------	7.03	2,890	10---------	4.89	1,250	11---------	5.14	1,420	8----------	3.52	470
12-------	6.38	2,300	11---------	4.72	1,150	12 m.------	5.09	1,380	12 m.-------	3.49	456
			12 m.------	4.66	1,120	1 p.m.----	5.02	1,340	4 p.m.-----	3.45	438
Aug. 14			1 p.m.----	4.64	1,100	2---------	4.96	1,300	8----------	3.41	420
2 a.m.--	5.73	1,810	2---------	4.63	1,100	3---------	4.90	1,260	12---------	3.39	410
4-------	5.05	1,360	3---------	4.60	1,080	4---------	4.84	1,220			
6-------	4.60	1,080	4---------	4.53	1,040	5---------	4.78	1,190	Aug. 25		
8-------	4.40	960	5---------	4.50	1,020	6---------	4.73	1,160	4 a.m.-----	3.37	402
10-------	4.30	900	6---------	4.59	1,070	7---------	6.68	1,130	8----------	3.37	402
12 m.----	4.29	894	7---------	5.15	1,420	8---------	4.64	1,100	12 m.-------	3.37	402
2 p.m.--	5.05	1,360	8---------	6.15	2,120	9---------	4.61	1,090	4 p.m.-----	3.33	384
4-------	6.16	2,130	9---------	7.50	3,380	10---------	4.58	1,070	8----------	3.30	370
6-------	6.15	2,120	10---------	8.35	4,400	11---------	4.55	1,050	12---------	3.27	358
8-------	5.15	1,420	11---------	9.85	6,590	12---------	4.52	1,030			
10-------	4.60	1,080	12---------	13.17	13,000						

(227) Delaware River above Lackawaxen River, near Barryville, N. Y.

Location.--Lat 41°30'30", long 74°59'15", on left bank 1.6 miles upstream from Lackawaxen River and 5.8 miles northwest of Barryville, Sullivan County. Datum of gage is 600.22 ft above mean sea level (datum of 1929, New York-Pennsylvania supplementary adjustment of 1943).
Drainage area.--2,023 sq mi.
Gage-height record.--Water-stage recorder graph except for period 9 p.m. Aug. 18 to 9 a.m. Aug. 22, for which graph was reconstructed on basis of high-water mark in gage house and outside-gage readings.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 55,000 cfs and by slope-area determination at 23.19 ft.
Maxima.--August 1955: Discharge, 130,000 cfs, about 3:30 a.m. Aug. 19 (gage height, 26.40 ft, from high-water mark in gage house).
1940 to July 1955: Discharge, 105,000 cfs, May 23, 1942 (gage height, 23.19 ft), from slope-area determination.
Remarks.--Practically entire flow above Downsville Dam (drainage area, 371 sq mi) diverted for water supply of city of New York, subsequent to Sept. 15, 1954.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	532	7	566	12	808	17	1,930	22	9,480	27	2,910
2	541	8	576	13	2,720	18	10,400	23	9,720	28	2,520
3	516	9	605	14	6,100	19	85,000	24	6,750	29	2,200
4	505	10	560	15	5,180	20	25,800	25	4,770	30	1,840
5	500	11	565	16	2,920	21	12,700	26	3,600	31	2,140
6	523										
Runoff, in inches											3.78

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 11			Aug. 17			Aug. 19--Con.			Aug. 22		
12 p.m.--	2.31	640	4 a.m.----	3.81	2,190	1 p.m.-----	19.53	80,400	2 a.m.-----	7.11	11,300
			8---------	3.70	2,020	2----------	19.03	77,200	4----------	6.98	10,800
Aug. 12			12 m.------	3.61	1,890	3----------	18.53	73,900	6----------	6.78	10,100
6 a.m.--	2.31	640	4 p.m.----	3.53	1,790	4----------	18.03	70,700	8----------	6.61	9,480
12 m.----	2.39	690	8---------	3.47	1,710	5----------	17.48	67,100	10---------	6.49	9,050
6 p.m.--	2.80	990	12---------	3.41	1,630	6----------	17.03	64,200	12 m.------	6.40	8,740
12-------	3.01	1,180				7----------	16.53	60,900	2 p.m.-----	6.32	8,470
			Aug. 18			8----------	16.03	57,700	4----------	6.27	8,300
Aug. 13			1 a.m.----	3.39	1,610	9----------	15.51	54,400	6----------	6.30	8,400
4 a.m.--	3.14	1,310	2---------	3.39	1,610	10---------	15.06	51,700	8----------	6.38	8,670
8-------	3.36	1,570	3---------	3.38	1,600	11---------	14.56	48,700	10---------	6.73	9,910
12 m.----	4.13	2,720	4---------	3.38	1,600	12---------	14.08	45,800	12---------	6.67	9,690
4 p.m.--	4.53	3,480	5---------	3.39	1,610						
8-------	4.97	4,480	6---------	3.43	1,660	Aug. 20			Aug. 23		
12-------	4.83	4,150	7---------	3.45	1,680	1 a.m.-----	13.61	43,300	2 a.m.-----	6.72	9,870
			8---------	3.49	1,740	2----------	13.14	40,700	4----------	6.92	10,600
Aug. 14			9---------	3.57	1,840	3----------	12.65	38,000	6----------	7.04	11,100
2 a.m.--	4.76	3,990	10---------	3.63	1,920	4----------	12.21	35,600	8----------	6.92	10,600
4-------	4.84	4,170	11---------	3.69	2,010	5----------	11.76	33,000	10---------	6.78	10,100
6-------	5.10	4,800	12 m.------	3.86	2,270	6----------	11.36	30,900	12 m.------	6.71	9,840
8-------	5.34	5,440	1 p.m.----	4.09	2,650	7----------	11.01	29,000	2 p.m.-----	6.63	9,550
10-------	5.37	5,520	2---------	4.29	3,010	8----------	10.69	27,400	4----------	6.58	9,370
12 m.----	5.82	6,820	3---------	4.66	3,760	9----------	10.43	26,000	6----------	6.53	9,190
2 p.m.--	6.21	8,090	4---------	5.26	5,220	10---------	10.23	25,000	8----------	6.45	8,910
4-------	6.21	8,090	5---------	5.90	7,080	11---------	10.04	24,100	10---------	6.35	8,570
6-------	6.05	7,560	6---------	6.63	9,550	12 m.------	9.86	23,200	12---------	6.26	8,260
8-------	5.88	7,020	7---------	7.53	12,900	1 p.m.-----	9.69	22,400			
10-------	5.75	6,610	8---------	8.83	18,500	2----------	9.54	21,700			
12-------	5.64	6,280	9---------	11.03	29,100	3----------	9.38	21,000			
			10---------	13.51	42,700	4----------	9.24	20,300	Aug. 24		
Aug. 15			11---------	16.03	57,700	5----------	9.11	19,700	4 a.m.-----	6.08	7,660
4 a.m.--	5.61	6,190	12---------	18.03	70,700	6----------	8.98	19,200	8----------	5.89	7,050
8-------	5.51	5,910				7----------	8.86	18,600	12 m.------	5.77	6,670
12 m.----	5.29	5,300	Aug. 19			8----------	8.73	18,000	4 p.m.-----	5.64	6,280
4 p.m.--	5.02	4,600	1 a.m.----	21.03	90,200	9----------	8.62	17,500	8----------	5.51	5,910
8-------	4.82	4,130	2---------	24.56	115,000	10---------	8.52	17,100	12---------	5.40	5,600
12-------	4.65	3,740	3---------	26.33	130,000	11---------	8.40	16,600			
			4---------	26.37	130,000	12---------	8.30	16,100	Aug. 25		
			5---------	25.94	127,000				6 a.m.-----	5.22	5,110
Aug. 16			6---------	24.71	117,000	Aug. 21			12 m.------	5.08	4,750
4 a.m.--	4.48	3,380	7---------	23.66	109,000	4 a.m.-----	7.93	14,600	6 p.m.-----	4.93	4,380
8-------	4.34	3,110	8---------	22.51	101,000	8----------	7.62	13,300	12---------	4.80	4,080
12 m.----	4.21	2,870	9---------	21.61	94,300	12 m.------	7.36	12,300			
4 p.m.--	4.09	2,650	10---------	21.01	90,100	4 p.m.-----	7.15	11,500	Aug. 26		
8-------	3.99	2,480	11---------	20.53	86,900	8----------	7.03	11,000	12 m.------	4.57	3,570
12-------	3.91	2,350	12 m.------	20.05	83,800	12---------	7.13	11,400	12 p.m.-----	4.39	3,200

(231) Middle Creek near Hawley, Pa.

Location.--Lat 41°29'05", long 75°13'20", on downstream side of left span of highway bridge near center pier, 0.1 mile downstream from Red Shale Brook, 2 miles northwest of Hawley, Wayne County, and 2.5 miles upstream from mouth. Datum of gage is 1,017.73 ft above mean sea level, unadjusted.
Drainage area.--78.4 sq mi.
Gage-height record.--Wire-weight gage read twice daily and peak from crest-stage indicator.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 3,500 cfs and extended above on basis of slope-area determinations at gage heights 13.22 ft and 17.87 ft.
Maxima.--August 1955: Discharge, 12,000 cfs 1 a.m. Aug. 19 (gage height, 17.87 ft, from crest-stage indicator). 1944 to July 1955: Discharge, 6,970 cfs July 10, 1952 (gage height, 14.17 ft), from rating curve extended as explained above.
Flood of May 23, 1942 reached a stage of about 18 ft.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	3.1	7	6.2	12	22	17	108	22	422	27	80
2	2.9	8	4.9	13	453	18	2,420	23	419	28	84
3	2.8	9	3.7	14	629	19	6,740	24	207	29	54
4	2.8	10	3.1	15	498	20	1,220	25	133	30	48
5	2.7	11	4.3	16	197	21	548	26	94	31	93
6	2.7										

Runoff, in inches..... 6.88

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15--Con.			Aug. 18--Con.			Aug. 21		
12 p.m.--	2.43	34	6 p.m.- --	4.59	360	12---------	17.47	11,400	12 m.-------	2.81	507
Aug. 13			12---------	4.27	284	Aug. 19			6 p.m.------	2.69	469
2 a.m.--	2.78	59	Aug. 16			1 a.m.-----	17.87	12,000	8----------	2.91	540
4-------	3.20	103	12 m.--- --	3.77	186	2----------	17.56	11,600	10----------	3.06	592
6-------	3.74	181	12 p.m.-----	3.43	133	4----------	16.46	10,400	12----------	2.87	527
8-------	4.49	336				6----------	15.22	9,320			
10-------	5.34	571	Aug. 17			8----------	14.13	8,340	Aug. 22		
12 m.----	5.94	769	12 m.------	3.21	105	10---------	13.04	7,360	6 a.m.------	2.53	420
2 p.m.--	5.92	762	12 p.m.-----	3.05	88	12 m.------	11.96	6,400	6 p.m.------	2.35	368
6-------	5.45	606				2 p.m.-----	10.73	5,410	8----------	2.34	365
10-------	5.07	491	Aug. 18			4----------	9.68	4,570	10----------	2.56	429
12-------	5.50	622	4 a.m.-----	3.23	108	6----------	8.91	3,960	12----------	3.06	592
Aug. 14			6----------	3.51	144	8----------	8.18	3,410			
2 a.m.--	5.71	690	8----------	4.20	269	10---------	7.53	2,950			
6-------	5.53	632	9----------	4.99	468	12---------	6.91	2,520	Aug. 23		
12 m.----	5.22	535	10---------	5.55	638				2 a.m.------	3.29	675
6 p.m.--	5.53	632	12 m.------	6.75	1,100				4----------	3.11	610
12-------	5.86	741	4 p.m.- --	8.00	1,730	Aug. 20			8----------	2.65	456
			7----------	10.00	3,060	4 a.m.-----	5.62	1,750	12 m.-------	2.36	371
			8----------	13.00	5,790	8----------	4.76	1,300	6 p.m.------	2.11	304
Aug. 15			9----------	15.12	8,260	12 m.------	4.23	1,050	12----------	1.95	264
6 a.m.--	5.53	632	10---------	16.17	9,620	6 p.m.-----	3.61	799			
12 m.----	5.06	488	11---------	16.96	10,700	12---------	3.23	653			

(232) Lackawaxen River at Hawley, Pa.

Location.--Lat 41°28'30", long 75°10'05", on left bank at Hawley, Wayne County, 300 ft downstream from Wallenpaupack Creek and 1,000 ft downstream from highway bridge. Datum of gage is 869.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Drainage area.--290 sq mi (excludes that of Wallenpaupack Creek, which is 228 sq mi, and flow from which is diverted around station to hydroelectric plant downstream.)

Gage-height record.--Water-stage recorder graph to 11 p.m. Aug. 18 at which time recording gage was destroyed. Record from 11 p.m. Aug. 18 to 6 a.m. Aug. 23 based on graph of once-daily gage readings at bridge 1,000 ft upstream equated to recording gage site and floodmark of peak stage. Record from 6 a.m. Aug. 23 to Aug. 31 based on graph of once or twice-daily readings of inclined staff gage at recording gage site.

Discharge record.--Stage-discharge relation defined by current-meter measurements below 12,000 cfs and by slope-area determination at gage height 20.1 ft.

Maxima.--August 1955: Discharge, 51,900 cfs about 2 a.m. Aug. 19 (gage height, 20.6 ft, from floodmark).
1908-19, 1938 to July 1955: Discharge, 50,000 cfs May 23, 1942 (gage height, 20.1 ft, from floodmark).
Flood of March 1936 reached a stage of 13.9 ft, from floodmark (discharge, 27,600 cfs).

Remarks.--At 11 p.m., August 18, the elevation of the water surface in Lake Wallenpaupack was 1,182.7 ft and rising. Spill over the top of the roller gates began at 7:15 a.m. Aug. 19 on the basis of information furnished by Pennsylvania Power and Light Co. The peak stage and peak discharge of the Lackawaxen River at Hawley, which occurred at about 2 a.m. August 19, were not affected by spill over the gates. Daily discharges for the period August 19-31 include spill over the gates which is listed below, in cfs:

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
19	1,280	23	2,160	26	1,140	29	639
20	2,900	24	1,710	27	944	30	480
21	2,900	25	1,380	28	789	31	369
22	2,650						

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	22	7	46	12	133	17	413	22	4,170	27	1,420
2	21	8	32	13	2,390	18	10,800	23	4,240	28	1,310
3	20	9	29	14	2,080	19	26,800	24	2,730	29	1,180
4	19	10	24	15	1,400	20	6,810	25	2,060	30	862
5	19	11	34	16	692	21	4,820	26	1,610	31	825
6	23										

Runoff, in inches (adjusted)..... 7.40

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 16			Aug. 18--Con.			Aug. 21--Con.		
12 p.m.--	2.00	176	6 a.m.-----	3.17	789	12----------	19.50	47,800	6 p.m.-----	5.76	4,330
			12 m.-------	2.99	668				10----------	5.65	4,120
Aug. 13			6 p.m.-----	2.86	586	Aug. 19			12----------	6.13	5,140
4 a.m.--	2.13	217	12----------	2.72	502	2 a.m.-----	20.60	51,900			
6-------	2.47	370				4----------	19.50	47,800	Aug. 22		
8-------	3.00	675	Aug. 17			5----------	18.37	43,700	1 a.m.-----	6.43	5,900
9-------	3.40	965	12 m.-------	2.52	394	6----------	17.20	39,600	2----------	6.48	6,030
10-------	4.35	1,960	6 p.m.-----	2.45	360	8----------	15.35	33,200	4----------	5.82	4,450
11-------	5.35	3,560	12----------	2.53	399	10----------	13.46	27,000	6----------	5.50	3,830
12 m.----	5.88	4,580				12 m.-------	12.00	22,300	12 m.--------	5.27	3,420
4 p.m.--	5.85	4,520	Aug. 18			2 p.m.-----	10.85	18,800	4----------	5.25	3,380
8-------	5.28	3,430	4 a.m.-----	2.54	404	4----------	9.87	15,800	8----------	5.50	3,830
12-------	4.72	2,490	5----------	2.74	514	6----------	9.15	13,600	10----------	5.98	4,800
			6----------	3.00	675	8----------	8.63	12,100	12----------	6.68	6,570
Aug. 14			7----------	3.38	949	10----------	8.20	10,900			
2 a.m.--	4.62	2,340	8----------	5.20	3,290	12----------	7.80	9,710	Aug. 23		
4-------	4.73	2,510	9----------	7.05	7,590				1 a.m.-----	7.00	7,450
8-------	4.50	2,160	10----------	7.50	8,850	Aug. 20			2----------	7.05	7,590
10-------	4.33	1,930	12 m.-------	8.08	10,500	4 a.m.-----	7.20	8,010	3----------	6.85	7,030
4 p.m.--	4.12	1,670	2 p.m.-----	8.40	11,400	6----------	6.77	6,810	4----------	6.20	5,310
6-------	4.49	2,150	4----------	8.52	11,800	12 m.-------	6.62	6,400	5----------	5.80	4,410
12-------	4.31	1,900	6----------	8.87	12,800	6 p.m.-----	6.46	5,980	12 m.--------	5.47	3,780
			7----------	9.33	14,200	12----------	6.31	5,590	6 p.m.-----	5.21	3,310
Aug. 15			8----------	10.10	16,500				12----------	5.06	3,050
12 m.----	3.86	1,390	9----------	12.20	22,900	Aug. 21					
6 p.m.--	3.60	1,140	10----------	14.15	29,200	6 a.m.-----	6.15	5,190			
12-------	3.38	949	11----------	17.00	38,900	12 m.-------	5.97	4,770			

(242) Delaware River at Port Jervis, N. Y.

Location.--Lat 41°22'20", long 74°41'50", on right bank 250 ft downstream from highway bridge on U. S. Highways 6 and 209 at Port Jervis, Orange County, 1½ miles upstream from Neversink River, and 6.5 miles downstream from Mongaup River. Datum of gage is 415.35 ft above mean sea level, datum of 1929.
Drainage area.--3,076 sq mi.
Gage-height record.--Water-stage recorder graph except for periods 3-8 p.m. Aug. 13 (graph reconstructed on basis of recorded range in stage) and 4-8 a.m. Aug. 19 (graph reconstructed on basis of high-water mark in gage house).
Discharge record.--Stage-discharge defined by current-meter measurements below 89,000 cfs and extended to peak stage on basis of slope-area determinations at 14.95 ft and 23.91 ft.
Maxima.--August 1955: Discharge, 233,000 cfs, about 5:30 a.m. Aug. 19 (gage height, 23.91 ft, from high-water mark in gage house).
1904 to July 1955: Discharge 140,000 cfs, May 23, 1942 (gage height, 17.76 ft), from rating curve extended above 89,000 cfs by logarithmic plotting on basis of slope-area determination.
Oct. 10, 1903: Discharge, 205,000 cfs (gage height, 23.1 ft, reported by United States Weather Bureau), from rating curve extended above 70,000 cfs by logarithmic plotting and velocity-area studies; maximum stage known, 25.5 ft Mar. 8, 1904 (ice jam).
Remarks.--Practically entire flow above Downsville Dam (drainage area, 371 sq mi) diverted for water supply of city of New York, subsequent to Sept. 15, 1954. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge reservoirs (combined capacity, 12,300,000,000 cu ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	762	7	810	12	1,450	17	4,170	22	17,400	27	5,770
2	1,350	8	850	13	5,640	18	13,700	23	17,100	28	4,870
3	1,430	9	810	14	10,600	19	163,000	24	12,700	29	4,570
4	1,300	10	807	15	9,170	20	49,900	25	9,140	30	4,320
5	1,400	11	945	16	5,530	21	23,400	26	7,170	31	4,960
6	1,160										

Runoff, in inches..... 4.67

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 16--Con.			Aug. 19			Aug. 20--Con.		
12 p.m.	2.07	1,360	12 m.	3.84	5,760	1 a.m.	18.86	151,000	11	8.41	31,600
			2 p.m.	3.79	5,590	2	20.69	179,000	12	8.30	30,700
Aug. 13			4	3.73	5,390	3	22.40	207,000			
2 a.m.	1.98	1,230	6	3.67	5,190	4	23.30	223,000	Aug. 21		
4	2.13	1,450	8	3.55	4,820	5	23.88	233,000	4 a.m.	7.90	27,600
6	2.34	1,810	10	3.55	4,820	5:30	23.91	233,000	8	7.55	25,200
8	2.64	2,410	12	3.45	4,510	6	23.80	231,000	12 m.	7.24	23,000
10	2.94	3,110				7	23.40	224,000	4 p.m.	6.92	20,800
12 m.	3.47	4,570				8	22.93	216,000	8	6.68	19,400
2 p.m.	4.03	6,420	Aug. 17			9	22.50	209,000	12	6.54	18,500
4	4.35	7,650	2 a.m.	3.43	4,450	10	22.00	200,000			
6	4.61	8,740	4	3.41	4,390	11	21.47	192,000	Aug. 22		
8	5.20	11,500	6	3.35	4,220	12 m.	20.65	178,000	4 a.m.	6.57	18,700
9	5.25	11,800	8	3.33	4,160	1 p.m.	19.93	167,000	8	6.56	18,700
10	5.29	12,000	10	3.30	4,070	2	19.21	156,000	12 m.	6.36	17,500
11	5.33	12,200	12 m.	3.30	4,070	3	18.62	147,000	4 p.m.	6.18	16,400
12	5.31	12,000	2 p.m.	3.25	3,930	4	18.00	138,000	8	6.05	15,800
			4	3.20	3,790	5	17.45	130,000	12	6.15	16,200
Aug. 14			6	3.15	3,660	6	16.90	123,000			
4 a.m.	4.98	10,400	8	3.38	4,300	7	16.31	115,000	Aug. 23		
8	4.71	9,200	10	3.50	4,660	8	15.73	107,000	4 a.m.	6.30	17,100
12 m.	4.83	9,740	12	3.30	4,070	9	15.22	101,000	8	6.51	18,400
4 p.m.	5.07	10,800				10	14.64	93,600	12 m.	6.49	18,200
6	5.31	12,000				11	14.22	88,500	4 p.m.	6.25	16,800
8	5.31	12,000	Aug. 18			12	13.75	83,200	8	6.09	16,000
10	5.21	11,600	1 a.m.	3.04	3,360				12	5.92	15,100
12	5.03	10,600	2	2.97	3,180	Aug. 20					
			3	2.92	3,060	1 a.m.	13.27	77,900	Aug. 24		
Aug. 15			4	2.93	3,080	2	12.91	73,900	12 m.	5.40	12,500
2 a.m.	4.97	10,400	5	3.00	3,260	3	12.61	70,600	12 p.m.	5.04	10,700
4	4.86	9,870	6	3.05	3,390	4	12.30	67,200			
6	4.78	9,510	7	3.10	3,520	5	12.01	64,000	Aug. 25		
8	4.76	9,420	8	3.19	3,760	6	11.70	60,700	4 a.m.	4.92	10,100
10	4.88	9,960	9	3.27	3,990	7	11.45	58,200	8	4.77	9,460
12 m.	4.84	9,780	10	3.35	4,220	8	11.18	55,500	12 m.	4.70	9,150
2 p.m.	4.75	9,380	11	3.39	4,330	9	10.92	52,900	4 p.m.	4.61	8,740
4	4.80	9,600	12 m.	3.41	4,390	10	10.68	50,700	8	4.40	7,850
6	4.56	8,520	1 p.m.	3.41	4,390	11	10.48	48,900	10	4.53	8,380
8	4.33	7,570	2	3.42	4,420	12 m.	10.27	47,000	12	4.39	7,810
10	4.27	7,330	3	3.46	4,540	1 p.m.	10.02	44,800			
12	4.12	6,750	4	3.51	4,690	2	9.83	43,100			
			5	4.35	7,650	3	9.65	41,500	Aug. 26		
			6	5.89	15,000	4	9.50	40,300	4 a.m.	4.30	7,450
Aug. 16			7	6.50	18,300	5	9.31	38,800	8	4.27	7,330
2 a.m.	3.97	6,200	8	7.08	21,900	6	9.10	37,100	12 m.	4.29	7,410
4	3.89	5,930	9	8.15	29,500	7	8.95	35,900	4 p.m.	4.22	7,130
6	3.81	5,650	10	10.27	47,000	8	8.80	34,700	8	3.95	6,140
8	3.74	5,420	11	12.60	70,500	9	8.66	33,600	10	4.11	6,710
10	3.89	5,930	12	16.14	112,000	10	8.53	32,500	12	4.10	6,670

(243) Neversink River at Oakland Valley, N. Y.

Location.--Lat 41°29'45", long 74°38'45", on right bank 250 ft downstream from highway bridge known as Paradise Bridge, three-quarters of a mile downstream from Oakland Valley, Sullivan County, and 3½ miles northwest of Cuddebackville. Datum of gage is 332.00 ft above mean sea level, adjustment of 1912.
Drainage area.--222 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 7,800 cfs and extended to peak stage on basis of slope-area determination at 12.62 ft.
Maxima.--August 1955: Discharge, 23,800 cfs, 2:30 a.m. Aug. 19 (gage height, 12.74 ft).
1928 to July 1955: Discharge, 23,300 cfs, Nov. 26, 1950 (gage height 12.62 ft), on basis of slope-area determination.
Remarks.--Practically entire flow above Neversink Dam (drainage area, 91.8 sq mi) diverted for water supply to city of New York, subsequent to June 2, 1953.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	97	7	116	12	146	17	220	22	700	27	258
2	101	8	106	13	1,540	18	2,510	23	847	28	222
3	97	9	101	14	1,120	19	11,000	24	544	29	192
4	96	10	105	15	614	20	2,240	25	380	30	179
5	95	11	114	16	324	21	1,080	26	296	31	221
6	96										

Runoff, in inches..... 4.31

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	1.98	177	1 p.m.	3.52	968	4	4.12	1,470	12	5.85	3,580
Aug. 13			4	3.50	953	5	4.52	1,870			
1 a.m.	2.01	186	6	3.45	916	6	4.77	2,150			
2	2.07	205	8	3.40	879	7	5.32	2,830	Aug. 20		
3	2.11	218	10	3.35	844	8	6.30	4,280	4 a.m.	5.39	2,920
4	2.13	225	12	3.30	808	9	7.45	6,460	8	5.04	2,470
5	2.21	253	Aug. 15			10	8.70	9,580	12 m.	4.75	2,120
6	2.36	308	12 m.	2.98	606	11	10.00	13,700	4 p.m.	4.49	1,840
7	2.60	411	12 p.m.	2.68	449	12	10.90	16,900	8	4.27	1,620
8	2.90	561							12	4.07	1,420
9	3.28	795	Aug. 16			Aug. 19					
10	3.81	1,200	12 m.	2.36	308	1 a.m.	11.72	19,900	Aug. 21		
11	4.11	1,460	12 p.m.	2.25	267	2	12.59	23,200	8 a.m.	3.76	1,160
12 m.	4.39	1,740				2:30	12.74	23,800	4 p.m.	3.52	968
1 p.m.	4.82	2,200	Aug. 17			3	12.67	23,500	12	3.30	807
2	5.15	2,600	12 m.	2.10	215	4	12.39	22,400			
3	5.22	2,700	12 p.m.	1.98	177	5	11.82	20,300	Aug. 22		
4	5.57	3,170				6	11.03	17,400	4 a.m.	3.23	759
5	5.70	3,350	Aug. 18			7	10.40	15,100	8	3.16	713
6	5.54	3,130	1 a.m.	1.97	174	8	9.85	13,200	12 m.	3.12	687
7	5.25	2,740	2	1.98	177	9	9.35	11,500	4 p.m.	3.05	643
8	5.02	2,440	3	2.06	202	10	8.90	10,200	8	2.98	600
9	4.82	2,200	4	2.22	256	11	8.50	9,020	12	3.27	787
10	4.65	2,020	5	2.42	332	12 m.	8.20	8,230			
11	4.50	1,850	6	2.77	493	1 p.m.	7.90	7,490	Aug. 23		
12	4.40	1,750	7	3.02	629	2	7.63	6,860	4 a.m.	3.51	961
			8	3.10	677	3	7.40	6,350	8	3.50	953
Aug. 14			9	3.15	709	4	7.18	5,890	12 m.	3.42	894
2 a.m.	4.21	1,560	10	3.18	728	5	6.98	5,490	4 p.m.	3.32	821
4	4.06	1,410	11	3.24	768	6	6.78	5,100	8	3.19	732
6	3.92	1,290	12 m.	3.38	865	7	6.60	4,790	12	3.07	655
8	3.80	1,190	1 p.m.	3.59	1,020	8	6.43	4,500			
10	3.69	1,100	2	3.68	1,090	9	9.28	4,250	Aug. 24		
12 m.	3.60	1,030	3	3.73	1,130	10	6.13	4,010	12 m.	2.88	543
						11	5.98	3,770	12 p.m.	2.68	437

(248) Delaware River at Montague, N. J.

Location.--Lat 41°18'30", long 74°47'50", on right bank at downstream side of old bridge pier and 0.4 mile upstream from toll bridge at Montague, Sussex County, three-quarters of a mile downstream from Saw Kill. Datum of gage is 369.93 ft above mean sea level, datum of 1929.
Drainage area.--3,480 sq mi.
Gage-height record.--Water-stage recorder graph except for Aug. 21-31 when there was no gage-height record.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 90,000 cfs. Discharge records being held pending completion of a basin study.
Maxima.--August 1955: Gage height, 35.15 ft 9 a.m. Aug. 19.
1940 to July 1955: Discharge, 136,500 cfs May 23, 1942 (gage height, 25.70 ft).
Flood of Oct. 10, 1903 reached a stage of 35.5 ft.
Remarks.--Flow regulated by Lake Wallenpaupack and by Pepacton, Toronto, Cliff Lake, Swinging Bridge, and Neversink Reservoirs (combined capacity, 36,932,000,000 cu ft).

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	*Discharge	Time	Gage height	*Discharge	Time	Gage height	*Discharge	Time	Gage height	*Discharge
Aug. 11			Aug. 15--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	4.75		12 m.	8.41		9 p.m.	11.00		11 p.m.	24.65	
			4 p.m.	8.36		10	11.80		12	23.74	
Aug. 12			8	8.26		11	14.10				
4 a.m.	4.69		12	7.66		12	16.00				
8	5.21								Aug. 20		
12 m.	4.92		Aug. 16						1 a.m.	22.75	
4 p.m.	4.88		6 a.m.	7.21		Aug. 19			2	21.85	
8	4.90		12 m.	7.03		1 a.m.	19.30		3	21.00	
12	4.86		6 p.m.	6.93		2	22.80		4	20.28	
			12	6.68		3	26.50		5	19.70	
Aug. 13						4	28.80		6	19.18	
4 a.m.	4.99		Aug. 17			5	30.70		7	18.72	
8	5.44		6 a.m.	6.51		6	32.15		8	18.28	
12 m.	6.08		12 m.	6.38		7	33.70		9	17.80	
4 p.m.	7.25		6 p.m.	6.28		8	34.50		10	17.40	
8	7.87		12	6.47		9	35.15		11	17.05	
12	8.88					10	35.12		12 m.	16.69	
			Aug. 18			11	34.92		1 p.m.	16.39	
Aug. 14			2 a.m.	6.49		12 m.	34.45		2	16.05	
4 a.m.	8.93		4	6.24		1 p.m.	33.85		3	15.75	
8	8.61		6	6.14		2	33.50		4	15.50	
12 m.	8.40		8	6.24		3	33.00		5	15.25	
4 p.m.	8.49		10	6.44		4	32.15		6	15.04	
8	8.79		12 m.	6.70		5	31.00		7	14.82	
12	8.88		2 p.m.	6.91		6	29.80		8	14.60	
			4	6.97		7	28.70		9	14.40	
Aug. 15			6	7.12		8	27.73		10	14.20	
4 a.m.	8.66		7	7.58		9	26.63		11	14.00	
8	8.48		8	9.50		10	25.60		12	13.90	

* Discharge records being held pending completion of a basin study.

(252) Bush Kill at Shoemakers, Pa.

Location.--Lat 41°05'15", long 75°02'20", on right bank at downstream end of wingwall of highway bridge, 0.1 mile downstream from Saw Creek, three-quarters of a mile northwest of Shoemakers, Monroe County, and 2 miles southwest of Bushkill. Datum of gage is 421.13 ft above mean sea level, unadjusted.
Drainage area.--117 sq mi.
Gage-height record.--Water-stage recorder graph except for period 3:30 a.m. to 5:30 a.m. Aug. 19. Graph for missing period drawn on basis of floodmark in gage shelter.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 2,600 cfs and extended to peak stage on basis of slope-area determination. Determinations of the peak discharge by the slope-area method were run on Bush Kill (discharge, 19,500 cfs) at a site 0.4 mile upstream from the gaging station, and on Saw Creek (discharge, 3,870 cfs) 1.6 miles upstream from its mouth. Saw Creek enters Bush Kill immediately above the gaging station. Shifting-control method used at times.
Maxima.--August 1955: Discharge, 23,400 cfs 4 a.m. Aug. 19, (gage height, 13.95 ft, from floodmark).
1908 to July 1955: Discharge, 5,250 cfs July 24, 1920 (gage height, 7.2 ft, from graph based on gage readings), from rating curve extended above 2,600 cfs by logarithmic plotting.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	8.2	7	9.7	12	31	17	225	22	1,270	27	375
2	8.2	8	16	13	480	18	1,110	23	1,000	28	324
3	7.3	9	15	14	584	19	11,800	24	744	29	272
4	6.8	10	12	15	421	20	4,110	25	572	30	241
5	6.8	11	14	16	304	21	1,980	26	448	31	379
6	6.8										

Runoff, in inches..... 8.51

(252) Bush Kill at Shoemakers, Pa.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	1.39	52	12 m.	2.49	420	9	5.77	3,560	8	8.14	7,660
Aug. 13			12 p.m.	2.34	353	10	6.42	4,550	10	7.80	6,960
2 a.m.	1.42	58	Aug. 16			11	6.95	5,440	12	7.49	6,340
4	1.56	87	12 m.	2.22	303	12	7.35	6,150			
5	1.74	134	12 p.m.	2.10	256	Aug. 19			Aug. 20		
6	1.91	188				1 a.m.	7.95	7,300	4 a.m.	6.95	5,330
7	2.15	276	Aug. 17			2	9.69	11,100	8	6.53	4,620
8	2.54	443	12 m.	2.00	219	3	12.45	18,600	12 m.	6.10	3,930
9	2.62	482	12 p.m.	1.96	205	4	13.95	23,400	4 p.m.	5.73	3,380
10	2.77	561				5	13.64	22,300	8	5.40	2,920
11	2.89	628	Aug. 18			6	12.79	19,600	12	5.13	2,580
3 p.m.	2.92	646	4 a.m.	1.97	208	7	11.79	16,700	Aug. 21		
7	3.03	713	6	2.07	245	8	11.24	15,100	6 a.m.	4.84	2,220
12	3.03	713	8	2.20	295	9	10.74	13,800	12 m.	4.57	1,920
			10	2.37	366	10	10.34	12,800	6 p.m.	4.38	1,720
			4 p.m.	2.63	487	11	9.99	11,900	12	4.19	1,530
Aug. 14			5	2.82	588	12 m.	9.74	11,300			
12 m.	2.78	566	6	3.06	732	2 p.m.	9.30	10,200	Aug. 22		
12 p.m.	2.64	492	7	3.64	1,150	4	8.92	9,340	12 m.	3.87	1,240
			8	4.73	2,220	6	8.52	8,470	12 p.m.	3.66	1,070

(254) Flat Brook near Flatbrookville, N. J.

Location.--Lat 41°06'24", long 74°57'09", on right bank 1 mile upstream from Flatbrookville, Sussex County, and 1½ miles upstream from mouth. Datum of gage is 347.73 ft above mean sea level, datum of 1929.
Drainage area.--65.1 sq mi.
Gage-height record.--Water-stage recorder graph except for Aug. 19 (6 a.m. to 6 p.m.) for which graph was drawn on basis of adjoining graphs and high-water mark in gage house and for Aug. 22-25 when there was no gage-height record.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,400 cfs and extended to peak stage on basis of slope-area determination. Discharge for period of no gage-height record Aug. 22-25 estimated on basis of weather records and records for nearby stations.
Maxima.--August 1955: Discharge, 9,550 cfs 11 a.m. Aug. 19 (gage height, 12.58 ft, from high-water mark in gage house).
1923 to July 1955: Discharge, 3,630 cfs Apr. 6, 1952 (gage height, 7.24 ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	8.0	7	20	12	15	17	122	22	260	27	112
2	8.0	8	29	13	462	18	468	23	180	28	110
3	6.8	9	18	14	506	19	6,310	24	160	29	95
4	6.8	10	12	15	369	20	1,510	25	140	30	86
5	6.8	11	12	16	191	21	508	26	126	31	98
6	8.0										

Runoff, in inches..... 6.84

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	1.93	24	2 p.m.	3.08	312	7	3.63	570	7	9.75	5,900
Aug. 13			4	3.20	365	8	4.37	982	8	9.20	5,240
2 a.m.	2.04	30	6	3.37	442	9	4.85	1,280	9	8.70	4,670
4	2.14	43	8	3.41	460	10	5.30	1,590	10	8.10	4,020
5	2.24	58	10	3.40	455	11	5.75	1,920	11	7.70	3,620
6	2.39	86	12	3.43	470	12	6.23	2,280	12	7.25	3,180
7	2.66	159	Aug. 15			Aug. 19			Aug. 20		
8	2.92	249	3 a.m.	3.45	480	1 a.m.	6.75	2,720	2 a.m.	6.75	2,720
10	3.26	392	12 m.	3.19	360	2	7.45	3,370	4	6.25	2,300
12 m.	3.43	470	12 p.m.	2.92	249	3	8.25	4,180	6	5.76	1,920
2 p.m.	3.60	555				4	8.95	4,940	8	5.44	1,690
4	3.75	632	Aug. 16			5	9.50	5,600	10	5.13	1,470
6	3.96	743	12 m.	2.74	185	6	10.2	6,440	12 m.	4.86	1,290
8	4.19	874	12 p.m.	2.61	143	7	10.8	7,190	2 p.m.	4.65	1,160
10	4.35	970				8	11.3	7,840	4	4.46	1,040
11	4.37	982	Aug. 17			9	11.8	8,490	6	4.30	940
12	4.34	964	12 m.	2.53	120	10	12.4	9,310	8	4.17	862
Aug. 14			12 p.m.	2.47	105	11	12.58	9,550	10	4.05	792
2 a.m.	4.15	850	Aug. 18			12 m.	12.5	9,450	12	3.92	721
4	3.90	710	4 a.m.	2.48	107	1 p.m.	12.3	9,170			
6	3.64	575	8	2.62	146	2	11.9	8,620	Aug. 21		
8	3.41	460	12 m.	2.83	216	3	11.4	7,970	6 a.m.	3.64	575
10	3.26	392	4 p.m.	3.13	334	4	10.9	7,320	12 m.	3.44	475
12 m.	3.14	338	6	3.38	446	5	10.5	6,800	6 p.m.	3.29	406
						6	10.13	6,360	12	3.35	432

(260) Brodhead Creek at Minisink Hills, Pa.

Location.--Lat 41°00'00", long 75°08'50", on right bank 175 ft downstream from main building of Coates Paper Box Co. at Minisink Hills, Monroe County, 1 mile upstream from mouth and 3 miles southeast of East Stroudsburg. Datum of gage is 304.03 ft above mean sea level, datum of 1929.

Drainage area.--259 sq mi.

Gage-height record.--Water-stage recorder graph except for period Aug. 5-31. Graph based on readings from reference points and floodmarks Aug. 18, 19 and, during period Aug. 20-31, on occasional staff gage readings and shape of general recession.

Discharge record.--Stage-discharge relation defined by current-meter measurements below 5,000 cfs and extended above on basis of computation of flow over dam at gage height 14.43 ft and slope-area determination at gage height 29.9 ft. Discharge for days of no gage-height record Aug. 5-17 was estimated on basis of records for nearby stations.

Maxima.--August 1955: Discharge 68,800 cfs 2 a.m. Aug. 19 (gage height, 29.9 ft).
1950 to July 1955: Discharge, 19,900 cfs Dec. 11, 1952 (gage height, 14.43 ft), from computation of peak flow over dam.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	51	7	60	12	190	17	1,300	22	2,710	27	662
2	50	8	96	13	3,000	18	6,730	23	2,190	28	594
3	46	9	90	14	3,500	19	30,500	24	1,990	29	542
4	45	10	77	15	2,600	20	9,970	25	1,190	30	575
5	41	11	87	16	2,000	21	5,020	26	815	31	882
6	41										

Runoff, in inches..... 11.15

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 17			Aug. 18--Con.			Aug. 19--Con.			Aug. 20		
12 p.m.	2.50	1,120	10	20.70	37,800	10	17.65	28,700	4 a.m.	11.10	12,300
			11	22.30	42,600	11	17.05	27,000	8	10.35	10,800
Aug. 18			12	23.85	47,200	12 m.	16.45	25,300	12 m.	9.75	9,580
3 a.m.	2.50	1,120				1 p.m.	15.90	23,800	4 p.m.	9.29	8,710
6	2.65	1,220	Aug. 19			2	15.42	22,500	8	8.80	7,820
9	2.88	1,390	1 a.m.	26.00	54,600	3	15.00	21,400	12	8.32	6,970
12 m.	2.97	1,470	2	29.9	68,800	4	14.59	20,400			
3 p.m.	3.12	1,590	3	26.80	57,400	5	14.22	19,500	Aug. 21		
4	3.25	1,690	4	24.30	48,600	6	13.85	18,600	6 a.m.	7.65	5,850
5	3.48	1,880	5	22.55	43,400	8	13.18	17,000	12 m.	7.05	4,900
6	3.84	2,210	6	21.10	39,000	10	12.55	15,500	6 p.m.	6.51	4,110
7	4.45	2,760	7	20.10	36,000	12	12.00	14,300	12	6.05	3,480
8	8.00	7,130	8	19.15	33,200						
9	15.00	21,400	9	18.40	30,900						

(267) Paulins Kill at Blairstown, N. J.

Location.--Lat 40°58'44", long 74°57'15", on right bank 1,200 ft upstream from bridge on State Highway 94 in Blairstown, Warren County, 1,400 ft upstream from Blairs Creek, and 10 miles upstream from mouth. Datum of gage is 335.86 ft above mean sea level, datum of 1929.
Drainage area.--126 sq mi.
Gage-height record.--Water-stage recorder graph except Aug. 19 (8 a.m. to 3 p.m.) for which graph was drawn on basis of adjoining graphs and high-water mark in gage house.
Discharge record.--Stage-discharge relation defined below 6,100 cfs and extended to peak stage on basis of slope-area determination.
Maxima.--August 1955: Discharge, 8,740 cfs 12 m. Aug. 19 (gage height, 11.12 ft, from high-water mark in gage house).
1921 to July 1955: Discharge, 4,480 cfs Sept. 22, 1938 (gage height, 7.56 ft).
Remarks.--Diurnal fluctuation caused by powerplant above station and flow slightly regulated by Swartswood Lake.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	17	7	17	12	22	17	226	22	1,700	27	345
2	9.1	8	38	13	299	18	409	23	1,110	28	292
3	14	9	28	14	671	19	5,950	24	712	29	249
4	12	10	16	15	558	20	3,750	25	506	30	221
5	12	11	20	16	336	21	2,380	26	408	31	216
6	9.1										

Runoff, in inches..... 6.06

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15--Con.			Aug. 19--Con.			Aug. 20--Con.		
12 p.m.--	1.52	27	4 a.m.----	3.12	648	2 a.m.----	6.40	2,240	2 p.m.----	7.60	3,560
			8---------	3.06	622	3---------	7.02	2,970	4---------	7.48	3,430
Aug. 13			12 m.------	2.92	565	4---------	7.70	3,670	6---------	7.35	3,300
2 a.m.--	1.60	39	4 p.m.----	2.82	524	5---------	8.40	4,480	8---------	7.20	3,150
4-------	1.71	60	8---------	2.64	446	6---------	9.10	5,390	10---------	7.07	3,020
6-------	1.89	107	12---------	2.58	419	7---------	9.56	6,040	12---------	6.95	2,900
8-------	2.04	158				8---------	10.0	6,700			
10-------	2.24	245	Aug. 16			9---------	10.4	7,380	Aug. 21		
12 m.----	2.24	245	12 m.------	2.40	331	10---------	10.8	8,160	4 a.m.----	6.72	2,700
2 p.m.--	2.27	260	12 p.m.----	2.28	265	11---------	11.1	8,700	8---------	6.51	2,530
4-------	2.30	275				12 m.------	11.12	8,740	12 m.------	6.28	2,350
6-------	2.72	482	Aug. 17			1 p.m.----	11.1	8,700	4 p.m.----	6.06	2,190
8-------	3.10	638	12 m.------	2.20	225	2---------	10.9	8,310	8---------	5.85	2,040
10-------	3.28	710	8 p.m.----	2.14	199	3---------	10.6	7,740	12---------	5.77	1,990
12-------	3.30	718	12---------	2.14	199	4---------	10.32	7,240			
						5---------	10.02	6,730	Aug. 22		
Aug. 14			Aug. 18			6---------	9.76	6,340	4 a.m.----	5.66	1,910
2 a.m.--	3.29	714	4 p.m.----	2.14	199	7---------	9.57	6,060	8---------	5.51	1,820
4-------	3.18	670	8---------	2.21	230	8---------	9.38	5,780	12 m.------	5.38	1,740
6-------	3.08	630	12 m.------	2.28	265	9---------	9.20	5,530	4 p.m.----	5.14	1,590
8-------	3.02	606	4 p.m.----	2.40	331	10---------	9.02	5,280	8---------	4.95	1,480
10-------	2.95	578	6---------	2.46	361	11---------	8.88	5,090	12---------	4.75	1,380
12 m.----	2.86	541	7---------	2.62	437	12---------	8.74	4,910			
2 p.m.--	2.99	594	8---------	2.94	573						
3-------	3.24	694	9---------	3.40	758	Aug. 20			Aug. 23		
4-------	3.42	766	10---------	4.08	1,060	2 a.m.----	8.50	4,600	4 a.m.----	4.54	1,280
5-------	3.45	778	11---------	4.80	1,410	4---------	8.30	4,360	8---------	4.36	1,190
6-------	3.44	774	12---------	5.42	1,760	6---------	8.14	4,170	12 m.------	4.19	1,110
8-------	3.39	754				8---------	8.00	4,000	4 p.m.----	3.99	1,020
10-------	3.29	714	Aug. 19			10---------	7.86	3,850	8---------	3.82	937
12-------	3.18	670	1 a.m.----	5.94	2,110	12 m.------	7.73	3,700	12---------	3.64	858

(271) Delaware River at Belvidere, N. J.

Location.--Lat 40°49'36", long 75°05'02", on left bank at Belvidere, Warren County, 1,500 ft downstream from Pequest River. Datum of gage is 226.43 ft above mean sea level, datum of 1929.
Drainage area.--4,535 sq mi.
Gage-height record.--Water-stage recorder graph except Aug. 19 (5 p.m.) to Aug. 20 (12 m.) when graph was drawn on basis of hourly wire-weight gage readings by Delaware River Joint Toll Bridge Commission and high-water mark in gage house.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 170,000 cfs and extended to peak stage on basis of slope-area determination.
Maxima.--August 1955: Discharge, 247,000 cfs 8 p.m. Aug. 19 (gage height, 30.21 ft, from high-water mark in gage house).
1922 to July 1955: Discharge, 179,000 cfs Mar. 19, 1936 (gage height, 25.0 ft).
Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark (discharge, 220,000 cfs).
Remarks.--Flow regulated by Lake Wallenpaupack and by Pepacton, Toronto, Cliff Lake, Swinging Bridge, and Neversink Reservoirs (combined capacity, 36,932,000,000 cu ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	1,160	7	1,520	12	1,410	17	7,980	22	29,300	27	10,800
2	940	8	1,220	13	5,210	18	9,230	23	25,300	28	9,240
3	1,480	9	1,120	14	16,200	19	178,000	24	21,600	29	7,900
4	1,670	10	1,120	15	15,900	20	134,000	25	16,200	30	7,240
5	1,520	11	1,060	16	11,900	21	45,500	26	12,900	31	7,720
6	1,560										

Runoff, in inches..... 4.82

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 11			Aug. 16--Con.			Aug. 19--Con.			Aug. 21		
12 p.m.	2.71	1,170	12 p.m.	5.78	9,120	1 p.m.	26.80	203,000	2 a.m.	14.18	57,900
Aug. 12			Aug. 17			2	27.53	212,000	4	13.75	54,600
4 a.m.	2.76	1,240	6 a.m.	5.67	8,680	3	28.22	221,000	6	13.32	51,400
8	2.81	1,300	12 m.	5.48	7,980	4	28.80	228,000	8	12.94	48,600
12 m.	2.80	1,290	6 p.m.	5.29	7,320	5	29.2	234,000	10	12.62	46,300
4 p.m.	2.97	1,540	12	5.14	6,790	6	29.7	240,000	12 m.	12.30	44,100
8	3.04	1,650				7	30.0	244,000	2 p.m.	12.03	42,200
12	3.10	1,750	Aug. 18			8	30.21	247,000	4	11.78	40,500
			2 a.m.	5.16	6,860	9	30.1	246,000	6	11.55	38,800
Aug. 13			4	5.19	6,960	10	30.0	244,000	8	11.30	37,100
4 a.m.	3.28	2,060	6	5.19	6,960	11	29.8	241,000	10	11.10	35,700
8	3.70	2,850	8	5.22	7,070	12	29.5	236,000	12	10.90	34,400
12 m.	4.30	4,250	10	5.27	7,240						
4 p.m.	4.91	6,030	12 m.	5.40	7,700	Aug. 20			Aug. 22		
8	5.98	9,920	2 p.m.	5.77	9,080	1 a.m.	29.0	229,000	4 a.m.	10.48	31,900
12	6.13	10,500	4	5.94	9,760	2	28.5	222,000	8	10.16	30,000
			6	5.95	9,800	3	27.9	213,000	12 m.	9.92	28,500
Aug. 14			7	5.97	9,880	4	27.4	206,000	4 p.m.	9.83	28,000
4 a.m.	6.57	12,400	8	6.06	10,200	5	26.8	197,000	8	9.70	27,300
8	7.62	17,300	9	6.29	11,200	6	26.0	186,000	12	9.50	26,200
12 m.	8.04	19,400	10	6.70	13,000	7	25.1	174,000			
4 p.m.	7.83	18,400	11	7.80	18,200	8	24.3	164,000	Aug. 23		
8	7.50	16,700	12	9.60	28,400	9	23.2	150,000	4 a.m.	9.40	25,700
12	7.37	16,000				10	22.4	141,000	8	9.26	24,900
			Aug. 19			11	21.6	131,000	12 m.	9.26	24,900
Aug. 15			1 a.m.	13.24	55,400	12 m.	21.0	124,000	4 p.m.	9.30	25,100
4 a.m.	7.42	16,300	2	15.97	79,700	1 p.m.	20.31	116,000	8	9.40	25,700
8	7.57	17,000	3	17.48	94,800	2	19.50	108,000	12	9.30	25,100
12 m.	7.50	16,700	4	18.49	106,000	3	18.80	100,000			
4 p.m.	7.27	15,600	5	19.30	114,000	4	18.09	92,900	Aug. 24		
8	7.07	14,600	6	20.25	124,000	5	17.48	86,800	6 a.m.	8.93	23,200
12	7.00	14,300	7	21.35	138,000	6	16.98	81,800	12 m.	8.62	21,600
			8	22.40	150,000	7	16.47	77,200	6 p.m.	8.30	20,000
Aug. 16			9	23.40	162,000	8	16.09	73,800	12	7.99	18,400
6 a.m.	6.84	13,600	10	24.30	173,000	9	15.68	70,200			
12 m.	6.46	11,900	11	25.15	182,000	10	15.35	67,400	Aug. 25		
6 p.m.	6.06	10,200	12 m.	25.95	192,000	11	15.04	64,800	12 m.	7.51	16,000
						12	14.76	62,600	12 p.m.	7.09	14,200

(272) Lehigh River at Stoddartsville, Pa.

Location.--Lat 41°07'45", long 75°37'40", on left bank 75 ft upstream from concrete bridge on State Highway 115, at Stoddartsville, Luzerne County, 1.9 miles upstream from Tobyhanna Creek, and 4 miles southwest of Thornhurst. Datum of gage is 1,463.81 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.
Drainage area.--91.7 sq mi.
Gage-height record.--Water-stage recorder graph except for period Aug. 19, 20 when graph was drawn based on elevation of crest stage and partial gage-height record.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,700 cfs and extended to peak stage on basis of slope-area determination. Shifting-control method used at times.
Maxima.--August 1955: Discharge, 31,900 cfs 4 a.m. Aug. 19 (gage height 16.37 ft, from floodmarks).
1943 to July 1955: Discharge, 7,250 cfs (revised) Dec. 4, 1950 (gage height, 8.59 ft) from rating curve extended as explained above.
Flood of May 22, 1942, reached a stage of 12.03 ft, present site and datum (discharge, 15,700 cfs, revised, from rating curve extended as explained above).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	14	7	14	12	74	17	372	22	702	27	209
2	14	8	25	13	978	18	2,030	23	562	28	180
3	13	9	19	14	2,190	19	18,900	24	401	29	167
4	13	10	15	15	1,520	20	2,850	25	303	30	155
5	13	11	23	16	660	21	1,110	26	240	31	360
6	14										

Runoff, in inches..... 13.85

(272) Lehigh River at Stoddartsville, Pa.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	0.99	61	8	4.42	1,710	5	3.53	1,100	4	11.20	13,200
			12 m.	4.08	1,460	6	4.29	1,600	5	10.45	11,100
Aug. 13			4 p.m.	3.78	1,250	7	5.00	2,190	6	9.95	9,750
2 a.m.	1.08	76	8	3.49	1,070	8	6.15	3,390	8	9.13	7,710
4	1.18	94	12	3.24	924	9	7.20	4,800	10	8.50	6,320
6	1.46	157				10	8.71	7,470	12	8.03	5,380
8	1.77	247	Aug. 16			11	10.27	11,000			
10	2.27	439	6 a.m.	2.96	770	12	12.45	17,000			
12 m.	2.92	749	12 m.	2.70	638				Aug. 20		
2 p.m.	3.63	1,160	6 p.m.	2.50	543	Aug. 19			2 a.m.	7.67	4,720
4	4.34	1,640	12	2.31	456	1 a.m.	14.50	24,200	4	7.34	4,180
6	4.73	1,950				2	15.55	28,400	6	7.02	3,680
8	4.90	2,100	Aug. 17			3	16.10	30,700	8	6.72	3,250
12	4.94	2,140	12 m.	2.09	364	4	16.37	31,900	10	6.43	2,870
			12 p.m.	1.93	303	5	16.30	31,600	12 m.	6.24	2,630
Aug. 14						6	15.95	30,000	4 p.m.	5.63	2,040
5 a.m.	5.07	2,250	Aug. 18			7	15.45	28,000	8	5.19	1,680
10	4.81	2,020	2 a.m.	1.93	303	8	15.10	26,600	12	4.88	1,460
1 p.m.	4.67	1,910	4	2.08	360	9	14.75	25,200			
4	5.00	2,190	6	2.24	426	10	14.50	24,200			
7	5.28	2,450	8	2.40	497	11	14.00	22,300	Aug. 21		
12	5.09	2,270	10	2.64	609	12 m.	13.55	20,700	6 a.m.	4.55	1,240
			12 m.	2.80	687	1 p.m.	13.00	18,800	12 m.	4.30	1,100
Aug. 15			2 p.m.	2.92	749	2	12.45	17,000	6 p.m.	4.05	960
4 a.m.	4.80	2,010	4	3.17	884	3	11.90	15,300	12	3.85	850

(275) Lehigh River at Tannery, Pa.

Location.--Lat 41°02'25", long 75°45'45", on right bank 600 ft upstream from highway bridge at Tannery, Luzerne County, 1¼ miles upstream from Black Creek. Datum of gage is 1,042.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Drainage area.--322 sq mi.

Gage-height record.--Water-stage recorder graph except for period Aug. 17-24 when graph was reconstructed on basis of floodmarks and hydrographic comparison with upstream and downstream stations.

Discharge record.--Stage-discharge relation defined by current-meter measurements below 7,100 cfs and extended above on basis of slope-area determination at peak stage made at White Haven, 2 miles upstream (discharge, 57,300 cfs), Aug. 22-24 discharge estimated on basis of records for upstream and downstream stations. Shifting-control method used at times.

Maxima.--August 1955: Discharge, 58,300 cfs 5 a.m. Aug. 19 (gage height 22.2 ft, from floodmark).
1914 to July 1955: Discharge, 29,600 cfs May 22, 1942 (gage height, 16.51 ft), from computation of peak flow over dam.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	66	7	74	12	134	17	1,220	22	2,200	27	618
2	66	8	86	13	1,370	18	2,740	23	1,700	28	528
3	64	9	84	14	6,140	19	36,000	24	1,250	29	468
4	64	10	74	15	4,180	20	8,060	25	914	30	469
5	68	11	96	16	2,140	21	3,240	26	730	31	1,200
6	74										

Runoff, in inches..... 8.79

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	1.35	138	8	7.33	5,880	10	3.37	1,670	6	15.45	26,100
			10	7.38	5,940	12 m.	3.52	1,810	7	14.80	23,800
Aug. 13			12	7.25	5,780	2 p.m.	3.72	2,000	8	14.25	21,900
3 a.m.	1.35	138				4	4.03	2,300	9	13.70	20,100
8	1.44	175	Aug. 15			5	4.30	2,560	10	13.15	18,400
10	1.56	234	4 a.m.	6.80	5,220	6	4.59	2,840	11	12.67	17,000
12 m.	1.78	364	8	6.28	4,610	7	5.05	3,300	12	12.16	15,500
1 p.m.	2.15	632	12 m.	5.78	4,060	8	5.95	4,240			
2	2.59	982	4 p.m.	5.35	3,600	9	6.95	5,400	Aug. 20		
3	3.02	1,360	8	4.97	3,220	10	8.10	6,950	2 a.m.	11.26	13,200
4	3.45	1,750	12	4.65	2,900	11	9.10	8,610	4	10 58	11,500
5	3.90	2,180				12	10.90	12,300	6	9.77	9,890
6	4.22	2,480	Aug. 16						8	9.15	8,700
7	4.54	2,790	4 a.m.	4.36	2,610	Aug. 19			10	8.69	7,890
8	4.78	3,030	8	4.09	2,360	1 a.m.	13.40	19,200	12 m.	8.22	7,130
9	5 25	3,500	10	3.95	2,220	2	17.35	33,400	2 p.m.	7.80	6,510
10	5.90	4,190	12 m.	3.81	2,090	3	19.55	43,800	4	7.43	6,010
11	6.55	4,920	6 p.m.	3.49	1,790	4	21.50	54,100	6	7.12	5,610
12	6.98	5,440	12	3.20	1,520	5	22.20	58,300	8	6.83	5,260
						6	22.00	57,100	10	6.55	4,920
Aug. 14			Aug. 17			7	21.65	55,000	12	6.27	4,600
1 a.m.	7.25	5,780	6 a.m.	2.95	1,300	8	21.10	51,700			
2	7.44	6,020	12 m.	2.83	1,190	9	20.65	49,200	Aug. 21		
3	7.55	6,160	6 p.m.	2.74	1,110	10	20.15	46,800	4 a.m.	5.73	4,000
4	7.82	6,540	12	2.70	1,080	11	19.70	44,500	8	5.24	3,490
5	7.93	6,700				12 m.	19.20	42,000	12 m.	4.84	3,090
6	7.97	6,760	Aug. 18			1 p.m.	18.65	39,200	4 p.m.	4.55	2,800
8	7.91	6,660	1 a.m.	2.70	1,080	2	18.10	36,500	8	4.30	2,560
12 m.	7.50	6,100	3	2.79	1,150	3	17.50	34,000	12	4.08	2,350
2 p.m.	7.32	5,870	6	2.99	1,330	4	16.75	31,000			
4	7.43	6,010	8	3.19	1,510	5	6.05	28,200			

(280) Lehigh River at Walnutport, Pa.

Location.--Lat 40°45'20", long 75°36'15", on left bank 0.3 mile upstream from highway bridge at Walnutport, Northampton County, and 0.4 mile upstream from Trout Creek. Datum of gage is 350.27 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.
Drainage area.--889 sq mi.
Gage-height record.--Water-stage recorder graph except for 15 hours on Aug. 19 when graph was drawn on basis of floodmark of peak and fragmentary gage-height record.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 60,000 cfs and extended to peak stage on basis of logarithmic plotting.
Maxima.--August 1955: Discharge, 77,800 cfs 6:30 a.m. Aug. 19 (gage height, 17.68 ft, from floodmark).
1946 to July 1955: Maximum discharge, 46,000 cfs Dec. 4, 1950 (gage height, 12.66 ft).
Maximum stage known, 20.6 ft May 23, 1942, from floodmarks.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	228	7	236	12	462	17	2,400	22	5,950	27	2,150
2	224	8	265	13	3,560	18	12,800	23	4,890	28	1,900
3	212	9	250	14	10,900	19	62,400	24	3,630	29	1,730
4	212	10	228	15	7,150	20	18,200	25	2,880	30	1,630
5	216	11	343	16	3,690	21	8,880	26	2,420	31	2,930
6	220										
Runoff, in inches											6.83

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.	2.12	525	8	6.00	10,500	10	3.90	3,650	5	13.60	50,500
Aug. 13			12	5.83	9,820	12 m.	4.24	4,490	6	13.00	46,900
2 a.m.	2.12	525	Aug. 15			2 p.m.	4.64	5,620	7	12.35	43,000
4	2.32	746	6 a.m.	5.49	8,460	3	4.88	6,340	8	11.80	39,800
6	2.69	1,280	12 m.	5.08	7,030	4	5.58	8,820	9	11.33	37,200
8	3.14	2,020	6 p.m.	4.69	5,770	5	6.69	13,500	10	10.92	35,000
10	3.49	2,710	12	4.37	4,840	6	7.75	18,400	11	10.46	32,400
12 m.	3.74	3,270				7	8.50	22,100	12	10.10	30,400
2 p.m.	3.91	3,670	Aug. 16			8	9.51	27,200			
4	4.14	4,240	6 a.m.	4.10	4,140	9	10.32	31,800	Aug. 20		
6	4.49	5,170	12 m.	3.87	3,580	10	11.55	38,400	2 a.m.	9.45	26,900
8	4.88	6,340	6 p.m.	3.70	3,180	11	14.57	56,300	4	8.95	24,400
10	5.35	7,980	12	3.56	2,860	12	16.55	69,800	6	8.45	21,800
12	5.64	9,060				Aug. 19			8	8.05	19,800
			Aug. 17			2 a.m.	17.20	74,400	12 m.	7.46	16,900
Aug. 14			12 m.	3.29	2,300	4	17.50	76,500	4 p.m.	6.97	14,700
2 a.m.	6.06	10,700	12 p.m.	3.20	2,130	6:30	17.68	77,800	8	6.56	12,900
4	6.15	11,100				8	17.59	77,100	12	6.24	11,500
6	6.15	11,100	Aug. 18			10	17.35	75,400	Aug. 21		
8	6.23	11,400	1 a.m.	3.21	2,150	12 m.	16.95	72,600	6 a.m.	5.85	9,900
10	6.20	11,300	3	3.31	2,340	2 p.m.	16.30	68,100	12 m.	5.55	8,700
12 m.	6.23	11,400	6	3.57	2,880	3	15.55	62,800	6 p.m.	5.27	7,700
4 p.m.	6.15	11,100	8	3.81	3,430	4	14.55	56,200	12	5.06	6,960

(284) Lehigh River at Bethlehem, Pa.

Location.--Lat 40°37'05", long 75°21'55", on left bank 1,650 ft upstream from Minsi Trail Bridge at Bethlehem, Northampton County, and 2,400 ft downstream from Monocacy Creek. Datum of gage is 208.45 ft above mean sea level, datum of 1929.
Drainage area.--1,279 sq mi.
Gage-height record.--Water-stage recorder graph except for period Aug. 19-24 when graph was drawn on basis of flood mark in gage shelter, engineer's staff gage readings, and wire-weight gage readings furnished by the U. S. Weather Bureau.
Discharge.--Stage-discharge relation defined by current-meter measurements below 50,000 cfs and extended to peak stage.
Shifting-control method used at times.
Maxima.--August 1955: Discharge, 91,300 cfs 10 a.m. Aug. 19 (gage height, 23.38 ft, from floodmark).
1902-05, 1909 to July 1955: Discharge, 92,000 cfs May 23, 1942 (gage height, 23.47 ft).
Flood of Feb. 28, 1902 reached a stage of 24.9 ft, from floodmark, site and datum in use in September 1902 (discharge about 88,000 cfs).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	463	7	528	12	1,200	17	3,240	22	6,950	27	2,890
2	446	8	633	13	4,500	18	9,890	23	4,870	28	2,630
3	436	9	504	14	12,700	19	70,400	24	4,150	29	2,370
4	436	10	468	15	9,670	20	22,800	25	3,750	30	2,250
5	441	11	557	16	5,140	21	10,700	26	3,220	31	3,260
6	441										
Runoff, in inches											4.84

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15--Con.			Aug. 19			Aug. 20--Con.		
12 p.m.	2.78	1,390	12	5.09	6,670	1 a.m.	14.60	44,600	2	12.92	37,000
						2	15.40	48,200	3	12.30	34,300
Aug. 13			Aug. 16			3	16.40	53,000	4	11.70	31,800
2 a.m.	3.12	1,760	6 a.m.	4.78	5,750	4	18.00	61,100	5	11.18	29,600
4	3.72	2,950	12 m.	4.52	5,020	5	21.05	77,800	6	10.68	27,500
6	4.00	3,620	6 p.m.	4.32	4,460	6	22.20	84,400	8	10.00	24,600
8	3.81	3,150	12	4.12	3,930	7	22.90	88,400	10	9.43	22,200
10	4.06	3,780				8	23.20	90,200	12 m.	8.85	19,900
12 m.	4.43	4,760	Aug. 17			9	23.35	91,100	4 p.m.	8.20	17,300
4 p.m.	4.72	5,580	6 a.m.	3.96	3,520	10	23.38	91,300	8	7.73	15,400
9	4.98	6,340	12 m.	3.84	3,230	11	23.22	90,300	12	7.32	13,800
12	5.43	7,760	10 p.m.	3.66	2,810	12 m.	22.88	88,200			
						1 p.m.	22.50	86,100	Aug. 21		
Aug. 14			Aug. 18			2	22.00	83,200	6 a.m.	6.85	11,900
4 a.m.	6.12	10,300	3 a.m.	3.88	3,320	3	21.50	80,400	12 m.	6.46	10,400
8	6.77	12,900	6	3.85	3,250	4	21.00	77,500	6 p.m.	6.17	9,260
10	7.00	13,800	9	4.15	4,010	5	20.00	71,900	12	5.94	8,380
12 m.	7.00	13,800	12 m.	4.50	4,960	6	19.25	67,800			
2 p.m.	7.19	14,600	4 p.m.	4.95	6,250	7	18.40	63,200	Aug. 22		
4	7.23	14,700	5	6.10	10,200	8	17.40	58,000	12 m.	5.52	6,880
8	6.95	13,600	6	6.50	11,800	9	16.60	54,000	12 p.m.	5.14	5,670
12	6.73	12,700	7	7.11	14,200	10	15.78	50,000			
			8	8.25	18,800	11	15.02	46,500	Aug. 23		
Aug. 15			9	10.00	25,800	12	14.35	43,500	12 m.	4.83	4,790
6 a.m.	6.37	11,300	10	11.40	31,400				12 p.m.	4.61	4,220
12 m.	5.95	9,640	11	12.53	35,900	Aug. 20					
6 p.m.	5.52	8,070	12	13.53	40,000	1 a.m.	13.76	40,700			

(287) Musconetcong River near Bloomsbury, N. J.

Location.--Lat 40°40'20", long 75°03'40", on right bank just downstream from highway bridge, 1½ miles upstream from Bloomsbury, Hunterdon County, and 9½ miles upstream from mouth. Datum of gage is 274.83 ft above mean sea level, datum of 1929.
Drainage area.--143 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,800 cfs and extended to peak stage on basis of slope-area determination.
Maxima.--August 1955: Discharge, 4,430 cfs 9 a.m. Aug. 19 (gage height, 6.95 ft).
1921 to July 1955: Discharge, 5,760 cfs (revised) Mar. 15, 1940 (gage height, 7.55 ft).
Remarks.--Flow regulated by Lake Hopatcong (usable capacity, 800,000,000 cu ft).
Diurnal fluctuation caused by small powerplants above station.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	40	7	21	12	132	17	335	22	1,250	27	451
2	35	8	48	13	858	18	630	23	928	28	376
3	31	9	44	14	674	19	2,890	24	734	29	342
4	32	10	46	15	476	20	2,390	25	594	30	305
5	39	11	48	16	385	21	1,720	26	500	31	290
6	32										

Runoff, in inches..... 4.34

Gage height, in feet, and discharge in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 14--Con.			Aug. 18--Con.			Aug. 19--Con.		
12 p.m.--	1.68	191	6----------	2.85	648	1 a.m.-----	2.41	459	2 p.m.-----	5.92	2,730
			8----------	2.88	661	2----------	2.65	560	4----------	5.77	2,570
Aug. 13			10---------	2.83	638	3----------	2.80	625	6----------	5.57	2,360
1 a.m.-	1.67	187	12 m.------	2.80	625	4----------	2.81	630	7----------	5.54	2,330
2-------	1.73	207	2 p.m.----	2.98	706	6----------	2.66	564	8----------	5.57	2,360
3-------	1.90	265	3----------	3.30	860	8----------	2.56	522	10----------	5.68	2,470
4-------	2.35	435	4----------	3.35	885	10----------	2.46	479	12 m.-------	5.81	2,610
5-------	2.77	612	6----------	3.06	742	12 m.-------	2.45	475			
6-------	2.95	692	8----------	2.91	674	2 p.m.-----	2.51	500			
7-------	3.21	815	10---------	2.75	602	4----------	2.49	491	Aug. 20		
8-------	3.34	880	12---------	2.65	560	6----------	2.48	487	3 a.m.-----	5.85	2,660
9-------	3.50	960				7----------	2.50	495	6----------	5.79	2,590
10-------	4.00	1,240	Aug. 15			8----------	2.90	670	12 m.-------	5.62	2,410
11-------	4.21	1,360	6 a.m.----	2.50	495	9----------	3.45	935	6 p.m.-----	5.43	2,220
12 m.----	4.20	1,350	12 m.-----	2.44	471	10---------	3.90	1,180	12---------	5.21	2,020
1 p.m.--	4.15	1,320	6 p.m.----	2.38	447	11---------	4.35	1,440			
2-------	4.12	1,300	12---------	2.32	423	12---------	4.65	1,620	Aug. 21		
3-------	4.06	1,270							6 a.m.-----	5.02	1,870
4-------	3.98	1,230	Aug. 16			Aug. 19--Con.			12 m.-------	4.82	1,730
5-------	3.85	1,160	12 m.------	2.22	384	1 a.m.-----	4.95	1,820	6 p.m.-----	4.55	1,560
6-------	3.68	1,060	12 p.m.----	2.13	349	2----------	5.25	2,060	12---------	4.37	1,450
7-------	3.45	935				3----------	5.65	2,440			
8-------	3.23	825				4----------	6.12	2,990	Aug. 22		
9-------	3.05	738	Aug. 17			5----------	6.42	3,430	6 a.m.-----	4.22	1,360
10-------	2.93	684	12 m.------	2.04	316	6----------	6.53	3,610	12 m.-------	3.99	1,230
11-------	2.85	648	3 p.m.----	1.97	290	7----------	6.59	3,720	6 p.m.-----	3.83	1,140
12-------	2.82	634	4----------	2.08	331	8----------	6.87	4,260	12---------	3.67	1,060
			6----------	2.09	334	9----------	6.95	4,430			
Aug. 14			8----------	2.14	353	10---------	6.77	4,060	Aug. 23		
2 a.m.--	2.81	630	10---------	2.15	357	11---------	6.47	3,510	12 m.-------	3.41	915
4-------	2.84	643	12---------	2.30	415	12 m.-------	6.20	3,100	12 p.m.-----	3.22	820

(288) Delaware River at Riegelsville, N. J.

Location.--Lat 40°35'36", long 75°11'17", on left bank 20 ft upstream from suspension bridge at Riegelsville, Warren County, and 600 ft upstream from Musconetcong River. Records include flow of Musconetcong River. Datum of gage is 125.12 ft above mean sea level, datum of 1929.
Drainage area.--6,328 sq mi (includes that of Musconetcong River).
Gage-height record.--Water-stage recorder graph except Aug. 19 (12 m.) to Aug. 25 (11 a.m.) for which graph was drawn on basis of hourly readings by New Jersey Power & Light Company 3.5 miles downstream and floodmark.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 160,000 cfs. Discharge records being held pending completion of a basin study.
Maxima.--August 1955: Gage height, 38.85 (from floodmark) 1 a.m. Aug. 20.
1906 to July 1955: Discharge, 210,000 cfs Mar. 19, 1936 (gage height, 32.45 ft).
Flood of Oct. 10, 1903, reached a stage of 35.9 ft, from floodmarks (discharge, about 275,000 cfs).
Remarks.--Diversion above station to Delaware Division Canal. Flow regulated by Lakes Hopatcong and Wallenpaupack and by Pepacton, Toronto, Cliff Lake, Swinging Bridge, and Neversink Reservoirs (combined capacity, 37,732,000,000 cu ft).

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	*Discharge	Time	Gage height	*Discharge	Time	Gage height	*Discharge	Time	Gage height	*Discharge
Aug. 11			Aug. 16--Con.			Aug. 19--Con.			Aug. 20--Con.		
12 p.m.	2.37		12 m.	7.54		11	32.00		8	24.2	
			6 p.m.	6.93		12 m.	32.7		9	23.5	
Aug. 12			12	6.41		1 p.m.	33.2		10	22.9	
4 a.m.	2.50					2	34.0		11	22.4	
8	2.60					3	34.8		12	22.0	
12 m.	3.36		Aug. 17			4	35.6				
4 p.m.	3.31		6 a.m.	6.00		5	36.3		Aug. 21		
8	3.16		12 m.	5.76		6	37.0		4	20.0	
12	3.11		6 p.m.	5.56		7	37.5		8	18.4	
			12	5.28		8	37.9		12 m.	17.2	
Aug. 13						9	38.2		4 p.m.	16.2	
4 a.m.	3.56		Aug. 18			10	38.4		8	15.5	
3	4.80		4 a.m.	5.31		11	38.6		12	15.0	
12 m.	5.56		8	5.51		12	38.7				
4 p.m.	6.00		12 m.	5.62					Aug. 22		
8	6.40		2 p.m.	5.78					12 m.	13.6	
12	7.26		4	6.04		Aug. 20			12 p.m.	12.6	
			6	6.45		1 a.m.	38.85				
Aug. 14			7	7.00		2	38.8		Aug. 23		
4 a.m.	7.72		8	7.90		3	38.5		12 m.	11.8	
8	8.75		9	8.65		4	38.2		12 p.m.	11.4	
12 m.	10.22		10	9.30		5	37.7				
4 p.m.	10.76		11	10.25		6	37.2		Aug. 24		
8	10.65		12	11.50		7	36.6		12 m.	10.4	
12	10.17					8	35.9		12 p.m.	9.2	
			Aug. 19			9	35.0				
Aug. 15			1 a.m.	12.90		10	34.2		Aug. 25		
4 a.m.	9.88		2	14.20		11	33.7		12 m.	8.32	
8	9.72		3	16.00		12 m.	33.2		6 p.m.	8.04	
12 m.	9.65		4	19.30		1 p.m.	31.5		12	7.74	
4 p.m.	9.36		5	22.10		2	30.0				
8	9.88		6	24.70		3	29.0		Aug. 26		
12	8.44		7	26.70		4	28.0		6 a.m.	7.43	
			8	28.50		5	27.0		12 m.	7.17	
Aug. 16			9	29.80		6	26.0		6 p.m.	6.97	
6 a.m.	8.01		10	30.90		7	25.0		12	6.78	

* Discharge records being held pending completion of a basin study.

(289) Tohickon Creek near Pipersville, Pa.

Location.--Lat 40°26'00", long 75°07'00", on right bank at highway bridge, 1.5 miles northeast of Pipersville, Bucks County, and 4.5 miles upstream from mouth. Datum of gage is 258.96 ft above mean sea level, datum of 1929 (tentative adjustment).
Drainage area.--97.4 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 3,600 cfs and extended to peak stage on basis of slope-area determination at gage height 10.48 ft. Shifting-control method at times.
Maxima.--August 1955: Discharge, 16,000 cfs 12 p.m. Aug. 18 (gage height, 11.26 ft).
1935 to July 1955: Discharge, 13,700 cfs Aug. 9, 1942 (gage height, 10.48 ft), on basis of slope-area determination.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	0.5	7	0.5	12	166	17	73	22	553	27	31
2	.4	8	2.7	13	6,090	18	2,350	23	170	28	24
3	.5	9	4.2	14	1,650	19	3,740	24	78	29	18
4	.5	10	5.5	15	303	20	326	25	52	30	17
5	.5	11	5.5	16	128	21	127	26	38	31	19
6	.5										
Runoff, in inches											6.10

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 11			Aug. 14			Aug. 18--Con.			Aug. 20--Con.		
12 p.m.	0.86	5.3	2 a.m.	5.96	3,750	8	3.24	790	9	2.57	343
Aug. 12			4	5.47	3,040	10	3.01	618	12 m.	2.46	292
5 a.m.	.83	4.7	6	4.97	2,390	12 m.	2.80	474	6 p.m.	2.25	214
8	.89	6.0	8	4.51	1,890	3 p.m.	2.59	353	12	2.10	167
9	1.12	13	10	4.11	1,500	6	2.44	284			
11	1.32	24	12 m.	3.73	1,170	7	2.52	319			
3 p.m.	1.39	29	3 p.m.	3.37	888	8	5.99	3,800	Aug. 21		
4	1.57	47	6	3.05	648	9	9.28	10,400	12 m.	1.92	121
5	1.95	128	12	2.80	474	10	9.62	11,300	10 p.m.	1.81	97
7	2.12	173	Aug. 15			11	10.28	13,000	12	2.00	140
8	2.30	230	6 a.m.	2.63	374	12	11.26	16,000	Aug. 22		
9	2.74	437	12 m.	2.45	288	Aug. 19			1 a.m.	3.30	835
10	3.34	865	6 p.m.	2.28	223	1 a.m.	10.73	14,400	2	4.17	1,550
11	3.62	1,090	12	2.14	179	2	9.68	11,400	3	4.30	1,680
12	3.89	1,300	Aug. 16			3	8.55	8,640	4	3.87	1,290
Aug. 13			12 m.	1.93	123	4	7.53	6,460	5	3.38	895
1 a.m.	4.19	1,570	12 p.m.	1.75	86	6	6.27	4,240	6	3.03	632
2	4.55	1,930	Aug. 17			8	5.61	3,230	8	2.74	437
3	5.48	3,050	3 p.m.	1.63	65	10	5.15	2,620	10	2.57	343
4	6.61	4,800	4	1.66	70	12 m.	4.76	2,160	2 p.m.	2.42	275
5	7.30	6,020	12	1.69	74	2 p.m.	4.37	1,750	3	2.53	324
6	8.18	7,810	Aug. 18			4	4.06	1,450	5	2.72	425
7	7.99	7,400	1 a.m.	1.83	101	6	3.80	1,230	9	2.58	348
8	8.12	7,670	2	2.14	179	8	3.52	1,010	12	2.44	284
11	8.61	8,780	3	2.72	425	10	3.25	798			
2 p.m.	8.03	7,480	4	3.05	648	12	3.06	655			
6	7.44	6,290	6	3.66	1,120	Aug. 20			Aug. 23		
9	6.98	5,430				3 a.m.	2.84	500	6 a.m.	2.22	204
12	6.43	4,500				6	2.69	408	2 p.m.	2.02	145
									12	1.83	101

(290) Delaware River at Trenton, N. J.

Location.--Lat 40°13'18", long 74°46'38" on left bank 450 ft upstream from Calhoun Street bridge at Trenton, Mercer County, and half a mile upstream from Assunpink Creek. Datum of gage is 7.77 ft above mean sea level, datum of 1929.
Drainage area.--6,780 sq mi.
Gage-height record.--Water-stage recorder graph except for Aug. 19 (10 a.m.) to Aug. 23 (1 p.m.) for which graph was drawn based on hourly wire-weight gage readings by Delaware River Joint Toll Bridge Commission and high-water mark in gage house.
Discharge record.--Stage-discharge relation defined by current-meter measurements to 230,000 cfs and extended to peak stage by logarithmic plotting.
Maxima.--August 1955: Discharge, about 329,000 cfs 6-7 a.m. Aug. 20 (gage height, 20.83 ft, from high-water mark in gage house).
1913 to July 1955: Discharge, 227,000 cfs Mar. 19, 1936 (gage height, 16.66 ft).
Maximum stage known, 22.8 ft Mar. 8, 1904, from floodmark (ice jam). Flood of Oct. 11, 1903, reached a stage of about 20.7 ft (discharge estimated, 295,000 cfs).
Remarks.--Diversion above station to Delaware & Raritan Canal. Flow regulated by Lakes Hopatcong and Wallenpaupack, and by Pepacton, Toronto, Cliff Lake, Swinging Bridge, and Neversink Reservoirs (combined capacity, 37,732,000,000 cu ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	1,900	7	2,340	12	3,870	17	15,600	22	50,700	27	17,000
2	1,900	8	2,880	13	28,500	18	16,900	23	37,800	28	14,600
3	1,620	9	2,480	14	28,400	19	163,000	24	33,800	29	12,600
4	1,730	10	1,920	15	33,300	20	281,000	25	26,000	30	11,600
5	2,220	11	2,120	16	23,500	21	88,100	26	20,500	31	11,000
6	2,160										
Runoff, in inches											5.10

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 11			Aug. 17--Con.			Aug. 20--Con.			Aug. 22		
12 p.m.	0.00	2,290	12	2.44	13,400	6	20.83	329,000	4 a.m.	7.1	59,800
						7	20.83	329,000	8	6.6	53,300
Aug. 12			Aug. 18			8	20.8	328,000	12 m.	6.3	49,700
4 a.m.	.03	2,220	4 a.m.	2.45	13,400	9	20.8	328,000	4 p.m.	6.0	46,100
8	.07	2,480	8	2.47	13,600	10	20.8	328,000	8	5.8	43,800
12 m.	.26	3,030	12 m.	2.78	15,800	11	20.6	323,000	12	5.6	41,600
4 p.m.	.51	3,810	4 p.m.	2.73	15,400	12 m.	20.4	318,000			
8	1.00	5,710	8	2.65	14,800	1 p.m.	20.1	310,000			
12	1.76	9,350	9	2.75	15,600	2	19.7	300,000	Aug. 23		
			10	3.36	20,100	3	19.2	288,000	4 a.m.	5.4	39,400
Aug. 13			11	5.45	40,000	4	18.8	278,000	8	5.3	38,300
4 a.m.	2.30	12,500	12	7.70	67,600	5	18.3	266,000	12 m.	5.2	37,200
8	5.02	35,300				6	17.7	252,000	4 p.m.	5.16	36,800
10	5.61	41,700	Aug. 19			7	17.0	235,000	8	5.12	36,400
12 m.	5.53	40,800	1 a.m.	9.05	86,600	8	16.1	215,000	12	5.08	36,000
4 p.m.	5.05	35,600	2	9.97	101,000	9	15.4	200,000			
8	4.30	28,100	3	10.58	111,000	10	14.7	185,000			
12	3.91	24,600	4	10.64	111,000	11	13.8	167,000	Aug. 24		
			5	10.15	104,000	12	13.1	154,000	4 a.m.	5.07	35,900
Aug. 14			6	9.64	95,400				8	5.06	35,800
4 a.m.	3.67	22,600	7	9.34	90,900	Aug. 21			12 m.	4.92	34,300
8	3.79	23,600	8	9.45	92,600	1 a.m.	12.5	143,000	4 p.m.	4.75	32,500
12 m.	3.93	24,800	9	9.82	98,100	2	11.9	132,000	8	4.64	31,400
4 p.m.	4.45	29,500	10	11.0	117,000	3	11.3	122,000	12	4.46	29,600
8	5.29	38,200	11	12.0	134,000	4	11.0	117,000			
12	5.40	39,400	12 m.	12.7	147,000	5	10.6	111,000			
			1 p.m.	13.7	165,000	6	10.2	104,000	Aug. 25		
Aug. 15			2	14.3	177,000	7	9.9	99,400	6 a.m.	4.25	27,600
4 a.m.	5.17	36,900	3	14.9	189,000	8	9.6	94,800	12 m.	4.04	25,800
8	4.90	34,100	4	15.4	200,000	9	9.4	91,800	6 p.m.	3.86	24,200
12 m.	4.77	32,700	5	15.9	210,000	10	9.0	85,800	12	3.71	22,900
4 p.m.	4.65	31,500	6	16.4	221,000	11	8.7	81,600			
8	4.57	30,700	7	17.0	235,000	12 m.	8.5	78,800	Aug. 26		
12	4.37	28,700	8	17.4	245,000	1 p.m.	8.4	77,400	12 m.	3.40	20,400
			9	17.8	254,000	2	8.2	74,600	12 p.m.	3.13	18,300
Aug. 16			10	18.3	266,000	3	8.1	73,200			
6 a.m.	4.01	25,500	11	18.8	278,000	4	7.9	70,400	Aug. 27		
12 m.	3.73	23,100	12	19.1	285,000	5	7.8	69,000	12 m.	2.95	17,000
6 p.m.	3.52	21,400				6	7.7	67,600	12 p.m.	2.77	15,700
12	3.22	19,000	Aug. 20			7	7.6	66,300			
			1 a.m.	19.3	290,000	8	7.4	63,700	Aug. 28		
Aug. 17			2	19.8	303,000	9	7.3	62,400	6 a.m.	2.68	15,100
6 a.m.	2.92	16,800	3	20.0	308,000	10	7.2	61,100	12 m.	2.57	14,300
12 m.	2.68	15,100	4	20.4	318,000	11	7.2	61,100	6 p.m.	2.55	14,200
6 p.m.	2.54	14,100	5	20.6	323,000	12	7.2	61,100	12	2.47	13,600

(291) Neshaminy Creek near Langhorne, Pa.

Location.--Lat 40°10'25", long 74°57'30", on left bank at bridge on State Highway 213, 0.3 mile downstream from Mill Creek and 1.7 miles west of Langhorne, Bucks County. Datum of gage is 40.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.
Drainage area.--210 sq mi.
Gage-height record.--Water-stage recorder graph except for period Aug. 19-22 which was reconstructed on basis of records for nearby stations and floodmark of peak.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 4,700 cfs and extended above on basis of contracted-opening determination at 15.94 ft and slope-area determination at 22.84 ft.
Maxima.--August 1955: Discharge, 49,300 cfs about 9 a.m. Aug. 19 (gage height, 22.84 ft, from floodmark).
1934 to July 1955: Discharge, 24,800 cfs July 23, 1938 (gage height, 15.94 ft) by contracted-opening method. Flood of Aug. 23, 1933 reached a stage of 17.3 ft (discharge, 30,000 cfs, from rating curve extended as explained above).
Remarks.--Occasional regulation by Springfield Lake (capacity, 650 million gallons); no significant regulation during flood period.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	13	7	17	12	550	17	213	22	1,910	27	253
2	11	8	73	13	12,300	18	1,290	23	620	28	233
3	13	9	123	14	1,770	19	27,300	24	415	29	205
4	18	10	40	15	479	20	3,230	25	341	30	198
5	18	11	46	16	276	21	554	26	290	31	198
6	18										
Runoff, in inches											9.39

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 11			Aug. 13--Con.			Aug. 17--Con.			Aug. 19--Con.		
12 p.m.--	0.93	43	6----------	13.55	17,300	10----------	1.46	194	6----------	12.60	15,000
			10----------	12.42	14,600	12----------	1.51	213	9----------	10.40	10,200
			12----------	10.40	10,200				12----------	8.80	7,330
Aug. 12											
4 a.m.--	.89	36	Aug. 14			Aug. 18			Aug. 20		
7-------	.92	34	1 a.m.-----	8.45	6,780	2 a.m.-----	1.66	274	6 a.m.-----	6.60	4,310
8-------	1.12	83	2----------	6.37	4,060	9----------	1.93	388	12 m.-------	5.06	2,720
10-------	1.07	71	3----------	5.35	3,000	12 m.-------	2.15	489	6 p.m.-----	3.93	1,720
12 m.----	1.04	65	4----------	4.63	2,340	6 p.m.-----	2.08	456	12----------	3.00	990
1 p.m.--	2.57	712	8----------	3.47	1,360	7----------	2.33	579			
2-------	2.78	842	2 p.m.-----	2.80	855	8----------	3.11	1,070	Aug. 21		
6-------	2.59	724	5----------	2.99	983	9----------	4.68	2,380	6 a.m.-----	2.25	538
8-------	2.83	874	12----------	2.42	626	10----------	7.65	5,630	12 m.-------	1.80	332
9-------	3.13	1,090				11----------	9.52	8,550	6 p.m.-----	1.90	375
10-------	3.96	1,750	Aug. 15			12----------	10.77	11,000	12----------	2.95	955
12-------	4.85	2,540	12 m.-------	2.12	475						
			12 p.m.-----	1.82	341	Aug. 19			Aug. 22		
Aug. 13						1 a.m.-----	12.00	13,600	2 a.m.-----	3.70	1,540
3 a.m.--	5.95	3,600				2----------	14.20	18,900	6----------	4.95	2,620
4-------	7.90	5,980	Aug. 16			4----------	18.32	31,500	8----------	5.20	2,850
5-------	9.54	8,580	12 m.-------	1.65	270	6----------	21.50	43,800	2 p.m.-----	4.60	2,310
6-------	10.48	10,400	12 p.m.-----	1.54	225	9----------	22.84	49,300	4----------	4.08	1,840
8-------	11.82	13,200				12 m.-------	21.30	43,000	6----------	3.53	1,400
11-------	12.75	15,400	Aug. 17			2 p.m.-----	17.75	29,600	10----------	3.00	990
2 p.m.--	12.61	15,000	12 m.-------	1.52	217	4----------	14.80	20,500	12----------	2.85	888

(294) Little Schuylkill River at Tamaqua, Pa.

Location.--Lat 40°48'20", long 75°58'20", on left bank at pumping plant of Panther Valley Water Co., 0.6 mile upstream from Tamaqua, Schuylkill County, and 0.8 mile upstream from Panther Creek. Datum of gage is 817.48 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.
Drainage area.--42.9 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 3,200 cfs and extended above on basis of contracted-opening determination at peak stage.
Maxima.--August 1955: Discharge, 7,790 cfs 5:30 p.m. Aug. 18 (gage height, 11.10 ft).
1916 to July 1955: Discharge, 4,310 cfs May 22, 1942 (gage height, 7.95 ft).
Remarks.--Figures of daily discharge and monthly mean do not include water diverted from Still Creek Reservoir (capacity, 133,900,000 cu ft).

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	10.5	7	12	12	6.1	17	38	22	328	27	112
2	10	8	11.5	13	187	18	2,080	23	324	28	107
3	9.5	9	9.8	14	91	19	1,600	24	200	29	105
4	10	10	9.8	15	59	20	577	25	172	30	99
5	11	11	23	16	42	21	344	26	137	31	166
6	10.5										
Runoff, in inches											5.98

(294) Little Schuylkill River at Tamaqua, Pa.--Continued

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 16			Aug. 18--Con.			Aug. 21		
12 p.m.	2.00	28	12 m.	2.19	43	5:30	11.10	7,790	12 m.	3.48	340
			12 p.m.	2.14	37	6	10.16	6,660	6 p.m.	3.34	292
Aug. 13						7	9.20	5,510	7	3.40	312
2 a.m.	2.12	35	Aug. 17			8	8.44	4,600	11	3.34	292
4	2.40	75	4 p.m.	2.12	35	9	7.89	3,960	12	3.44	326
6	2.60	116	5	2.18	42	12	6.95	2,920			
7	2.83	177	6	2.12	35						
9	2.92	206	9	2.20	44				Aug. 22		
12 m.	2.93	209	12	2.20	44	Aug. 19			2 a.m.	3.52	354
6 p.m.	3.19	300				3 a.m.	6.42	2,390	5	3.39	309
12	2.84	180	Aug. 18			6	6.01	1,990	10	3.28	273
			1 a.m.	2.29	57	10	5.60	1,620	12 m.	3.14	229
Aug. 14			2	2.35	66	2 p.m.	5.25	1,320	3 p.m.	3.08	202
4 a.m.	2.62	121	3	2.48	90	6	4.94	1,100	7	3.14	229
10	2.45	84	4	2.64	126	12	4.55	844	8	3.39	309
1 p.m.	2.33	63	5	2.84	180				9	4.26	680
5 p.m.	2.33	63	6	3.00	232	Aug. 20			10	4.33	718
8	2.40	75	7	3.15	286	3 a.m.	4.40	756	12	4.01	557
12	2.35	66	9	3.20	304	9	4.16	629			
			12 m.	3.17	293	2 p.m.	3.95	530	Aug. 23		
			1 p.m.	3.29	339	3	3.80	464	2 a.m.	3.75	444
Aug. 15			2	4.94	1,370	6	3.65	404	6	3.51	351
6 a.m.	2.35	66	3	6.96	3,180	8	3.75	444	8	3.45	330
12 p.m.	2.22	47	4	9.45	5,820	12	3.68	415	12 p.m.	3.15	232

(312) Lackawanna River at Old Forge, Pa.

Location.--Lat 41°21'30", long 75°44'40", on right bank 150 ft upstream from Delaware, Lackawanna and Western Railroad bridge in Old Forge, Lackawanna County, and 0.5 mile upstream from St. Johns Creek. Datum of gage is 595.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Drainage area.--332 sq mi.

Gage-height record.--Water-stage recorder graph except for period 10 p.m. Aug. 18 to 2:20 p.m. Aug. 22. Graph for period Aug. 19-22 drawn on basis of observer's reading, floodmark of peak and comparison with record for gaging station at Archbald.

Discharge record.--Stage-discharge relation defined by current-meter measurements below 5,000 cfs and extended to peak stage on basis of slope-area determinations at gage heights 15.30 and 20.05 ft. Doubtful gage-height record Aug. 1-11, 23-31.

Maxima.--August 1955: 31,000 cfs about 2 a.m. Aug. 19 (gage height, 20.05 ft, from floodmark).
1938 to July 1955: Discharge, 20,900 cfs May 23, 1942 (gage height, 15.30 ft), from slope-area determination of peak flow.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	102	7	153	12	188	17	613	22	2,420	27	815
2	117	8	122	13	1,060	18	4,820	23	2,090	28	695
3	117	9	110	14	2,630	19	14,000	24	1,540	29	580
4	122	10	110	15	1,870	20	3,680	25	1,170	30	534
5	125	11	190	16	922	21	2,300	26	916	31	644
6	125										

Runoff, in inches..... 5.03

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15--Con.			Aug. 18--Con.			Aug. 21		
12 p.m.	2.30	221	12 p.m.	3.57	1,200	7	7.85	7,880	6 a.m.	4.17	1,970
						9	11.30	14,000	12 m.	3.97	1,700
Aug. 13			Aug. 16			10	13.50	18,000	4 p.m.	3.89	1,600
6 a.m.	2.60	359	12 m.	3.27	875	12	17.60	25,900	6	4.55	2,500
7	2.97	604	12	3.13	740				9	5.52	3,980
8	3.56	1,190				Aug. 19			10	5.34	3,690
12 m.	3.92	1,640	Aug. 17			1 a.m.	19.40	29,600	12	5.05	3,240
12	3.52	1,140	12 m.	2.95	588	2	20.05	31,000			
			12	2.88	535	3	18.50	27,800	Aug. 22		
Aug. 14						6	13.00	17,000	6 a.m.	4.56	2,510
2 a.m.	3.57	1,200	Aug. 18			12 m.	9.60	10,900	12 m.	4.22	2,040
5	4.24	2,070	4 a.m.	3.07	686	6 p.m.	7.82	7,820	4 p.m.	4.16	1,950
12 m.	4.39	2,280	5	3.27	875	12	6.61	5,770	6	4.53	2,470
2 p.m.	5.22	3,500	6	3.65	1,300				8	4.23	2,050
5	5.50	3,950	10	3.62	1,260	Aug. 20			10	4.75	2,800
12	4.76	2,810	2 p.m.	4.10	1,870	6 a.m.	5.78	4,400	12	4.58	2,540
			4	4.70	2,720	12 m.	5.19	3,460			
Aug. 15			5	5.20	3,470	6 p.m.	4.76	2,810			
12 m.	4.00	1,740	6	6.00	4,750	12	4.43	2,330			

(316) Wapwallopen Creek near Wapwallopen, Pa.

Location.--Lat 41°04'35", long 76°05'40", on left bank 100 ft upstream from Harts Bridge, 2¼ miles southeast of Wapwallopen, Luzerne County, and 3.7 miles upstream from mouth. Datum of gage is 752.41 ft above mean sea level (Pennsylvania Railroad benchmark).
Drainage area.--45.8 sq mi.
Gage-height record.--Water-stage recorder graph.
Discharge record.--Stage-discharge relation defined by current-meter measurements below 1,300 cfs and extended to peak stage by logarithmic plotting. Shifting-control method used at times.
Maxima.--August 1955: Discharge, 3,140 cfs 11 p.m. August 18 (gage height, 9.23 ft).
1919 to July 1955: Discharge, 2,980 cfs July 22, 1952 (gage height, 8.96 ft), as explained above.

Mean discharge, in cubic feet per second, August 1955

Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs	Day	Cfs
1	2.0	7	2.3	12	9.3	17	11	22	357	27	54
2	1.7	8	4.5	13	74	18	810	23	183	28	46
3	1.7	9	5.1	14	53	19	1,170	24	116	29	40
4	1.5	10	3.4	15	22	20	310	25	84	30	46
5	1.4	11	3.9	16	14	21	208	26	66	31	98
6	1.7										

Runoff, in inches..... 3.09

Gage height, in feet, and discharge, in cubic feet per second, at indicated time

Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge	Time	Gage height	Discharge
Aug. 12			Aug. 15			Aug. 18--Con.			Aug. 20		
12 p.m.--	0.80	12	12 m.-------	0.97	21	3----------	1.95	130	12 m.-------	2.89	303
			12----------	.90	17	4----------	3.65	487	12----------	2.50	221
						5----------	6.62	1,550			
Aug. 13						6----------	7.08	1,780	Aug. 21		
4 a.m.--	.85	14	Aug. 16			7----------	7.96	2,300	12 m.-------	2.33	187
6-------	1.08	28	12 m.-------	.85	14	9----------	8.36	2,540	9 p.m.-----	2.16	154
8-------	1.29	44	12----------	.81	12	11----------	9.23	3,140	10----------	2.42	205
10-------	1.46	60				12----------	9.05	3,020	11----------	3.32	401
12 m.----	1.61	77	Aug. 17						12----------	4.25	636
2 p.m.--	1.78	102	12 m.-------	.78	11	Aug. 19					
4-------	1.97	133	12----------	.78	11	2 a.m.-----	8.31	2,510	Aug. 22		
8-------	1.87	116				4----------	7.80	2,200	1 a.m.-----	4.62	745
12-------	1.81	107	Aug. 18			6----------	7.00	1,740	3----------	4.08	591
			4 a.m.-----	.87	15	8----------	6.03	1,270	5----------	3.57	458
			6----------	1.00	23	10----------	5.40	1,010	7----------	3.26	385
Aug. 14			7----------	1.15	33	12 m.-------	4.88	831	12 m.-------	2.85	295
6 a.m.--	1.53	68	8----------	1.45	59	2 p.m.-----	4.44	689	6 p.m.-----	2.55	233
12 m.----	1.30	44	9----------	1.67	86	4----------	4.09	593	12----------	2.52	225
6 p.m.--	1.13	31	10----------	1.76	99	8----------	3.62	470			
12-------	1.10	30	2 p.m.-----	1.69	89	12----------	3.37	412			

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